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**APPENDIX, No. 5,**

TO THE

**FIFTEENTH VOLUME.**

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# APPENDIX TO THE FIFTEENTH VOLUME

OF THE

## JOURNALS

OF THE

### LEGISLATIVE ASSEMBLY

OF THE

#### PROVINCE OF CANADA.

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From the 26th February to the 10th June, 1857, both days inclusive,  
IN THE TWENTIETH YEAR OF THE REIGN OF OUR SOVEREIGN LADY  
**QUEEN VICTORIA.**

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Being the 3rd Session of the 5th Provincial Parliament of Canada.

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**SESSION, 1857.**

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*Printed by Order of the Legislative Assembly.*

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Vol. 15.



# R E T U R N

To an Address from the Legislative Assembly, dated 5th March, 1857 ;  
for Copy of Report of the Commissioners of Inquiry into the causes of  
the fall of the Montmorency Bridge.

By Command.

T. LEE TERRILL,  
Secretary.

SECRETARY'S OFFICE,  
Toronto, 23rd March, 1857.

(Copy.)

QUEBEC, 25th October, 1856.

Sir,—I have the honor herewith to transmit to you, for the information of His Excellency the Governor General, the Report of the Commissioners appointed to investigate into the causes of the Fall of the Montmorency Suspension Bridge, &c., with four parcels containing the evidence, exhibit, minutes with transcript of evidence, register, and plan in case.

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

C. ALLEYN,  
Chairman.

The Honorable T. L. TERRILL,  
Provincial Secretary.

To His Excellency Sir EDMUND WALKER HEAD, Baronet, Governor General of British North America, and Captain General and Governor in Chief in and over the Provinces of Canada, Nova Scotia, New Brunswick and the Island of Prince Edward, and Vice-Admiral of the same, &c., &c., &c.

The undersigned Commissioners, appointed by Commission, dated at Toronto the seventh day of July, one thousand eight hundred and fifty six, to inquire into the cause or causes which occasioned the fall and destruction of the Suspension Bridge over the Montmorency River, near the City of Quebec, on the thirtieth day of April last; to investigate into the circumstances connected with the

lamentable loss of life which resulted from that fall, and to ascertain the number of persons whose lives were thereby sacrificed; also, to ascertain by whose authority or through whose ministry the said bridge was constructed, by whom planned, and under whose superintendence it was erected, and generally to enquire into all facts and circumstances antecedent to the above accident in any way connected with the erection and management of the said bridge and the said loss of life, have the honor to submit the following report:—

By the Provincial Statute 14 and 15 Vic., cap. 133, the Trustees of the Quebec Turnpike Roads were authorized to purchase the Bridge over the Montmorency River and to rebuild it, and for these purposes were permitted to borrow a sum not exceeding five thousand pounds. The old Bridge was accordingly purchased on the 23d April 1852, for the sum of two thousand pounds, and in consequence of an application made by the Trustees to the Commissioner of the Board of Works, the services of Mr. Rubidge were placed at their disposal, and at the suggestion of this gentleman, Mr. Samuel Keefer, Civil Engineer, with whom Mr. Rubidge had been engaged some years before in designing and constructing the Union Suspension Bridge at the City of Ottawa, was also consulted.

Messrs. Keefer and Rubidge, accompanied by several gentlemen of the Trust, visited the Montmorency, and, after examination of the River and banks, fixed on the site of the Suspension Bridge immediately above the cataract, as near the fall as prudence would allow, at a distance of about three hundred yards from the old bridge; Mr. Rubidge measured the width of the river at this spot by triangulation, and made it (as appears by figures on plans furnished at a later period) three hundred and sixty feet from rock to rock.

This visit and preliminary survey were made about the commencement of 1852, and on the twenty-seventh of September, 1853, Messrs. Keefer and Rubidge transmitted to the Trustees the plans and specifications of a Suspension Bridge, the estimate of the total cost of which was five thousand two hundred pounds.

At the first meeting of the Trustees after the reception of these plans and specifications, it was decided to insert an advertisement in the papers calling for Tenders to build the bridge, returnable on the thirtieth of November, 1853, but on the sixth of December, conceiving that if more time were given, contractors from Upper Canada and the United States would be induced to make offers, the time for receiving tenders was extended to the first of February, 1854.

In answer to this advertisement several tenders were received, of which the lowest was from Mr. Thomas A. Walker, for a bridge of four hundred feet span for the sum of nine thousand three hundred and seventy-eight pounds.

The plans furnished by Mr. Keefer were dated June, 1852, and by these Mr. Keefer, basing his calculations upon the distance of three hundred and sixty feet from rock to rock, recommended that the centre of the towers should be placed three hundred and eighty-four feet apart.

It would appear that Mr. Keefer, at a later period, had some doubts as to the nature of the foundations, for in the specification which was written in September, 1853, more than a year after the completion of the drawings, it is stated that the centre of the towers should be about four hundred feet apart.

In August, 1853, one month before the plans and specifications were received from Mr. Keefer, the Trustees engaged Mr. William H. Rankin as Engineer to the Quebec Turnpike Trust.

A few days after Messrs. Rubidge's and Keefer's drawings of the Suspension Bridge had been laid before the Trustees, Mr. Rankin, conceiving that he might be ordered by the Board to carry the design into execution, examined the plans and specifications and also the site of the proposed bridge.

The result of this examination was that on the seventh of February, 1854, Mr. Rankin communicated to the Trustees that he had discovered an error in Messrs. Keefer's and Rubidge's measurement of the width of the Montmorency River. He stated that the actual distance from rock to rock at the proposed site was three hundred and six feet instead of three hundred and sixty, as represented by figures on Messrs. Keefer's and Rubidge's plans. From this he concluded that the span proposed by Mr. Keefer could be reduced some fifty or sixty feet. Mr. Rankin moreover represented to the Trustees that in consequence of this reduction of the span, the suspension cables, instead of being composed of twelve hundred wires as proposed by Mr. Keefer, could be made of one thousand wires, and that in the whole a saving of at least two thousand pounds in the cost of the work would be effected.

In consequence of these representations, on the seventh of February, 1854, the Trustees directed Mr. Porter to countermand whatever orders might have been laid before Messrs. Keefer and Rubidge, and at the same time directed Mr. Rankin to prepare other drawings and specifications adapting Mr. Keefer's views to the corrected distance of three hundred and six feet from edge to edge of rock.

It was also understood that the tenders received on the first of February, 1854, should be laid aside, and other tenders should be received on the drawings and specifications about to be prepared by Mr. Rankin.

Mr. Rankin accordingly prepared other plans and specifications, and by these he proposed that the distance between the points of suspension should be about three hundred and twenty-seven feet. These new plans and specifications were copies of those furnished by Mr. Keefer, with the exception of a difference of fifty-seven feet in the span and the consequent diminution of two hundred strands of wire in each of the two main cables. Mr. Rankin, in his specification, omitted a second inverted arch in the western anchorages described by Mr. Keefer, and also substituted to a paragraph in which Mr. Keefer described in detail the method of constructing the wire cables, the following:—"The process of fabrication will hereafter be determined by the engineer in charge."

The time for receiving the tenders was extended to the first of June, 1854, and on the sixth of that month four tenders were laid before the Trustees, namely—

W. O. Buchanan, at certain prices, per yard and quantities to be ascertained after the completion of the work.

Joseph Archer.....for.....	£12,000	0	0
James Lyons.....for.....	8,481	12	8
Thomas A. Walker..for.....	7,200	0	0

Mr. Walker's tender, being the lowest, was accepted. The accepted tender was dated the first of June, 1854, and offered to have the work completed by the first of December, 1855.

The width was taken as three hundred and twenty-seven feet, and the sum of the tender was divided into two parts, viz:—

For the Masonry.....	£4,200
For the Superstructure.....	3,000
<b>Total.....</b>	<b>£7,200</b>

The amount of debentures which the Trustees were empowered to issue being limited to five thousand pounds under the 14 and 15 Vic., cap. 133, of which two thousand pounds were applied to the purchase of the old bridge and a further sum of three thousand pounds under the 16th Vic., cap. 235, forming six thousand pounds. Delay arose in closing the contract, and a letter was written by their Secretary on the tenth of June, 1854, to the Provincial Secretary at Québec,

for permission to use a further sum not exceeding two thousand five hundred pounds for the construction of the bridge. No answer was ever received to this application, but as it was stated to the Trustees by Mr. Lemoine, one of their number, that he was certain from conversation which he had with them, that members of the Government had no objection that the contract should be entered into, it was signed on the twenty-eighth of July, 1854.

By the contract, Mr. Walker bound himself "to build, erect and construct, finish and complete, in a good, strong, workmanlike manner, with best of materials and workmanship, subject to the inspection and judgment of competent persons under the superintendence of the Engineer of the Road Trust, a Suspension Bridge over the River Montmorency above the Falls; the said bridge to span the said River Montmorency above the Falls a few feet back from the pitch of the cataract or sufficiently far removed to afford a safe and solid bearing for the foundations of the towers, but the exact centre line to be marked out by the Engineer of the Road Trust, and for the purpose aforesaid the said contractor did thereby bind and oblige himself to perform all the works mentioned and detailed in the specification for the said bridge, all the works to be executed in the best and most workmanlike manner, in strict accordance with the plans and specifications and the directions and instructions which might from time to time be given to him by the Engineer of the Road Trust," to commence the works at once, and to finish, complete and deliver the whole to the Trust on or before the first of December, 1855. As soon as the contract was signed the contractor commenced clearing the foundations, and on the twentieth of September, the excavations being completed, the first stone was laid. During the autumn of that year masonry was continued to be built until late in November, and in the months of December and January he continued to cut stone for use the next summer. Although the contractor never completely abandoned the works at the Montmorency Bridge, yet at times they were suspended, the summer months were not as fully occupied as they might have been, and at no time were they pushed on with energy.

Early in May the masonry of the towers was continued, and in January, 1856, they were completed. The greater part of this masonry was built in a good season, and your Commissioners have received the opinion of several Engineers and Builders upon their appearance and solidity.

Lieutenant Colonel Renwick, Royal Engineers, declares that for greater security he would take them down and place them some feet farther back, but he founded his opinion on the anticipated decay of the foundation rock and not from actual danger. Mr. Chessell, a gentleman of great practical experience, considers them safe at present, and Mr. Baldwin, the Engineer of the Quebec Water Works, whose high professional attainments are acknowledged in Canada and the United States, considers they may stand for a century: he made a particular examination of the rock forming their foundation, and he reports "that he perceived no indications of extensive fissures, which might be the cause of their fall, either in the limestone strata on which the towers rest, or in the gneiss rock underlying the limestone, the surface of the gneiss immediately under the towers on the west side at thirty-five feet and on the east fifteen feet, and in his opinion these towers compare well for solidity and safety with others which he has seen and which are considered safe." In the event, however, of being used hereafter it would be judicious to have the foundations carefully examined.

With the exception of a few pieces of the cornice stones they were not disturbed by the fall of the bridge. They have been erected three hundred and forty-two feet apart from centre to centre instead of three hundred and twenty-seven as proposed by the contract.

The iron wire for the bridge was imported from England, and the first strand was thrown across the Montmorency in or about the month of January, 1856.

The superstructure of this bridge, which was carried over in a very short period, does not appear to have been examined by any competent person not interested in the work, before the commencement of the series of accidents which ended in the fall of the bridge. Mr. Rubidge, who visited the work on the twenty-eighth of April, two days before the complete destruction of the bridge, observed a great many defects in the superstructure, but it was his opinion that many of these defects were to be attributed to some accident, and were not necessarily due to original faulty construction. In a letter to Mr. Keefer, dated the twenty-eighth of April, he severely criticises the whole of the work, but, when examined before your Commissioners, declared that in his opinion the defects and omissions which he noticed, were such as to affect more the durability of the bridge than indicative of immediate danger. It should be stated that Mr. Rubidge confined his remarks to those portions of the work, which were above ground and visible.

It being conceded on all sides, that the fall of this bridge was in no wise due to any defect in the masonry of the towers or omissions in the superstructure, and that the failure could clearly be traced to certain defects in the anchorages, your Commissioners have entered into a careful examination of all the details connected with the construction of these anchorages.

To render their comments more lucid they caused Mr. Cane, Civil Engineer, to prepare, for the purpose of transmitting with this Report, a series of sketches illustrating the construction of these anchorages, together with the several accidents which at different times have occurred to these parts of the works.

Sketch No. 1, is a side view of the whole structure, as it appeared before the accident, to a person standing before the cataract. The main cables, it will be seen, descend in a straight line from the top of the towers to the surface of the ground, and it will also appear by further inspection that these cables are continued in a curved line to a considerable depth below the surface, and are secured to the rock. It is this portion which is below the surface, together with the means employed in securing the cables to the rock, which is termed anchorage.

There were altogether four anchorages, one at each end of the two main cables, and sketch No. 2 shows an enlarged view of one of these anchorages as it would have appeared had it been constructed according to the plans and specifications proposed by Messrs. S. Keefer and Rubidge.

At each of the anchorages was to have been an excavation descending to a depth of some twenty-five feet below the surface of the roadway. At the bottom of this excavation a strong cast iron plate of three by four feet in area was to have been laid flatwise in such a manner that half the area of the iron plate would have been carefully fitted under the solid ledge of rock. The other half of the plate was retained in position by an inverted cut stone arch CCCC, the form and position of which will readily be seen by referring to the drawing, sketch No. 2.

This arrangement would render it impossible for the plates to be pulled up.

These anchor plates at the bottom of the wells were to have been connected with the wire of the main cable, the end of which was a few feet above the surface of the ground by a very strong and heavy chain. This chain, according to Mr. Keefer's specification, was to have been composed of four large links, each seven feet long, and each of these links was to have been insets of alternately seven or eight bars of heavy iron, four inches wide and seven-eighths and three-fourths of an inch in thickness.

The ends of one set of links were to have been joined to the ends of the next set, and also to the anchor plate and wire cables by large iron bolts two and a half inches diameter, running through holes bored in the ends of the bars.

In consequence of these links being laid in a curved line, and also of their great length, there was a considerable angle formed between each set of links, and it will readily be understood that when a strain was thrown on the cable a very great vertical pressure was caused at these angles.

To resist this pressure Mr. Keefer described in his specification large stone blocks, four by four feet by eighteen inches in thickness, and shown in sketch No. 2 by AAAA, and again between these stones and the links were iron plates ten by sixteen inches area and three-fourths of an inch in thickness, shown in sketch No. 2, at BBBB.

All the Engineers who have been consulted upon this important point are of opinion, that if the anchorages had been constructed according to Mr. Keefer's specification at a proper season of the year, the accident would not have happened. The plans and specifications prepared by Mr. Rankin, and upon which the contract between the Trustees and Mr. Walker was based, were, as far as the anchorages went, copies of those given by Mr. Keefer, so it follows that if the contractor had constructed the bridge according to the plans and specifications attached to his contract, the accident would not have happened.

The contract does not provide that the Engineer should give an order in writing for any change or deviation, which he might deem proper to make from the original plans and specifications.

The first of the changes made in the design of the anchorages was by Mr. Rankin after his return from a visit to the Falls of Niagara, whither he had been sent by the Trustees to examine the Suspension bridge built over the Niagara River. Mr. Rankin, on the occasion of this change in design, gave Mr. Walker a drawing signed by him, and dated September, 1855, a copy of which drawing is represented by sketch No. 3.

By this drawing, it will be observed, he intended to dispense with the large stone blocks below the surface of the solid rock, but to retain them above the surface as shown. It should also be noticed that he intended retaining the iron bearing plates as sketched.

The sets of bar links connecting the anchor plates and cables which gave way, were of Three Rivers iron. The Engineers and practical men, among whom are Lieutenant Colonel Renwick, Messrs. Baldwin, Chesseil and Baillargé, Engineers, and Messrs. Learmouth and Dawson, practical ironworkers, who have examined and given an opinion on the quality of this iron, state that it is good, although it may not be of the best quality, that its rough and uneven appearance was a defect in the workmanship, that there were flaws in some of the links and the manufacture was unworkmanlike, but at the same time they all concur in the opinion that the best iron in the world could not have resisted the strain which caused the fall of the bridge, and that the accident can in no way be attributed to the defect in the iron.

The bar links were all brought and fitted together at the contractor's forge near the actual site of the bridge. The chains were attached to the anchor plates and were lowered with strong tackle to their respective places in the anchoring wells.

The anchorages of the southern cable were built in summer during the good weather, while those of the northern cable were set during winter, and the anchorage wells filled with masonry during the cold weather.

In the fall of 1855 the spaces behind the bar links up to the surface of the ground were filled up with rubble masonry, and some of this work was done in

a very careless manner. Though it is apparent that the good or bad character of this masonry is not of great importance, yet it would show that the work was at this moment carried on in a reckless manner. It is asserted by one of the witnesses that stone was tumbled directly out of the cart into the well, and that some of the wells were thus filled or nearly so, without further precaution.

Sketch No. 4 shows the mode which Mr. Rankin finally adopted in the construction of the anchorages, but he never furnished the Trustees with any written information about this alteration, and it is not proved that he ever gave the Trustees verbal information of these changes.

By this sketch Mr. Rankin proposed omitting altogether the large stones of four feet square represented in sketch No. 3, and to this he proposed substituting the masonry A, B, C, D.

The masonry A, B, C, D, referred to, is a stone wall three and a half feet in thickness and faced all round the outside with cut stone. The chain rested upon the centre of this wall. It is true the outside of this wall was made of cut stone, but the space between the cut stone facings, namely, the centre of the wall, was filled with rubble masonry, and it was on this centre that the chain rested.

Your Commissioners were informed by the Engineers and Builders whom they have consulted on the subject, that this was a great mistake, and that this wall should have been designed and specified to be entirely of cut stone, and the whole wall should have been composed of large stone blocks extending through and through.

As for the execution of this faulty design all parties are of opinion that it should have been carried out in the fall of 1855, that is, before the suspension of the cables, and not in the spring after the bridge was nearly completed.

After the anchorage walls were all filled up with masonry it was decided to complete the bridge before the spring, but the contractor did not dare to build, during the depth of winter, the masonry A, B, C, D, shown in sketch No. 4, and described in the preceding observations.

But as it was impossible to build the bridge without supporting in some way or other the links above ground and resisting in some manner the pressure caused by the curve of the anchoring chains, wooden props and blocking were temporarily placed under the angles formed between the third and fourth set of links and also under the end of the fourth links. In the spring of the year these wooden props were to be removed, and the masonry A, B, C, D, sketch No. 4, to be built in place of them.

These wooden props sustained the weight of the bridge during the whole of the winter of 1855 and 1856. It would appear that the substitution of these wooden props to masonry was a great error, for your Commissioners have been assured by practical stonebuilders that with these props and bracing in the way (and the immense weight which they had to carry rendered it necessary that they should be very large) it was almost impossible to build good masonry under the bar links, and your Commissioners do not hesitate to express the opinion that this was the most important part of the whole structure.

Sketches No. 5 and 7 show the wooden props and blocking which supported the bridge during the winter. In the meantime the superstructure of the bridge was being rapidly carried on and was fast approaching completion. Many persons were visiting it and passing over it, and during the winter the stone, mortar, wooden props and iron of the anchorages were frozen together in one solid mass, and the whole was as immovable as the rock itself.

The side trusses were completed, the main cables were mostly all wrapped, the floor laid and the details nearly all finished, when, about the commencement of

March, Mr. Rankin informed the Trustees that the bridge was in a fit state to be tested, which was done in the presence of the Trustees and seemingly to their satisfaction.

At distances of every twenty feet along the whole length of the bridge the platform was attached by iron cables to the rock underneath the bridge on each side of the river. The arrangement of these cables or stays is shown in sketch No. 1. They were found in the highest degree effective, for all persons whom your Commissioners have examined on the subject, have certified that the wind had no perceptible effect on the bridge, and that no oscillation was ever noticed.

Up to this time nothing defective had been observed about the bridge. A considerable number of persons had habitually passed and repassed over it, and, as the spring was fast approaching, the Trustees decided to open it to the public as soon as possible.

For several days before the eighteenth of April, 1856, a carpenter, Isaac Toussaint, who was engaged in finishing some light work about the railing of the bridge, noticed a certain depression of the northern side of the platform.

On the eighteenth of April, the weather having been mild and the frost fast leaving the ground, Mr. Walker, the contractor, went down in the morning to the bridge with two masons and got the snow cleared from about the anchorages, and he perceived that something was wrong with the northeast anchorage.

Mr. Walker immediately returned to Quebec for other masons to have an examination, but he had not been gone many moments when the carpenter, who was alone and working on the centre of the bridge, and the two masons who were engaged at the northwestern anchorage, suddenly heard a loud noise and felt a severe shock.

These three men after some search traced this to an accident to the northeastern anchorage, and one of the masons was immediately dispatched to notify Mr. Walker. The other two closed the bridge at each end, and Isaac Toussaint, the carpenter, perceived that the northern side of the bridge had gone down at least four inches.

Early on the nineteenth, which was a Saturday, Mr. Rankin and Mr. Walker went out to the bridge, and the whole of that day was spent in taking the masonry out of the well of the northeastern anchorage, and when this was done, it was found that in the third set of links six out of the eight bars were broken crosswise, and the remaining two were each of them bent six inches on their edge.

Sketch No. 5 shows the appearance of this anchorage after the accident of the eighteenth. The cause of this accident will be easily seen by referring to the drawing, sketch No. 5.

The wooden blocks supporting the joint between the third and fourth sets of links yielded as the thaw made the material on which these blocks rested soften. These blocks were gradually depressed, and the centres of the bars, resting upon the solid rock at about half their length, C, and causing a cross strain, were broken.

Your Commissioners have ascertained that while eight bars of good iron of the sizes specified could support seven hundred and fifty tons applied in their longitudinal direction, they would break under a weight of very little over fifty tons, bearing crosswise.

Double link bars and bolts were immediately forged and the accident repaired. These repairs were completed on the Monday following, the twenty-first of April. Sketch No. 6 shows this anchorage as it appeared after it had been repaired, but it should be noticed that it was only the iron work which was finished on the twenty-first, and the masonry was only completed a few days after.

It was immediately decided by the Engineer to remove all the wooden blocks from under the links and replace them with masonry without delay. At this time, that is, on the twenty-first, the carpenter, Toussaint, remarked that the centre of the platform on the north side was about fifteen inches lower than a straight line drawn from end to end.

Mr. Walker having ascertained that the means provided for shortening the cables could not be employed, decided, with the approval of Mr. Rankin, to lift by means of powerful hydraulic presses the point I, shown in sketch No. 6, and thus by shortening the cables to lift the platform. This was done at the north-eastern corner, and a wall with cut stone facing was built under them, as shown by sketch No. 6.

On the twenty-first Messrs. McPherson, Gibb, McCallum, and Lemoine, four of the Trustees, visited the works and took full cognizance of the whole proceeding. The whole of the next day, the twenty-second of April, was spent in attempts to lift the northern side of the platform, and Toussaint, who was employed as the operator, states that during this day the platform was lifted one inch, and that during the night between the twenty-second and twenty-third he did not notice that the bridge had yielded.

It was under these circumstances that on Wednesday, the twenty-third of April, the Montmorency Suspension Bridge was opened and the old bridge closed to the public by order of the above four named Trustees, given to Bureau, the toll collector at the old bridge, on the occasion of their visit of the twenty-first of April. The following are the only minutes to be found in the books of the Quebec Turnpike Trust having relation to the Suspension Bridge and the shutting up the old one:—

“TUESDAY, 8th April, 1856.”

“Present—Messrs. Gibb, Buchanan, McPherson, Rowley, Lemoine, McCallum, Dalaire, Oiseau, Nault.”

“Resolved—That Pierre Fortin be appointed to the Toll Gate to be erected on the Beauport Road half a mile westward of the Montmorency Suspension Bridge, at a salary of £75 per annum, including fuel and light as well as house rent.”

“Resolved—That the house and lot at the old Montmorency Bridge be advertised for sale, at public auction, at the locality, on the tenth day of May next, at eleven o'clock A.M., that the same be cried at the church doors of Beauport and Ange Gardien churches, and that Mr. Lemoine be requested to attend the sale along with the Secretary.”

“A discussion then arose as to the proper time for opening Montmorency Suspension Bridge to the public, and it was finally decided that the day for that purpose should be fixed at the next meeting, and in the meantime Messrs. McPherson, McCallum, Gowen and Nault, were named as a Committee to make the necessary arrangements.”

“TUESDAY, 15th April, 1856.”

“Present—Messrs. Gibb, McPherson, Lemoine, DeBlois, McCallum, Gowen, Dalaire, Nault.”

“Mr. Lemoine then informed the Board that he had secured a proper site for the new Toll Gate on the Beauport Road, and he was requested to charge himself with the superintendence of the erection of a proper Toll Gate, the Engineer being at the same time directed to prepare the plan of a gate for the purpose.”

“Mr. Fortin, the toll collector, was then admitted and ordered to hold himself in readiness to commence taking tolls on Tuesday next, and meanwhile it was resolved—That the Trustees do visit Montmorency Suspension Bridge on Mon-

"day, leaving town at noon in order to examine and ascertain whether the said bridge will then be ready to be opened for traffic, but that the formal visit of the Trustees to be made on the occasion of the receiving of the said bridge be postponed until later in the season and until the bridge be completed."

"Resolved—That on Monday next, the Trustees will take into consideration the expediency of exchanging with Mr. Hall the lot and house at the old bridge for a certain quantity of ground and a new building at the present new bridge."

"TUESDAY, 22d April, 1856."

"Present—Messrs. Gibb, Buchanan, McPherson, McCallum, Gowen, Oceau, Dalairé, Carrier.

"Resolved—That the house and lot belonging to the Trustees at the Montmorency old Bridge be not sold under the sum of two hundred pounds currency."

"TUESDAY, 29th April, 1856."

"Present—Messrs. Gibb, Buchanan, McPherson, Lemoine, DeBlois, McCallum, Gowen, Oceau, Nault."

"Mr. Lemoine reported, that the fact of one of the iron links connecting the cable of the Montmorency Suspension Bridge with the anchorage being broken, having come to his knowledge yesterday, he had with the concurrence of Mr. McPherson sent down Mr. Wilson to examine the bridge, and desired him to attend the present meeting and make his report as to the result of such examination. Mr. Wilson was then called in, and stated that he could see nothing the matter with the bridge, and never saw finer masonwork; that he could not tell if anything was wrong with the iron links, and that to ascertain properly that fact it would be necessary to take down the masonwork, in which they are enclosed. Mr. Rankin, who was in attendance, was then directed to go down to the bridge and superintend personally the repair of the fracture, and endeavor to ascertain the cause of it and to remain upon the place constantly until all was properly put to rights, and the masonry relaid with cement."

It is proper to remark that from the rapidity of the Montmorency and the nature of the adjoining country it is not fordable above the falls, and that the old bridge purchased by the Trustees is the sole means of communication between the large population of both sides of the river.

On the twenty-third, indeed during the whole of this week, that is the twenty-fourth, twenty-fifth and twenty-sixth of April, four or five men were engaged in endeavoring to lift up the new bridge, but owing to some derangement in the hydraulic presses they only raised the platform a few inches.

Among the many persons who visited the bridge on the twenty-first of April was Dr. Tiburce Charest, of Beauport. His professional duties caused him to cross the Montmorency river frequently and often every day. On this occasion (the twenty-first) he thoroughly satisfied himself of the cause of the breakage of the six links, and it struck him with great force that as each of the four corners of the bridge was similar to this first one, the same accident which had happened here, might happen to any of the other three. He therefore examined the other anchorages and the bridge generally and perceived many defects.

He noticed about this time that the links of the anchoring chains on the north-west corner were leaving the masonry and were being bent or forced over towards the water.

As this indicated a repetition of the accident which had happened on the eighteenth it aroused his attention, and on the twenty-fifth of April he ascertained in the presence of two witnesses that these links had moved from the masonry a distance of eight or nine inches.

On the twenty-fifth, Dr. Charest, fully convinced that an accident was very near at hand, wrote a letter, addressed to Mr. Lemoine, one of the Trustees, in which all the circumstances of the case are laid down very clearly. The danger of the immediate destruction of the bridge was laid down with much precision and unfortunately, as the result proved, too much truth.

This letter, which is transmitted with this report and marked O, was received by Mr. Lemoine on the same day and laid by him before the Board of Trustees on the twenty-ninth, but was not taken into consideration, it is said, because it was addressed to Mr. Lemoine and not to the Board.

On Saturday, the twenty-sixth of April, in the evening, Mr. Lemoine was informed that one of the bars of the northwestern anchorage was broken. The next day, the twenty-seventh, being Sunday, nothing was done. Monday, the twenty-eighth, being a very wet day, nobody was at work on the bridge, but Mr. Rankin, the Engineer, visited it and examined the broken link; he did not, however, conceive there was any danger, and left orders with the foreman of the works to have the matter looked into.

Mr. Walker also visited the bridge on this day. Sketch No. 8 shows the broken link at F.

This accident happened from the same causes as the accident of the eighteenth. The depression at H, caused by the crushing of the masonry, allowed the bars to rest upon the solid rock at G.

The bars before snapping bent on their edge, and it was this which Dr. Charest had seen on the twenty-fifth. At this time, however, but one of the bars had broken, and seven others, though bent, had not as yet wholly given way.

The terror with which the inhabitants of that part of the country viewed these repeated accidents was very great. Many persons begged to be allowed to pass over the old bridge, but were refused by the gatekeeper, and were forced to pass over the new one.

On the twenty-eighth of April, Mr. Wilson, a master-builder of Quebec, was requested to examine the bridge by Mr. Lemoine, and having gone down on the morning of the twenty-ninth, he on that day reported to the Trustees, as appears from his evidence, that the masonry was defective, but that he could not examine the iron work and masonry below the surface, and he declares "that the men in charge of the bridge at the time did everything they could to hide the defects from him." The broken parts were purposely buried in rough masonry, and as Mr. Wilson did not feel authorized to cause any of the work to be taken up, he did not see any of the defects. Mr. Rankin was then ordered to go down to the bridge to superintend in person the repairs, and to remain constantly on the spot until they were finished. He, however, did not go down until the next day, and only arrived at the site of the bridge after its fall.

Great exertions were made during several days about the twenty-ninth to bring up the north side of the bridge to its proper level. The hydraulic press was applied under the head of the fourth link and lifted, and while another purchase was being given to the press the weight of the bridge was supported with blocking.

It sometimes happened that this blocking crushed or gave way, and the bridge would come down again with a jerk. On the twenty-ninth, however, the bridge was for a short time brought up to a level platform.

It should be noticed here that the specification provided that the platform of the bridge should be built with a rise in the centre of twelve inches, so that on the twenty-ninth the platform was still one foot lower than it should have been according to the original design.

On the twenty-ninth, Isaac Toussaint, who was, as mentioned before, one of the operators employed in lifting the bridge, left the work because he was afraid an accident would happen.

On the morning of Wednesday, the thirtieth of April, at about half-past eight, Louis Cloutier was about crossing the bridge coming to Quebec, when he heard a loud noise and saw the northern cable gradually sinking, and almost immediately the Beauport or western side fall into the river. The bridge was not carried away by the torrent, but hung in the fall almost in a perpendicular position by the two main cables from the top of the towers at the east side for about a week, when these were cut, and the whole structure, with the exception of the towers, disappeared.

It may not be improper for your Commissioners here to observe, that in order to give as much publicity as possible to their proceedings, a week's notice of the time and place of opening the Commission, with an invitation to all interested to attend, was inserted in all the papers published in Quebec.

A great part of the evidence was also taken on the spot for the accommodation of the witnesses residing in the neighborhood, and for the advantage of the inspection, after notice given in the parishes of Beauport, L'Ange Gardien, Chateau Richer, St. Joachim and St. Anne du Nord. The Trustees of the Quebec Turnpike Trust, the Engineer and Contractor, were specially informed of the sitting of the Commission, and when they desired it, they submitted cross-questions to the witnesses. Every person whom the Commissioners were requested by any of these gentlemen to examine was heard, and free communication was had of all the documents.

Two of the Trustees, Messrs. Gibb and Lemoine, were heard at their own request, and your Commissioners, being wholly unassisted in their investigation, were obliged to examine Messrs. Rankin and Walker, though personally interested, to arrive at sources of information. Mr. Porter, the Secretary of the Quebec Turnpike Trust, when called on, gave on all occasions every information in his power, and during three or four days Messrs. DeBlois and Lemoine attended, but the proceedings were in no other manner noticed by the Trustees.

At the time of its fall there were on the bridge Louis Vizina, aged sixteen years, Ignace Côté, a respectable farmer, and Angélique Drouin, his wife, all of the parish of l'Ange Gardien, and all of whom met their death in consequence.

Your Commissioners are of opinion that had the plans and specifications as agreed on, been carried out by Mr. Walker, the accident would not have happened; that in omitting the stone blocks and iron plates therein described, and adopting in their place masonry in raking courses, not solid through and through, he followed a faulty design, and in its execution committed a great error, and neglected the ordinary precautions in not building the masonry under the bar links before the suspension of the cables and the construction of the superstructure of the bridge.

To these causes, and to a portion of the masonwork having been improperly built in winter at the anchorages, is to be attributed the destruction of the bridge. The silence or consent of the Inspecting Engineer is no excuse for defective materials or bad workmanship on the part of the Contractor, and by the common laws of Lower Canada the civil responsibility of engineers, builders or contractors, for hidden defects and faults, extends over the period of ten years after the reception by the owner.

It appears that Mr. Rankin, the superintending Engineer, visited the work while in construction, about once a week. He consented to the masonry of the anchor vaults being built in winter, and allowed iron links, in two at least of which there were extensive flaws to be used; and made alterations in the plan which possibly, if authorized by the Trustees, will exonerate the securities of the

contractor. If this gentleman's other occupations did not permit more frequent attendance, he should have informed the Trustees. On the contrary, it would appear he dispensed with the services of an assistant named Lecours, furnished by the Board. The accident of the eighteenth of April showed a defect in one anchorage; and he confined himself to removing the effect without examining into its causes; and though similar defects, it was obvious, might have existed at the other anchorages, he did not examine them.

The bridge lost from this time its level. To pass over it was a cause of terror to the inhabitants; the bar links were not bearing properly at the anchorages. Dr. Charest, in his letter of the twenty-fifth, pointed out its immediate destruction; and on the twenty-sixth some links gave way. On the twenty-eighth, Mr. Rankin went down expressly to examine the bridge. He did not close the bridge, though after the first accident, the common sense of the mechanics employed suggested it to them as an imperative necessity; in fact, he did nothing.

On the twenty-ninth, though ordered at the Board to go down, and remain constantly on the spot inspecting the repairs until complete, he postponed this paramount duty to the routine business of a Board day, and only arrived at the spot, on the 30th, after the accident.

From the following extracts from the evidence of Messrs. Baldwin and Chessell, it is clear that the accidents of the eighteenth and twenty-sixth of April, were distinct warnings of danger, which ought to have been manifest to the Engineer.

Mr. Baldwin:—

Question.—“Supposing that some of the anchor links or iron bars had broken a few days before the 30th of April, on the east side, and that a link had broken on the twenty-ninth of April, on the west side, although the iron bars on the east side had been replaced, was the bridge safe for passengers before the causes of such breakage had been ascertained, and all the iron bars at the four anchorages had been examined, on the thirtieth of April?”

Answer.—“I should say that the cause of the accident should have been been thoroughly enquired into before allowing the public to pass.”

Question.—“Under such circumstances, would you have examined the iron links at all the anchorages?”

Answer.—“As soon as I had ascertained the subsidence of the iron links into the masonry, I should have adopted some efficient method for securing the iron links at all sides from further yielding. The breakage of six links was an indication of immediate danger to the bridge.”

Mr. Chessell:—

Question.—“From your long experience in public works are you of opinion that the breakage of six links out of eight in these anchorages was sufficient warning to any Engineer, Contractor, or Board of Trustees, of the immediate danger?”

Answer.—“Yes, certainly it was, and should have been sufficient to have induced the parties to have caused a strict examination to have taken place, to ascertain the state of the whole of the links in the remaining anchorages, and no time should have been lost in repairing the damage as far as practicable, as there was reason to fear not only that a similar defect would be found in the remaining anchorages, but that the two remaining links then supporting the whole weight of the bridge, might be broken from the same defect which had caused the fracture of the six links.”

Question.—“Admitting that the six broken links were replaced and with the knowledge which the Engineer, Contractor and Trustees had that the three other anchorages were built upon the same principles as the one which this first accident occurred to, do you not believe that the warning of danger

“was sufficiently great to have caused the immediate closure of the bridge to the public?”

Answer;—“I do consider that it was sufficient, and that the gates should have been closed until the repair of the damage, as the danger was manifest.”

Though the mere omission, on the part of Mr. Rankin, in not doing the whole of his duty in inspecting the construction of the bridge and in ascertaining its safety on or before the twenty-ninth of April, might not be sufficient to attach criminal liability to him, your Commissioners regret to say that in not ordering the bridge to be closed on the twenty-eighth of April, and in not carefully examining its whole structure from the date of the first accident on the eighteenth of April to its fall, they consider him guilty of criminal negligence.

It is laid down by Russell, one of the latest standard writers on Criminal Law, that “in cases where death is the consequence, where persons employed about such of their lawful occupations from which danger may arise to others, neglect the ordinary cautions, it will be manslaughter, at least on account of such negligence.”

It remains but to consider the conduct of the Trustees of the Quebec Turnpike Trust connected with the Bridge, and their execution of the powers conferred on them in relation thereto.

By the first Provincial Act the 14th and 15th Vic., cap. 132, passed on the thirtieth of August, 1851, the powers of the Trustees were confined to purchasing the old bridge and rebuilding it, and for those purposes to issue five thousand pounds, but by the fifth section of the Act they were only allowed to purchase within six months, after which period the above five thousand pounds were especially applied to the improvement and completion of the Chateau Richer road. The old bridge, however, was only acquired on the twenty-first of April, 1852, two months after their power to do so had expired.

It is true, that the 16th Vic. cap. 235, sec. 5, by implication, seems to recognize this purchase, and authorizes the Trustees to apply to the construction of the new bridge, at such place as they should think proper, a further sum not exceeding three thousand pounds. This gave them a nett sum of six thousand pounds, for the construction of the bridge. The Trustees, however, contracted for the sum of seven thousand two hundred pounds, and with extras the sum amounted to nine thousand one hundred and sixty-six pounds (£9,166), being three thousand one hundred and sixty-six pounds beyond their authority. This sum was taken from the general fund at the disposal of the Trust for the making and repairing the roads placed under their control at both sides of the River St. Lawrence.

It is established, that after the accident of the eighteenth of April, the bridge never regained its proper level. Until its ruin, workmen were employed on it; and by the contract, its examination by competent persons was provided for. Yet, on the twenty-first of April, four of the Trustees—Messrs. Gibb, McPherson, McCallum, and Lemoine, a merchant, notary public, lawyer, and country gentleman—went down, and, without the assistance of competent, disinterested persons, having been satisfied with their own examination, ordered the old bridge to be shut up, and the new one opened for traffic on the twenty-third. Thus, from and after the twenty-third, toll was collected and passengers obliged to use the new bridge, though, to the knowledge of all in a defective state. The reception of toll was a warranty of the safety of the bridge, and a patent notice from these public officers of its safety.

The state of the old bridge cannot be accepted as a justification. Were both dangerous, both should have been closed; and the protection from doubtful risk, by preventing the use of the old was, as the event established, purchased by certain death to passengers on the new bridge.

But the responsibility of the Trustees became much more serious on the twenty-ninth of April. They had then become aware of the second accident of the twenty-sixth, and Dr. Charest's letter was laid before them, pointing out what caused the destruction of the bridge, but it was not received or attended to, for the strange reason, as stated by Mr. Lemoine, that it was addressed to a Trustee and not to the Board.

Yet they gave then no order to close the bridge; but only ordered Mr. Rankin to proceed to the spot, and personally inspect the repairs, remaining there until they were completed. It is a matter of grave surprise to the Commissioners that this order was not carried into execution, and that in the minutes Mr. Wilson is stated to have reported that he had never seen finer masonry; while in his evidence he declares "that the masonry was defective, and that he reported to the Trustees that the bridge was down in its centre some fifteen or eighteen inches," and that the masonry was very defective, that is, the anchorage masonry. He did not, to his recollection, say anything to the Trustees about the other masonry."

Your Commissioners are forced, under all the circumstances, to come to the conclusion, that the Trustees of the Quebec Turnpike Trust, in the general management of the erection of the Montmorency Suspension Bridge, did not use the proper care and attention required of them by law, and that in allowing tolls to be taken at the new bridge in its imperfect condition, and closing the old bridge (by which all were compelled to use the Suspension Bridge), but especially in not ordering the new bridge to be closed to the public from and after the (29th) twenty-ninth of April, they were guilty of negligence and misfeasance.

Your Commissioners are aware that the Trust is composed of Citizens of great respectability and high standing in the community, and that the services are gratuitously performed, but the law of the land knows no distinction of persons and requires a strict performance of duty from all who accept office.

The whole respectfully submitted.

(Signed)

C. ALLEYN,

A. POLETTE,

T. TRUDEAU,

Commissioners.

QUEBEC, 1st October, 1856.

### Copy of Report of F. P. Rubidge, Esq., on the foregoing.

DEPARTMENT OF PUBLIC WORKS,

Toronto, February 6th, 1857.

Sir,—Having assisted, by permission of the Honorable the Commissioners of Public Works, in preparing the first set of plans proposed for the Montmorency Suspension Bridge, conjointly with Mr. Samuel Keefer, I have perused the report of the Board appointed to enquire into the cause of its destruction, and the documentary testimony appended, with much interest, and would respectfully submit a few observations thereon.

The unjustifiable step of setting aside the precautions originally provided for properly securing the anchorage, together with defective rubble masonry laid during winter weather, are conclusively shown by this investigation to have been the primary causes of the fall of the Montmorency Bridge.

It was not the prudential measure of placing the towers a few feet, more or less, farther apart than the exact distance demanded, as first drafted by the under-

signed, and so much commented on by the Engineer of the Trust, as though to screen his own culpability, that was the error committed; but the great and serious mistake was, by a faulty mode of construction, subjecting the direct tension-strain on the anchor bar-links to a destructive cross-strain, from which unfortunate change, lateral fracture of the bars ensued.

The responsibility of this injudicious departure from the original plan and specification, is, by the recent enquiry, shown to rest principally with the then newly appointed Superintending Engineer of the Quebec Road Trust.

It would appear, the cables and suspended weight of platform, were thrown across during the winter of 1855-6. In the following March a few additional tons were added by way of test, at a period when the imperfect rubble work was hardened and frost-bound around the anchorage by the severity of the season, for no sooner did the thaw commence loosening this connection of ice and bad masonry than the bridge betrayed symptoms of succumbing to its defective construction. Throughout the entire month of April the bridge was gradually breaking down, as on the 18th the first ruptured links were discovered, on the 26th the second ascertained breakage occasioned further alarm, until, on the 30th April, the whole suddenly dropped into the depth below.

The bridge, as constructed, was therefore not equal to the test of supporting its own weight.

In the course of this enquiry, the best professional testimony brings out conclusively the averment that had the plans and specification of Messrs. Keefer and Rubidge not been departed from further than any safe reduction of the span was advisable, which Colonel Renwick, R. E., questions when stating in evidence "for greater security he would take them" (the towers) "down and place them some feet farther back." The Montmorency Suspension Bridge so constructed would have been perfectly safe.

At page seven of the Commissioners' manuscript Report, occurs this paragraph:—

"All the Engineers who have been consulted upon this important point, are of opinion that if the anchorage had been constructed according to Mr. Keefer's specification, at a proper season of the year, the accident would not have happened."

Again, at page seventeen of the same Report:—

"Your Commissioners are of opinion, that had the plans and specification, as agreed on, been carried out," (the which are declared to be at page seven,) "prepared by Mr. Rankin, and upon which the contract was based, as far as the anchorages went, copies of those given by Mr. Keefer, the accident would not have happened; that in omitting the stone blocks and iron plates therein described, and adopting in their place masonry in raking courses, not solid through and through, he (the Contractor) followed a faulty design, and in its execution committed a great error."

In which conclusion, I unhesitatingly concur, and beg to subscribe myself,

Sir,

Your most obedient humble Servant,

(Signed,) F. P. RUBIDGE,  
A.E.P.W.

THOMAS A. BEGLY, Esq., Secretary.

# MONTMORENCY SUSPENSION BRIDGE.

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

## In the Matter of the MONTMORENCY SUSPENSION BRIDGE.

QUEBEC, 6th August, 1856.

John Porter, of the City of Quebec, Esquire, Secretary to the Trustees of the Quebec Turnpike Roads, being duly sworn, saith:—

That in consequence of the bad state of the Wooden Bridge over the Montmorency River, near the Falls, application was made to the Government by the Trustees of the Québec Turnpike Trust in January, 1852, for a report upon the condition of the Montmorency Bridge, as will be seen by a copy of my letter, addressed to the Secretary of the Board of Works, now produced, marked A. In reply to this application, consent was given, and I here produce a copy of this reply, which is marked B. In accordance with that letter Mr. Rubidge, Engineer, was permitted by the Government to put himself into communication with the Trustees on the subject, and he associates with him Mr. Samuel Keefer, Civil Engineer, who, as he informed the Trustees, would prepare a plan and specifications of the Suspension Bridge, which it was in contemplation to build to replace the old Bridge, and the Trustees received another letter from Mr. Rubidge, dated July 23rd, 1852, containing an estimate of the cost of the Bridge. It is now produced, marked P. It was accordingly decided by the Trust that the plan should be prepared by Mr. Samuel Keefer. On the 5th February, 1853, I wrote to Mr. S. Keefer a letter, a copy of which, marked C, is now produced, to enquire whether the plan and specifications had been prepared, to which he replied, on the seventh of the same month, stating that the plan and specifications were not yet ready. This reply I now produce, and it is marked D. Two other letters were addressed subsequently by me to Mr. Keefer, dated on the 4th and 10th of August, 1853,—copies of these letters I now produce, and they are marked E and F,—in reply to which Mr. Keefer again stated they were not ready. This answer is now produced, marked G. On the 17th August, I again addressed Mr. Keefer, requesting that when he was prepared to forward the plan and specifications, he would also suggest the names of such contractors as he considered in his opinion competent to undertake the work. A copy of this letter is produced, marked H. A letter was received from Mr. Keefer, dated the 22nd August, stating that the plans and specifications were still unprepared. This answer is marked I.

On the 27th September, 1853, the Trustees received a letter from Mr. Keefer, transmitting the plan and specifications. His letter is now produced, marked J. On the first subsequent meeting of the Trustees, an advertisement was ordered in the public papers, calling for tenders to build the Bridge, returnable on the 30th November following. On the 6th of December an order was issued by the Trustees to extend the time for receiving tenders to the 1st of February follow-

ing. On the 26th January I was desired to apply to Mr. Keefer for a bill of quantities of the work in detail and an estimate, as is seen by my letter marked K, which is now produced. Mr. Rankin informed the Board of Trustees that he had discovered an error in Mr. Keefer's plan, the actual distance across the river at the proposed site being much shorter than was laid down in the plan. I was, therefore, ordered to inform Mr. Rubidge, for Mr. Keefer's information, that the Trustees would not require the bill of quantities of the work which they had requested of him, and Mr. Rankin was ordered to make a plan and specification, with a bill of the quantities and an estimate, at his earliest convenience. On that day the delay for receiving tenders was extended to the first of June following, and at the next meeting of the Trustees, on the sixth of that month, the tenders were laid before the Board. I now produce four tenders, of Messrs. W. O. Buchanan, one of the gentlemen mentioned in Mr. Keefer's letter, Jones Lyons, Joseph Archer, and Thomas A. Walker, and marked L, M, N, O; Mr. Walker's tender being the lowest was accepted by the Trustees.

In October, 1854, a correspondence took place between the Trustees and Messieurs Rubidge and Keefer with reference to their Professional charge for making the plan and specification; the amount of which was disputed on the grounds of the error discovered by Mr. Rankin. I now produce a letter of Mr. Rubidge's, dated the 25th October, 1854, explaining the said error, and Mr. Rankin's answer thereto, dated the 6th November following, severally marked V and Q, and also a letter addressed by me to Mr. Keefer, on the same subject, by order of the Trustees, on the 13th January, 1855, marked R.

In consequence of the acceptance of the Tender, a contract was entered into with Mr. Walker on the 28th July, 1854. I have produced a Copy of this contract which was filed yesterday, and is marked No. 3. After the passing of this contract, the erection of the Suspension Bridge was proceeded with under the supervision of Mr. Rankin; the Contractor had to import the wire from England and the period fixed for the completion of the contract was in December, 1855. I have no recollection that the time given to the contractor for the erection of the Bridge was extended. The Bridge was not completed at the time of its fall about the 30th April last, so that it was never inspected according to the deed.

The last instalment which was to be paid to the contractor at the time of the delivery of the Bridge, was not paid to him. I paid the Contractor upon certificates given to him from time to time by the Engineer. The Trustees would have to pay Mr. Walker the sum of £7,200, contract price, and in addition the sum of £1313 for extra work, to which would have to be added the difference between the value of the debentures given in payment of the extra work and cash, amounting to over £300, making in all £8835, against which Mr. Walker has received £8780, leaving a balance still due of about £55. Mr. Keefer's plan, as originally given, was accepted by the Trust, and tenders advertised based thereon, as I have already stated. It was in consequence of the error of distance discovered by Mr. Rankin that new tenders were called for, returnable in June. The toll-gate at the old Bridge at the Montmorency River was kept in the month of March last by a man named Bureau, but when the new gate was put up, which was about a week or ten days before the new Suspension Bridge fell, no tolls were received at the old gate. They were collected by a man named Pierre Fortin, at the new gate which is about half a mile on this side of the old bridge. I had no official knowledge that the old gate was shut up, but I heard it from common report. I produce a copy of the minutes of the Board of Trustees, having reference to the said Bridge, and which is marked S. At the time the tenders were called in on the first of June, there was no information given to the Contractor respecting the mode of payment or the time of completion, but it was generally understood that the payment was to be made by debentures, to the

best of my recollection. At the time these tenders were received, there was nothing said with regard to the time of the completion of the Bridge. I furnish a list of the dates and amount of the certificates furnished by the Engineer; also a corresponding list of the sums paid by the Trustees to the Contractor on the Bridge contract. Mr. Rankin was engaged as Engineer to the Quebec Turnpike Trust in the month of August, 1853, and from that period until the day of his ceasing to remain an officer of the board, which was in the month of May last, all the works were carried on under his inspection and supervision. I do not recollect if any written report was received from Mr. Rankin informing the Board of the error in Mr. Keefer's plan, at the time he made the discovery. I think the Trustees were first informed of the error at one of their weekly meetings, verbally, by Mr. Rankin.

Mr. Rankin was ordered to make a plan and specification with a bill of the quantities and estimates at his earliest convenience. I have no recollection of any suggested change or improvement upon Mr. Keefer's plan having been made by Mr. Rankin. It was upon Mr. Rankin's being ordered to apply the plan made by S. Keefer, that he discovered the error, and it then became his duty to report said error to the Board, as far as my recollection serves me.

[Cross-questioned by Mr. Rankin.]

About a month or six weeks ago, Mr. Walker came to my office with a man named Toussaint, who stated he had received tolls upon the new Suspension Bridge. Toussaint tendered me the money, and after putting to him the usual oath in such cases, I received the money. I have no official knowledge by whom he was employed to take the toll, and there is no resolution on the minutes of the Board on the subject. I knew from conversation with Mr. Rankin, that this man was taking tolls on this Bridge, but I had no official knowledge of it. I do not remember how much Toussaint swore to having received, but it was more than the fifteen shillings which he tendered to me, and which I accepted. He kept back a sum which he claimed for his time.

[Cross-questioned by Mr. Walker.]

I have no recollection of any letter having been written by Mr. Walker, complaining of the delay in the signing of the Contract, but such a letter may be in existence.

By reference to the minute book, I see the delay in signing the Contract, was caused by the necessity of applying to the Government to provide further sums to pay the full price of the Contract.

I received, as Secretary, several letters from Mr. Walker, and which I now produce, complaining of the delay in payment of the sums awarded to him by Mr. Rankin's certificates, and also a Copy of Protest against the Trustees by Mr. Walker, which I now produce, marked X.

The interest on the debentures due in January 1855, was not paid for some weeks afterwards, in consequence of the want of funds.

There was an agreement entered into on the 23rd day of January, 1856, between Mr. Walker and the Trustees, a Copy of which I now produce, and which is marked W. I did not hear of the first accident to the links at the Suspension Bridge, until about a week afterwards, nor have I any knowledge that it was officially notified by Mr. Rankin to the Trust. As soon as I heard of it I mentioned it to the Trustees. On Monday the 28th of April, Mr. Lemoine, one of the Trustees, informed me that a second accident had occurred at the Bridge, and he also stated then, that he had informed Mr. McPherson, his brother Trustee, also of that fact. Thereupon, at Mr. Lemoine's request, I saw Mr. Wilson, the mason, and sent him down to examine the work, and to make a Report the next day to the meeting.

On the next day Mr. Wilson appeared before the Trust, and stated that he had seen nothing wrong in the masonry, and that it was very fine mason work, but that he could not ascertain the state of the iron-work without removing the masonry and giving considerable trouble. I have no knowledge of Mr. Rankin having made any report with regard to the second accident, up to this time. The order to Mr. Rankin contained in the minute of the Board made on the 29th April last, was made in his presence and communicated to him. I cannot say whether he went down to the Bridge on that day or not. In April last Mr. McPherson, one of the Trustees, brought a letter to me, which he said came from Dr. Charest, and which was addressed by him to Mr. Lemoine, pointing out certain objections which he had to the Bridge. Mr. McPherson requested me to hand it to him at the next meeting, in order that he should lay its contents before the Board. Accordingly on the next meeting day I put the letter into Mr. McPherson's hands. This was on the 29th April. This letter was read in part by him to two of his brother Trustees, whose names I cannot recollect, and who were present before a quorum was formed, but nothing was done further respecting this letter. I do not know what has become of this letter, nor can I say whether the letter marked U, now shewn to me, is a copy of it. I cannot say how many members of the Trust were made acquainted with the fact of Dr. Charest having written to Mr. Lemoine, except Messrs. Lemoine and McPherson and the two gentlemen whose names I do not recollect, but I know it was not brought up before the Board.

When Mr. Rankin first spoke to me about the first breakage of the anchor links on the north-east or l'Ange Gardien side of the Bridge, he stated that he had worked in repairing them, and that the broken bars had been replaced. This was, as I have already stated, some days after the accident.

I am not aware of the Trustees having authorized any departure from the specification made by Mr. Rankin, and according to which Mr. Walker contracted to build the bridge.

Fortier, the toll-collector, was installed at the new gate on Tuesday, 22nd April, and took tolls there until the time of the fall of the bridge, and was paid by the Trust. There was no resolution or order upon minutes in reference to the opening of the Suspension Bridge other than those I have filed, and which are marked S. The Engineer, Rankin, was often spoken to and charged to be very attentive in superintending the work. The expenses of the Engineer for going to and returning from the Bridge were defrayed by the Trustees, as he was living in Quebec.

The Trustees frequently visited the Bridge, more frequently as it approached completion, as it was considered the most important work they had on hand.

[Cross-examined by Mr. Deblois, one of the Trustees.]

Question.—Is it to your knowledge that some of the members of the Trust had manifested a desire to be informed about all the particulars concerning the first breakage of the bars, and that they had called at the office for that purpose; and state what answer they received on this subject from the Engineer in your presence, or from the Engineer through you; and whether you have considered the Engineer disposed to make them acquainted with all the necessary information on that subject?

Answer.—A very great deal of anxiety was displayed by the Trustees on that subject, and the next day being one of the meeting days, a visit to the Bridge was arranged and took place during the week. The Engineer stated the bars that had broken; had been replaced, and that there was no danger. I do not recollect what reason the Engineer gave for the breakage of the links.

I do not recollect the particulars of the conversations that took place on the subject between Mr. Rankin and the Trustees, but blame was imputed by them to Mr. Rankin for not having seen that the stones had been placed at the junction of the bar links.

The foregoing deposition being duly read over to the witness, he persists in the truth thereof, and hath signed,

J. PORTER.

Sworn before us,  
this 16th August, 1856.

C. ALLEYN, }  
T. TRUDEAU, } Commissioners.  
A. POLETTE. }

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

### In the matter of the Montmorency Suspension Bridge.

William H. Rankin, of the City of Quebec, Civil Engineer, aged 33, being duly sworn, saith:—

I have acted as Civil Engineer during the last twelve years, three years of which I spent in Canada. The rest of the time, I acted in England and Ireland. I was Engineer to the Quebec Turnpike Trust, from August, 1853, to May last. The Montmorency Suspension Bridge, was built under my superintendence as such Engineer. The original plan of that bridge was furnished by Mr. Samuel Keefer, and is the plan marked A, now before the Commissioners. In consequence of a mistake of about 60 feet in the calculated width of the river in that plan, I made the plan marked B, by order of the said Trustees. This plan with specifications was accepted by the Trustees, and a Contract entered into accordingly with Mr. Walker.

The distance from the edge of the rock to rock was 306 feet, and from the points of Suspension, 342 feet. The towers from the level of the roadway to the top of the cable were 27 feet high. They were built solid. The foundations of the towers on the North side are about 20 feet below the roadway, and on the other side about five feet; and are built to the roadway of rock, faced ashler in heavy courses, and above the roadway of masonry. The towers rest on a foundation of solid rock, and at the level of the roadway are 9 feet six by 11 feet, diminishing upwards to the bottom of the cornice to 7 feet by 5 feet 6. The first stone of the towers was laid in September, 1854, and stone continued to be laid up to the end of November; but the work was suspended during the winter of that year, and commenced again when the snow began to leave the ground, in the Spring of 1855, and continued through that year. The Towers were not completed until the latter end of January, 1856. Some of the masonry was done in the depth of the winter, the masons having frequently had to light fires on the towers to enable them to set the stones. With the exception of a slight crack in one of the capstones, which may have originated from a flaw in the stone itself, I found no fault with the masonry, nor was the slightest defect to be found in it. The exact distance from the base of the towers on the East side to the edge of the rock is twelve feet, and on the West side is 13 feet, to the perpendicular face of the cliff. The distance from the face of the towers, at the level of the roadway, to the edge of the rock on the East side, is 13 feet 6 inches,

and on the West side is 13 feet 3 inches, to perpendicular face of cliff. As I have stated, the distance between the points of suspension was 342 feet, and the deflection or versedsine of the cables was 26 feet. The width of the platform was 21 feet, that of the roadway being 20. The length of the platform was 321 feet. Each of the two cables was composed of a thousand annealed charcoal manufactured iron wire strands of number 10. In addition to these cables, there were four bracket stays, or assistant cables, two on each side of the River, composed of a hundred strands of wire each, of the same size and quality as in the cables.

These cables were laid upon an improved plan, which was adopted at Niagara, in the construction of the Suspension Bridge. When the wires were extended and took their proper deflection, they were then bound round with wire number 14, in a close continuous wrapping, from end to end. At equal distances of about four feet bands of wrought iron  $2\frac{1}{2}$  by  $\frac{3}{8}$  inches, were put on over the cables. These bands were made to encircle the cable with two depending lugs, between which the loop on the end of the suspender was placed, and a bolt inserted to connect them together. The suspenders were composed of 28 strand of wire number 10, the same as in the cables. These suspenders were wrapped at intervals with wire number 18. At the lower extremity of the suspender, was attached another band of similar iron, made to fit round the beams of 12 by 4, and coupled to the suspender in a similar manner as the upper bands.

The platform was composed of beams from 24 to  $26\frac{1}{2}$  feet long; their size was 14 by 4 inches in the middle and 12 by 4 inches at each end. These beams were laid crosswise, four feet apart from centre to centre. They were made of the best description of tamarack. The cables were drawn in 6 feet towards each other in the middle of the bridge, *i.e.* 3 feet on each side. On these beams lengthways with the bridge was laid a tamarack flooring three inches thick.

This flooring was made by long pieces of tamarack over 30 feet in length. This flooring was well spiked with six and one half inch spikes of wrought iron.

Over this was laid an upper flooring of oak one inch and one quarter thick, laid crossways to the bridge to a width of 16 and one half feet, there being none on the foot-path which was slightly raised above the Broadway, and spiked to the lower floor with 4 inch spikes.

On each side of the platform was a truss six feet high, firmly bolted to every cross-bearer. This truss was composed of a top and bottom chord 6 inches square, connected by diagonal bracing 6 inches by two and one half, with bolts from top to bottom of  $3\frac{1}{4}$  round iron, set 4 feet apart. The top of the truss stood about 4 feet above the roadway. The truss was composed of the best tamarack. On the top of the truss was laid an oak cap of 7 inches by three-fourths; under the end of each truss extending from the face of each tower to a distance of 42 feet was an oak subsil, 8 inches square, bedded in the masonry of each abutment. Each of these sills was of one piece of oak, and to the outward extremity was attached bracket stays. These subsils were firmly bolted to the lower chord of the truss and cross bearers.

At intervals of 20 feet along the truss on each side of the bridge stays were attached, composed of 20 strands of No 10 wire, similar to that used in the cables, and firmly secured to the rock underneath. They were 32 in number, and were found of the greatest use in steadying and stiffening the bridge, and in lessening the vibrations usual in such constructions. I consider those stays were of the utmost importance, and am of opinion that no Suspension Bridge is safe without them. The cables passed over cast iron saddles on the tops of each tower, which saddles rested on cast iron rollers 12 inches in diameter. These rollers were turned and moved on a cast iron plate planed to a smooth surface, and which was bedded in the masonry. The cables descended from thence in a straight

line to the chain cable a point distant from the centre of the towers about 70 feet. The cable at this point was connected with a chain of wrought iron, forming a total length of 28 feet descending in a curvilinear position into the rocks. The lower extremity of each of these chains was secured to an anchor plate, made of cast iron of 4 feet by 3. Its thickness was about 2 inches, strengthened by deep flanges. In the central part of this anchor plate were two openings  $7\frac{1}{2}$  inches by  $3\frac{1}{4}$  inches, which received the ends of the bar through which was passed a two inch pin which secured them to the plate.

The chain was composed of bar links 7 feet long each, from centre to centre of connecting pin. They were in sets of 7 and 8 bars alternately, laid side by side in such a number as to give 6 inches in thickness. The depth of these bars was 5 inches. At each end of these bars was an eye through which a hole was bored, 2 inches in diameter. The iron about these holes was  $2\frac{1}{2}$  inches wide. A pin passed through the eyes of these bars 2 inches in diameter. The cable was connected with the bar links by a double set of short links, not connected as the long bars were, by pins passing through holes in their ends, but formed like the links of a common chain. These links were made up of 7 and 8 bars alternately, lapping past each other, and connected by two square pins of the same sectional area as the round ones, between which wedges could be inserted at pleasure when necessary for drawing up the cables. The same sectional area of iron was in the short links as in the long ones.

The anchor plates were fully twenty feet below the surface of the ground. At this distance half the width of the anchor plate was let in under the rock, which was cut out to receive it, and on the other half an inverted arch of cut stone masonry was built. From the anchor plate to the surface of the rock the rock was dressed and cut to a mould to allow the chain to lie in its proper position. The lower set of links stood perpendicular from the plate; the second inclined to them at a slight angle; the third inclined at the same angle to the second; and the fourth in like manner. The top of the third set of links was level with the ground, and the hole made to receive this chain was filled up with rubble masonry over the top of the inverted arch.

In the plan and specification large stones not less than 4 by 4 feet area 18 inches in thickness were directed to be placed and thoroughly bedded in rubble masonry at each angle or point of the chain. These large stones were to be laid in positions corresponding to the tangent of the curve at each joint. Plates of iron were to be placed between these stones and the heads of the bars  $\frac{1}{2}$  inch thick, and 10 by 16 inches area. These stones were omitted, as in excavating the anchorage the rock was found so good that they were dispensed with.

In June, '55 I was ordered by the Trustees to proceed to Niagara to examine the Suspension Bridge lately constructed there, and to apply any improvements that had been adopted there and were found suitable to the present structure. I found the anchor vaults there built on an entirely different plan from that proposed here, which improvement, with a slight modification, was adopted at Montmorency.

This plan was to build the anchor vaults solid in cut stone masonry, in raking courses corresponding with the upper set of links, so that the upper set should lie through all its length on this cut stone masonry. But at Niagara the vibration of the trains lifted the courses of the stones above the links, the first or upper set of links being in the same line as the land cables. To avoid this the upper set of links were lifted a little, so as to maintain a constant downward pressure, and had this set been built under as intended, the bridge would have been as secure, or more so, than on the original plan. The masons were in the act of building this when the bridge fell. The course of stone under the links was continued beyond both ends of the links, and at the lower end would have taken

the place of the large stone mentioned in the specification. The cut stone referred to above was intended to commence at the joint of the third and fourth links. The space between the joint of the 3rd and 4th bars and the surface of the rock, which occurred at about half the length of the 3rd bar, was filled with rubble masonry. The rubble masonry was built up to the level of the ground, that is, up to the top of the 3rd set of links, before the cable was laid across. The cut stone was commenced when the bridge was nearly completed, and was never finished.

I calculated the weight of the bridge and found the cables, stays, suspenders, truss and platform, &c., to be 103 tons. To this I added 17 tons for moisture, making the whole weight, when calculating the strength of the bridge, 120 tons. The greatest load which I estimate could be put upon the bridge is 120 tons, which would be the entire platform covered with people, giving a gross total of 240 tons. This would cause a tension at the points of Suspension of 412 tons on the two cables combined, giving 206 tons to each cable.

The ultimate strength of one cable, including the bracket stay, was 687 tons, thus proving they were three and one half times stronger than required.

The sectional area of the bar links was 30 inches and their breaking weight for direct tension was 757 tons according to Professor Barlow—whereas if subjected to a cross strain by being supported in the centre, and loaded at the one end, their breaking weight was only 8 and one half tons. The actual strain at this point when the bridge fell was 100 tons. Before the wire was stretched it was frequently tested in my presence and the breaking strain was found to be over 1400 lbs. The bar links could not be tested, as there was no possibility in this country to get a machine to test them in the direction of their length, in the manner in which they were to be applied. The lower links, *i.e.* the two lower sets to the best of my belief in all the anchorages were of Scotch iron Gorin brand, the remainder of the links, *i.e.* the upper sets in each anchorage, was scrap iron manufactured at Three Rivers. Scrap iron, when well manufactured, is generally considered to be the best of all iron. It was rough on the outside, but when examined was considered good. I examined it myself with great care.

In the month of March, 1856, I reported to the Trustees that the bridge was in a fit state to be tested, which was accordingly done in their presence. A weight of from 50 to 60 tons of stone having been placed upon it, besides a number of people and two horses with heavy loads of iron crossing and re-crossing without any perceptible effect. This test was considered perfectly satisfactory. At this time the frost was not off the ground.

On the 17th April, the men commenced to clear the snow to allow the carts to pass and on removing the snow from the North-east anchorage a slight derangement was perceived in the heads of the third set of links, which was just above the level of the ground. The masonry was at once cleared off this set of links and it was found that only two out of the 8 links were whole, the others having been broken at about half their length, at the point at which they crossed the top of the rock, it being evident that the broken links had been subjected to a cross strain produced by the thaw softening the ground down to the solid rock, at which point they broke. There was an angle between the third and fourth set of links. The strain at this angle was resisted by packings of flat wood and short pieces of flat iron of the same size as the links; a wooden prop was placed under the heads or upper end of the 4th set of links. These props and packings were to have been replaced by cut stone masonry as soon as the season would permit. The two remaining links had bent more than six inches on their edge and in that state carried the whole weight of the bridge, for what time I cannot say. I account for the breakage of these links by the depression of the angle between the 3rd and 4th links, which thus produced a cross strain at the points

where the links came into contact with the solid rock. New links were immediately forged of the best iron and some of the broken links removed. Two of the links we put down were double links. They were thicker than the old ones. Two double and two single links were put in the place of the broken ones, and were placed on the pins at a bright red heat, so that by their contraction in cooling they took their proper share of the strain. This anchorage was made rather stronger than it was before, and was completed by 12 o'clock on the 21st April.

I am fully persuaded that if the mason work had been built before the cables were carried over the river, this first accident would not have occurred; provided it was not built in the frost. This accident caused a depression in the centre of the cable on the North side of the Bridge, of twelve inches. The north side of the Bridge was again brought to its proper level by the hydraulic jacks; as soon as the bridge was brought to its proper level, the masonry at the North-East side, where these links were broken, was built up and secured. Although there was no large stone under the angle between the 3rd and 4th links, I considered that the masonry which was laid was sufficient to resist the strain. I did not perceive or hear that any thing was wrong with the Bridge until Monday, the 28th April, 1856, when it was reported to me that one out of the 8 links of the 3rd set, on the North-west anchorage, had broken about 18 inches from the surface of the ground. I went to the spot at once and examined the remaining seven, but as the day was very wet, I found it impossible to have a satisfactory examination. I was, however, under the impression that the remaining seven links were sound. I left orders to have a proper examination made as soon as the rain should cease. There was also, on this side, a slight angle between the 3rd and 4th links. The pressure caused by this angle was resisted by rubble masonry, which had been built in winter, and it was my intention in the spring to build under the 4th set of links with cut stone as in the opposite anchorage, which would have borne the whole strain. On Tuesday, the 29th, I reported the circumstance personally to the board, when they directed Mr. Wilson, Master-builder, to revisit the Bridge and ascertain if there were any thing wrong with it. He returned and made a favorable report, as I am informed.

On Wednesday the 30th, the seven remaining links of the 3rd set of the North-west anchorage gave way, which caused the cable from this anchorage to rush over the tower, breaking the South-west anchorage by a sudden jerk.

When I arrived upon the ground, the remains of the Bridge were hanging from the towers on the East side, where they remained until they were taken down.

I am fully persuaded, that if the mason work had been built before the cables were carried over the river, this would not have occurred, provided it was built in seasonable weather. I am also of opinion, that if the mason work had been built in summer, and not in winter, it would have been sufficient to resist the strain.

Notwithstanding all the minor defects of the masonry, the omission of large stones and iron plate under the heads of the links, I am of opinion that the accident would not have been so likely to occur, had the anchorage chains been laid in a straight line from the anchors to the points of suspension.

The bar links did rest along the whole length where they came into contact with the rock, and it was also intended that the whole length of the bar links should bear on the cut stone masonry, when completed.

I believe it would make no difference to the stability of the work whether the bars rested on their whole length or only at their angles or joints, provided the mason work under them was equally good all along as under the head, and that the whole was good cut stone mason work.

If there was any defect or ——— in the mason work, I believe it would be better that they should only bear under the heads of the links.

Question.—What changes did you make in the original plan and specification? Point them out and state the effect to be expected from them.

Answer.—At the time of preparing my plan and specification, I made no alteration from Mr. Keefer's plan, excepting dimensions. I had not sufficient time to enquire into the details of the construction to adopt the principles I considered best. This is the reason why many minor changes were made afterwards.

Question.—Is it upon your own plan and specification that the works were performed?

Answer.—It is, with the exception of some alteration in the details.

Question.—Were the plans and specifications strictly followed? If not, state in what particular, and the reasons for which they were deviated from.

Answer.—They were not, for in the erection of the Bridge I made many alterations in the details. The following were the principal:—1. The pins connecting the bar links were made 2 inches in diameter instead of  $2\frac{1}{2}$ , that being the proper proportion to the area of the bars. 2. The shackles to connect the wire with the bar links were omitted to allow the bar links to take a level bearing on the masonry of the anchor vaults and to simplify the construction. 3. The large bearing stones were omitted for the reasons before stated, viz: in excavating the anchorage the rock was found so good that the two lower stones were dispensed with, the anchor vaults having been built solid in raking courses as before described, were intended to take the place of the upper bearing stones shown on the plan. 4. The iron plates were omitted without my knowledge. 5. Ground stays were added for reasons before described, the Bridge not being considered safe without them. 6. The span of the Bridge was increased by 15 feet to place the towers farther from the edge of the rock. 7. Anchorage built solid and in raking courses for reasons aforesaid.

Question.—How often did you go down to inspect the work?

Answer.—About once a week in 1854—once to twice in 1855—and twice a week in 1856. My duties being so extensive I had no time to go oftener.

The reason for carrying on the work in the winter was that the Trustees were most urgent upon me to complete the Bridge before the spring, it being feared that the old Bridge would be carried away by the spring freshets. At the same time every possible precaution was taken.

Question.—At the time of the discovery of the first accident, was the Bridge shut up, or was it used up to the time of its falling?

Answer.—At the time of the discovery of the first accident the Bridge had not been opened to the public, and it was only after the Trustees had personally examined the repairs of the broken anchorage that they ordered it to be done. This was the 21st April, and the Bridge was used by the public from that time up to its fall.

The foregoing deposition being duly read over to the witness, he persists in the truth thereof, and hath signed.

WM. H. RANKIN.

Sworn before the Commissioners,  
at Quebec, this 11th August, 1856.

C. ALLEYN,  
T. TRUDEAU.

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

Frederick Preston Rubidge, of Toronto, Canada West, Civil Engineer, aged 50 years, being duly sworn saith:—

I have been engaged as Engineer in Public Works, for the last 27 years, of which the last 15 have been in the Public Works of Canada; my position there is Assistant Engineer. I had been employed by the Road Trust, upon professional duties, and they made application to the department for my services, in carrying a Suspension Bridge over the Montmorency River, to which I consented. On reflection, having been engaged with Mr. S. Keefer, the Engineer of the department, in the construction of the Union Bridge at Bytown, some years previously, I recommended the Trust to have the benefit of his experience. Accordingly, in company of some gentlemen of the Trust, we proceeded to the Montmorency River, and there made a reconnaissance survey. It was determined to place the Bridge as near the Cataract as was deemed prudent.

The mode of obtaining the width of the River on that occasion, was with a pocket sextant, which process, when the banks of the river will admit the base to be equal to the perpendicular or the inaccessible distance required, is a mode attended with great exactness. When as in the case of the Montmorency, the bank will not admit more than  $\frac{1}{4}$ th or  $\frac{1}{3}$ th of the perpendicular or distance sought, the angle becoming very acute, the same accuracy cannot be obtained. It was therefore determined to place the towers at a sufficiently safe distance apart. This Survey being a mere reconnaissance, no level was used on that occasion. The computations were made approximately from judgment, and measurement with a tape line. The plans and specifications were however based upon this survey. The estimate was made at the time when prices of labor and material were extremely low, or at least, when they were commencing to advance, and the whole character of the work was calculated to meet the funds in command of the Road Trust.

I see by the plan originally drawn, the points of suspension were placed 384 feet apart, and with the knowledge that I have obtained, that those supporting points had been reduced to 342 feet, I should recommend from the appearance of the base of the towers on inspection, they were removed to the distance originally intended as a matter of prudence and safety hereafter. In the original plan of Mr. Keefer, where the distance of 360 feet is given between the banks, from the mode of obtaining this distance, I do not consider it sufficiently accurate to be insisted on.

The centre line appears to have been moved considerably nearer the edge of the Fall. By so moving it, I consider it was brought into less secure foundation. Having duties in Quebec at the latter end of April, and hearing certain rumors connected with the Montmorency Bridge, I paid it a visit on the 27th April, 1856.

The plan or elevation shows the platform of the Bridge rising to the centre about 12 inches. On the occasion of my visit I found it sunken some nine inches below the horizontal line.

Having attended the opening of the Bytown Bridge, when crowded with a dense mass of people, marching in equal steps, I could not but compare that structure, preserving its rise under that dense load, with the unsightly Bridge thrown across the Montmorency River. But to convey my impression more truly at the time of my visit, I beg to lay before the Commissioners a copy of a communication sent in the following day to Mr. Samuel Keefer, setting forth many of the defects in construction which were apparent,

Anything relating to the anchoring and the securing the same below ground level I could not remark upon, the same being hidden from inspection. My observations refer to the superstructure chiefly. I now produce this communication, and it is marked T. It is a true copy of the original letter now submitted, with the exception of private observations having no relation to the construction of the Bridge, and is a true statement of my inspection on the occasion in question. One of the serious objections mentioned in the above communication which I would comment upon, is where the wire forming the main cable, and connecting with the anchor bars, is made to pass round the two inch bolt without any protection against chafing or means of spreading or increasing the bearing or tension. I examined the site of the Bridge yesterday, and found the blocks of stone which were intended as bearing points at the change of the curve line of the anchor bars to be wholly wanting. By the original plan, bed plates of cast-iron were intended to support the anchor bars at every change of curvature, between which points of support there was to be no contact with the masonry. Upon examining a series of these bars on the South-west side, I observed that an unnatural strain had been produced in the centre of their length, and had bent them to a curved line. On the opposite side the same force or strain had been evidently in existence, and had broken the bars asunder. I think that had this tension been made to bear upon the proposed stone blocks and bed plates, that the cross-strain upon the bars themselves would have been prevented. When I wrote to Mr. Keefer, on the 28th of April, I knew that some of the links had broken, but I did not know how many.

I am of opinion that the tortuous sunken set of lines shown on the roadway was caused by some yielding which had taken place at the anchoring.

The terminating posts were built too close to the towers to allow contraction or expansion for the play of the cables. What I have stated with regard to the truss or wood-work and the capping, in my letter, are minor defects, which would not be the cause of the fall of the Bridge. The deflection in the suspenders would be likely to be produced by the yielding of the anchorage. The want of collars or stirrups, where they clasp the bolts, would affect the durability of the Bridge, and not cause any immediate danger.

I am of opinion that the wires in supplementary suspenders not having equal tension was from having been badly made.

[Cross-questioned by Mr. Rankin.]

Question.—The banks having been ascertained by actual chain measurement to be 300 feet apart, instead of 360 as marked upon Mr. Keefer's plan, do you mean to say, as you imply in your evidence, that you consider it necessary for safety to place the towers 50 feet from the edge of the rock on each side, bearing in mind, as engineer, the great increase of expense in a Suspension Bridge in the increase of the span?

Answer.—From an inspection of the locality and the character of the rock, as it presents itself, I should deem it more prudent to place the points of suspension at 50 feet, rather than in the position which they now occupy. With reference to the increased cost of the platform by this extension it would amount to a mere trifle, for this reason, that the dimensions of the materials and the diameter of the cables had been provided, therefore all it would have amounted to would be some superficial feet in length of the platform.

The exact centre line was not marked out. It was to have been left to the inspecting engineer.

I cannot say how much farther up the stream the centre line ought to be, as that would depend upon the solidity of the rock, which I did not particularly investigate or ascertain.

Question.—From an examination of the drawing made by yourself, and from the figures on the face of that drawing, will you state how many feet back from the edge of the rock, on either side, you intended the face of the rock to be placed?

Answer.—I consider the points of suspension the governing dimensions. It is immaterial whether the edge of the cliff, made or drawn, is the exact width or otherwise.

Question.—Notwithstanding the defects in the construction of the Bridge, would it have fallen had the anchor and chain been carried down in a direct line?

Answer.—With no better class of masonry and arrangements, that is, the same character of work, I do not think it would have held.

Question.—Admitting the anchoring plate to be securely fixed in the rock, in a direct line, do you believe that, notwithstanding all the defects mentioned, the Bridge would have fallen?

Answer.—I am not prepared to give an opinion at present; there is a difference of principle involved, and it requires consideration.

The foregoing deposition having been duly read over to the witness, he persists therein, and hath signed.

F. P. RUBIDGE.

Sworn before the Commissioners,  
at Quebec, this 11th August, 1856.

C. ALLEYN,  
T. TRUDEAU.

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

Thomas A. Walker, of Quebec, Builder, aged 28 years, being duly sworn, saith:—I am the person named in the contract marked No. 1, now shown to me, as Contractor for the building of the Suspension Bridge over the Montmorency River. I have been engaged as Engineer for ten years on railways. The Montmorency Bridge was the first Suspension Bridge I ever built. I never assisted in any capacity whatever in the construction of a Suspension Bridge before that one over the Montmorency River. I was a student at the Engineering Department, King's College, London, and I was there when the Hungerford Suspension Bridge was built by Mr. Brunell. This is the only Suspension Bridge I have seen in the course of construction. My attention was first drawn to the Montmorency Bridge by advertisements in the Quebec papers, calling for tenders to build the Bridge in November, 1853. I called at the office of the Quebec Turnpike Trust for information, and was informed that the time for receiving tenders was postponed to February, 1854—at that date I gave in a Tender for the Bridge, based upon Mr. Keefer's plan, for £9378 for 400 feet span. I was informed that my tender was the lowest, but that an error in the width of the river had been discovered, and that it was intended to call for fresh tenders. I again tendered on the 1st June, 1854, on Mr. Rankin's plan of 327 feet span, for £7200, and my tender was accepted. By my tender the Bridge was to have been completed on the 1st December, 1855, this would have given 12 months seasonable weather to work,—leaving six winter months, during which stone cutting only could be carried on. I understood that the work was to be commenced immediately, but a delay of two months took place, from the Trustees not being in a position to

complete the contract. Immediately on the completion of the contract, indeed three days before, I commenced the works vigorously, and although much work was to be done in clearing out foundations, quarrying and cutting stone before the masonry could be commenced, we laid the first stone about six weeks from the time the contract was signed, viz.: on the 20th day of September, 1853. From this date to the end of the building season, viz., on the 21st November, the works were carried on vigorously. I employed 40 men at the work, and work to the value of £450 to £500 was done monthly. In the months of December and January I continued to have stone cut for use the next summer, but on the 1st January the Trustees were unable to pay the interest on their debentures and at the end of that month they thought it better to settle up our accounts then, and to stop the works till they obtained some assistance from the Government. An accurate list was therefore taken of all the cut stone which was delivered to them, and paid for, and the works were suspended. At the time I was in treaty for the purchase of the wire in England, and this I was also obliged to suspend. After 5 or 6 weeks, that is, about the middle of March, the works were again commenced, but with only a few men, as it was impossible to re-establish confidence in the Turnpike Trust Debentures. On the first of January, 1854, I held £10550 of Quebec Turnpike Trust Debentures taken in payment on account of my contracts, on which I had received an advance of 80 per cent. The depreciation in the value of the debentures, caused by the non-payment of the interest by the Trustees, was so sudden that I was compelled to give up the whole of these debentures for the amount of the advance which I had received upon them. When I undertook the contract, the debentures were being sold in town at one premium. In the month of April, I arranged for the purchase of the wire in England, but this was so late the whole of the wire having to be made to order, its being of a better quality than any kept in stock by the manufacturers, it was the end of the summer before it arrived in Quebec, and after its arrival it required from 6 weeks to 2 months to coat it properly with oil, as much as could be obtained. The iron of the anchor bars was bought in Quebec, in April, '55, and the balance was ordered from the St. Maurice Forges, at Three Rivers. That bought in Quebec was forged by myself and they gave great satisfaction to the Engineer when employed on the work. The iron was Bakk's best and Govan iron. The bars from Three Rivers, on the contrary, were badly manufactured, and had to be closely examined by my Smiths before being put into the work. The iron was found of excellent quality and rather larger than the specified sizes, which was considered to make up for any fault in the forging. In fact, the defect was in the workmanship; it was more unsightly than defective. The anchor plates were cast at Three Rivers. They were of good metal but very roughly cast. One set was returned to Three Rivers and re-cast.

The bars were bored by Messrs. Norcross, Phillips & Co., of Three Rivers, and their instructions as to the boring were given in the words of the specification. After the bars were delivered at Quebec, they were fitted in sets by my iron-smiths, and as the pins which connected them exactly filled the holes bored in their eyes, it was impossible but that all the bars should take their proper proportion of strain. At the same time they were fitted into the anchor plate and were never separated again, but lowered with strong tackle into their places, and hung from that tackle when they were built under and round the bars. The pins connecting the bars were made at my own forge, or shop, near the Falls.

When I signed the contract, I understood that I was bound by the specification to put in large stones and iron plates under the heads of the links, subject, of course, to all further orders to be received from the engineer.

I purchased the stone for the Bridge at Deschambault, and Mr. Rankin arranged that his inspector should go up with my foreman to the quarries and examine

the stone before it was shipped for Quebec. The question was then asked by the inspector whether he would ship the large stones required to put under the heads of the bar-links. Mr. Rankin told him not to do so, as the rock in the anchorages was so good as not to require them.

Question.—Did Mr. Rankin give you authority to omit the large stones under the bar-links above the surface of the solid rock?

Answer.—He did. He ordered an anchorage to be built in raking courses under the whole length of the upper set of links. A good piece of cut stone being set under the heads of the links; but of no particular dimensions. The piece let in the anchorage that gave way was of 16 inches Deschambault stone.

Question.—Did you understand it to be Mr. Rankin's order that the whole length of the bar-links should bear on the masonry?

Answer.—Certainly I did; but the centre of this masonry was of rubble, with only two or three through stones in the length of the links.

The day before the Bridge fell I was ordered to build a better class of masonry, cut stone throughout, set in cement, for which the Trustees then agreed to allow an extra price.

Question.—Did it occur to you at the time Mr. Rankin ordered these changes that they were uncalled for, and that it would have been better if he, Mr. Rankin, had adhered to the original design of having only the heads of the bar-links bearing upon the masonry?

Answer.—It did not occur to me, and I am still of opinion that the anchorage, as proposed by Mr. Rankin, was very much preferable to that shewn in Mr. Keefer's drawings. At the same time I understand Mr. Keefer's drawings to show the whole length of the bar links resting on the masonry, which is composed in his drawings of small flat stones set on edge, and although it was intended that the weights should be borne by the large stones at the heads, there would always have been great danger of the bars being broken by the derangement of these stones, which their great size rendered them peculiarly liable to, the upper part of the anchorage being open to receive any water, and if this were frozen under the stones they would certainly have been moved in some degree.

Question.—Did Mr. Rankin order you in writing to make these changes?

Answer.—He gave me a drawing for part of them, and merely a sketch for the last, which were only just commenced. The last of the bar-links were received about the 1st October, 1855. After this they had to be fitted before being placed in the anchor vaults. The mason work was commenced on the 3rd May, 1855, and was carried on but very slowly in the summer, there being constant disputes between myself and the Trustees as to the amount of money to be advanced on account of the works. These disputes were continued until the first week in November, when they paid me one-fifth of the whole price of the Bridge, and at the same time ordered me to push on the works, so as to finish them, if possible, before the spring freshets, which, it was expected, would carry away the old Bridge. After which time the work was carried on more vigorously, and the towers were completed in January. The first anchor plate was placed and built around in September, 1855; at the east end of the southern cable; the second, on the 9th October, at the west end of the same cable; the third, on the 29th November, at the east end of the north cable; the fourth, on the 15th December, at the west end of the north cable. This last was the one that broke.

The reason why these were not laid in summer was, that I could not get either the bar links or anchor plates, although I had ordered them in March previous. By the time the anchorage was built in masonry to the surface of the ground, the season was so far advanced that we dare not build the anchor vaults, which being entirely above the surface were more exposed to the frost. As it was desirable

to put the wires across the river without delay, the place of these anchor vaults was supplied by wooden props, which were to be taken out when the masonry was built under the cables, as early as possible in the following spring. These wooden props were put in with the sanction of Mr. Rankin. The first wires were put across the river on the 9th November, 1855, and the second cable was commenced on the 29th December. The suspenders and timber were commenced to be hung on the 1st February, 1856, and the Bridge was passable for foot passengers on the 14th.

On the 18th April, '56, I went down to let out the anchor vaults for the masons to commence building, that is to replace the wooden props by masonry, and at the same time to clear the snow off the road for the passage of carts, as the Bridge was to be open to the public in three days. On removing the snow from the head of the third set of links on the north-east anchorage, I perceived a slight derangement in them, as though the links did not all lie in one straight line. I had no men at the Bridge at this time but one carpenter finishing the railing and the masons who had that day commenced to build the anchor vaults. The men who had worked for me at the Bridge were then working at the Dorchester Bridge. I determined to send them up and have the state of these links examined, to do which it was necessary to take out the masonry to a depth of seven feet. I came to Quebec and sent these men to Montmorency the same night, ready for work the next morning.

About 8 o'clock at night the foreman of the masons came to my house to tell me that soon after I left he had heard a report like a pistol shot, and that at the same time the cable had appeared to shake so much as to throw down some of his points and chisel which he had laid on it. The next morning I did not observe that the Bridge had given away at all; it had done so a little previously, which we ascribed to the props under the cable sinking a little into the ground as it thawed.

The next morning, the 19th, Mr. Rankin and I went to the Bridge, when the masonry was taken out, and six of the links out of the third set, which consisted of eight, were found to be broken. Five of these links had bent about three inches before breaking, the sixth had bent about five inches, and the fracture was comparatively new; the other two links were bent six inches, and in that state carried the bridge. All these links were bent sideways. It proved that the iron was of the best quality, as no common iron would bend cold on such a depth as five inches. It appeared plain that the noise and shock mentioned by the foreman the day before had been caused by the breaking of the fifth link, the fracture of which was decidedly recent. This anchorage was on the edge of an old quarry, and the rock had been worked out to about the point at which the fracture took place, and it had not been considered safe in the winter to build up under the heads of these links, as it was entirely exposed to the weather, and five or six feet high. The thaw softening the ground, and allowing the wooden props to yield a little before the masonry could be built under the links, had lowered the head of those links so as to cause a cross-strain at the point where they crossed the rock, and this cross-strain had broken them. These links were immediately replaced by two double and two single links, giving a little greater area to the bars of the anchorage than they had originally.

At the same time, the upper set of links were built under throughout their whole length with masonry, as was intended to be done in all the anchorages, and those bars not only carried the weight of the Bridge to the time of the accident, but withstood the shock of the fall of the Bridge, and remained perfect till the cables were taken off them. The circumstances attending the fractures of these bars, were entirely different to those in the opposite anchorage, which afterwards gave way. All the other anchorages had been built in masonry to the surface

of the ground, that is above the head of the third set of links. This one was open to the point at which fracture took place. There was therefore no fear entertained of any similar accident in the other anchorages. It was at this time that we commenced operations with the hydraulic press. We use the press to lift the weight of the cables off the props, while the masonry was carried up under them, and at the same time, by raising the cable a little to restore the proper camber to the Bridge. They were successfully applied at the North-east anchorage, and the masonry built as I have before stated. When the bridge was built, a camber of about 4 or 5 inches was given to the platform, but at this time it had lost the whole of its camber, and on the North side showed a deflection of 4 or 5 inches. The adjusting links provided at the ends of the cables, were found useless for raising the Bridge, and it was for this reason, the hydraulic jacks were used.

On the 28th April, Mr. Lemoine, one of the Trustees, informed me, that one of the links had again given way. We proceeded to the Bridge, and found that one of the links at the North-west end was broken, but that the other seven were good, but it was thought better to examine them through the whole of their length, and this was ordered to be done forthwith. At this time it was raining so heavily that the men would not work, and it continued to do so on Tuesday. On Wednesday morning, as I was on my way to the Bridge, I received word that it had fallen.

The cause of the fall, on examination, was found to be a softening of the frozen masonry under the heads of the third set of links, allowing the heads of the links to fall, producing a cross-strain about a centre of them. There was masonry under these links for about three feet from their head. The head rested on a Deschambault stone, resting on the rock, which being in horizontal beds, was cut out in steps, so that the stone did not take the fair bearing on the rocks, but between the points at which it bore on the rock was carried by rubble masonry, which was softened by the thaw, and the stone taking an uneven bearing on the rock, had been broken into five pieces, indeed it was entirely shattered. Had the rubble masonry under this stone, been built in summer, so that this stone would have taken a fair bearing, it was calculated to carry without fracture, ten times the weight to which it was subjected.

Question.—Had you directions from Mr. Rankin for all and every the works performed in constructing the Bridge, if not, state what parts of the works were so performed without directions?

Answer.—I had Mr. Rankin's directions or approval for every part of the work done. I did not report the first accident at all to the Trustees, but Mr. Rankin reported it to them on Monday, the third day after arrival on the 28th of April, when I went down, having heard of the serious accident, with Mr. Rankin, we could not ascertain the extent of it as the men would not work, it rained so hard, but seeing that one link had broken and stood up above the other links, we came to the conclusion that the other seven held.

Question.—Why did you not order the Bridge to be then shut up?

Answer.—I had no authority then over the Bridge, as the Bridge had been taken out of my hands a week before by the Trustees. A man named Toussaint then had charge of it for the Trustees.

Four painters of mine, however, were working at the Bridge, and also my masons building the anchor vaults, up to the 30th. I could not repair the accident on the 29th, on account of the rain and in consequence of my being obliged to attend the meeting of the Trustees at Quebec, to receive their orders about the anchor vaults. I did not consider the Bridge in any danger on the

28th or 29th. I crossed it twice in a caleche on the 28th, and the men never ceased to use the Bridge.

Question.—Why did you not build the anchor vaults in cement as mentioned in the specification?

Answer.—The anchorages below the ground were laid in common lime only after the weather became too severe to allow the use of cement. Cement cannot be used in frost at all, but common lime can by being used hot. This is my reason for departing from the specification, and I had Mr. Rankin's consent for so doing.

I did not put the iron plates or saddles under the links above the solid rock because the whole plan was changed by the substitution of raking courses.

Question.—Was it to Mr. Rankin's knowledge that the iron plates or saddle above the rock were omitted?

Answer.—Certainly, his inspector, King, was present at the laying of the stone. King is not now in this Province. Mr. Rankin himself was so constantly present that he could not be ignorant of this change. At the time of the building of these anchorages, Mr. Rankin came there three or four days a week.

The old Bridge was in so dangerous a state in April last, that for my own part I did not like to cross it. About the fifth of May, I saw a portion of the timber removed from it, and I am only surprised that the Bridge did not fall of its own weight.

The man Toussant, who has given his evidence in this cause, was discharged by me on the 22nd or 23rd of April, at the time he took charge of the Bridge for the Trustees, and collected toll on the Bridge itself. At the time he stated, that he left the work for fear of the Bridge falling, he came back to me and begged me to take him into my employment as the payment he received from the Trustees was not sufficient for him to live upon. Accordingly I employed him again about three days before the Bridge fell. It is to my certain knowledge that he took toll for horses and carts on the Bridge, which he says he did not do.

The foregoing deposition being read to the witness, he persists in the truth thereof, and hath signed.

THOMAS WALKER.

Sworn before us at Quebec,  
this 20th August, 1856.

C. ALLEYN,	} Commissioners.
A. POLETTE,	
T. TRUDEAU,	

[*Evidence of James Kane.*]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

James Kane, of Quebec, Civil Engineer, aged 38, being sworn, saith:—I have been an engineer upwards twenty years, of which the last sixteen have been in Canada. I saw the Suspension Bridge over the Montmorency in the months of

November, December, and January last, during which time the work was not completed. Having been employed some thirteen years ago in making drawings for a similar Bridge, designed by Mr. S. Keefer, I felt an interest in this work, and examined it rather particularly in Quebec, some time previous to my visit. On my arriving here I was astonished to find them building rubble masonry in the vaults, where the bar links are secured, and that in the depth of winter, when I felt convinced that this description of work would not be performed properly at this season of the year. I mentioned it to several parties in Quebec, but not to the Turnpike Trust. I was convinced that as soon as the thaw set in, in consequence of this defective masonry, the iron work would not stand or hold its position, and in consequence that the Bridge would go down. I saw some of the mortar in the spring, after the Bridge had fallen, which had been used in this rubble masonry, and the lime and sand, of which it was composed, had not incorporated together in consequence of the frost, when it was first used. I wrote a letter three days before the fall to the Quebec "Colonist," cautioning the public against the Bridge. Even had the bar-links been continued down to the anchor, in a direct line with the cables, provided there existed the same defects in the masonry, I don't think the Bridge would have stood; but I prefer straight line for securing a Bridge.

[Cross-questioned by Mr. Deblois.]

I have been informed that an hydraulic ram had been employed to elevate the Bridge, but as I do not know at what point it was applied, I cannot state whether it was injurious or not.

The foregoing deposition having been duly read over to the witness, he persists therein and hath signed.

JAMES KANE.

Sworn before me at L'Ange Gardien,  
this 13th August, 1855.

C. ALLEYN,  
A. POULETTE,  
T. TRUDEAU.

[Translation.]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Suspension Bridge erected over the  
River Montmorency.**

Presque Vezina, of Ange Gardien, day-laborer, aged 50 years, being duly sworn, deposeth as follows:—

My son, Louis Vezina, 16 years of age, left my house on 30th April last, about eight o'clock, a.m. I met him on the road about five minutes past eight. He was going to Mr. Beuvrette's, who lived on the other side of the Montmorency Bridge. The old Bridge at that time was closed, and it was necessary to cross by the Suspension Bridge. I never saw my son alive after that. The Bridge fell about half-past 8, a.m. On the 24th May last I saw the body of my son, which had been found in the River St. Lawrence, in the Parish of Beauport, a quarter of a league below the Montmorency Falls. We sent our son to Mr. Beuvrette's

to procure bread, on that occasion. I am aware that the Suspension Bridge had sunk considerably, several days before the accident. We had begun to raise it, but our operations were not finished when the Bridge broke. People crossed it while under repair. The road leading to the old Bridge had been closed to prevent people from passing.

This deposition having been read to the witness, he persisted therein, and declares that it contains the truth, and affixes his mark thereunto, being unable to write.

PRESQUE <sup>his</sup> ~~X~~ VEZINA.  
mark.

Sworn before us, at Ange Gardien,  
this, 13th August, 1856.

(Signed,) C. ALLEYN,  
A. POLETTE,  
T. TRUDEAU.

[*Translation.*]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

François Xavier Lepine, of Ange Gardien, Farmer, aged 22 years, being duly sworn, doth depose and say:—

I was three-fourths of an arpent from the Suspension Bridge over the River Montmorency when it fell, on 30th April last, about half past 8, a.m. I saw, at the time, Ignace Cote, farmer, of Ange Gardien, and Angelique Drouin his wife, advance upon the Bridge in their vehicle. While they were on it, the Bridge fell, and they were thrown into the abyss. Their bodies have not yet been found. There was at the time on the Bridge, a third person, who was also cast into the fall, but I cannot say who it was. I had crossed the Bridge myself, about a quarter of an hour before it fell; in crossing I had perceived a trembling, which caused me to think, that something was wrong. It inclined a little on the north side.

When I perceived the trembling, the bridge was being raised, I thought something was wrong.

This deposition having been read, the witness persists therein, declares that it contains the truth, and has affixed his mark, being unable to write.

FRANCOIS XAVIER <sup>his</sup> ~~X~~ LEPENE.  
mark.

Sworn before us, at Ange Gardien,  
this 13th August, 1856.

(Signed,) C. ALLEYN,  
A. POLETTE,  
T. TRUDEAU.

[Translation.]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

Louis Belanger, of Ange Gardien, farmer, aged 52 years, deposes, as follows:—

I am next neighbor but one to the late Ignace Coté, in his lifetime farmer, in the same Parish, and I live at a distance of 5 or 6 arpents from his house. It is to my knowledge that on the 30th April last, about 7, a.m., the said Ignace Coté and Angelique Drouin, his wife, set out from home in a cart to go to Quebec. She spoke to me when passing my house. She could not get to Quebec without crossing the Suspension Bridge over the Montmorency. About an hour and a quarter after, the Bridge fell, and it is generally known that the said Ignace Coté and his wife were on the Bridge, and fell into the Falls. Since that time the said Coté and his wife never came back, and have never been seen. There is no doubt but that they perished. Some of their property was found on the banks of the river at Beauport and Ange Gardien, and also at the foot of the Falls; I saw them myself. Five days before the accident, I myself crossed the Bridge. It then inclined on the north side, and this was caused by some bars of iron to which the cables were attached which were broken. It was on the north east side from the river. It was on the other side of the river that the Bridge gave way. When I crossed, the road leading to the other Bridge was closed. One could not cross to the other side of the river without going by the Suspension Bridge.

This deposition having been read, the witness persists therein, declares that it contains the truth, and hath affixed his mark, being unable to write.

his  
LOUIS ✕ BELANGER.  
mark.

Sworn before us, at Ange Gardien,  
this 13th August, 1856.

(Signed,) C. ALLEYN,  
A. POLETTE,  
T. TRUDEAU.

[Translation.]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

Felix Bonchard, of Ange Gardien, farmer, aged 18 years, being sworn, deposes as follows:—

I was brought up by Ignace Cote, in his lifetime, of Ange Gardien, farmer, and by Angelique Drouin, his wife. I was residing with them on the 30th of April last. I know that about 7 o'clock, A. M., of the same day they started together in a cart for Quebec, where they had business to do. They never returned since. ~~It is generally known that they perished in the Montmorency Fall, into which~~

they were drawn by the Suspension Bridge, which fell on the day I mentioned. Some of their effects were found at the foot of the said fall, and I recognized them perfectly. They could not do otherwise than pass by the said Bridge to go to Quebec, and it was about an hour and a half after their departure that the Bridge fell, and they would have had time since their departure to get there before it fell.

This deposition having been read to the witness, he declares that it contains the truth, and hath affixed his mark, being unable to write.

his  
FELIX X BOUCHARD.  
mark.

Sworn before us, at Ange Gardien,  
this 13th August, 1856.

(Signed,) P. ALLEYN,  
A. POLETTE,  
T. TRUDEAU.

[*Translation.*]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

François Xavier Goulette, of Ange Gardien, trader, aged 50 years, being sworn, deposeth as follows:—

On 28th April last, I arrived at the house of Mr. Bureau, keeper of the old Bridge over the Montmorency fall; I found the gate of the Bridge closed, and I asked Mr. Bureau several times to open the gate, as I was afraid to cross over the Suspension Bridge, and my horse was also afraid. He replied that he could not open it, as he had been forbidden to do so. I was then obliged to pass over the Suspension Bridge, for I had pressing business at Quebec. The Suspension Bridge at that time inclined on the North side, and they were working at it at both ends. In going on the Bridge I remarked that it oscillated; in going further on, it was more steady, there was no wind at the time. I crossed it upon my return from Quebec, with two other men. We noticed that it had sunk still lower; the next day it fell into the fall.

This deposition having been read to the witness, he persists therein, declares that it contains the truth, and hath affixed his mark, being unable to write.

his  
FRANCOIS XAVIER X GOULETTE.  
mark.

Sworn before us, at Ange Gardien,  
this 13th August, 1856.

(Signed,) C. ALLEYN,  
A. POLETTE,  
T. TRUDEAU.

[Translation.]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

Louis Cloutier, of Chateau Richer, farmer, aged 60 years, being duly sworn, deposeth as follows:—

I have seen the Suspension Bridge over the Montmorency River, erected under the direction of Quebec Turnpike Road Trustees. On the 30th April last, I was very near the Bridge, on the North-east side, that is to say, Ange Gardien, about 8½ in the morning, I was about to cross. Having heard a very loud noise I stopped, thinking that the Bridge was about to fall, and in fact, it had broken and did fall immediately. The iron bars to which the chain, or rather the cable, was attached, on the North side to the South-west of the Bridge broke, and caused the bars of iron, to which the South cable was attached, to break also; in consequence the Bridge fell into the Fall. The end on the North-east side, not having broken, kept up a part of the Bridge, even in the Fall. When the Bridge broke there was a vehicle on it, and a man and woman, to whom it appeared to belong. There was also a youth of 15 or 16 years of age on the Bridge. These three persons and the vehicle fell with the Bridge into the Fall, and perished. I did not know the three men, but I have been positively informed that they were Ignace Côté, farmer, of Ange Gardien; Angelique Drouin, his wife; and Louis Vezina. About the end of May last, the body of Louis Vezina having been found, I was summoned before the Coroner's Jury to give my evidence, and I gave it. I saw the body of Vezina, but I did not recognize it. Immediately after the fall of the Bridge, I took the road leading to the old Bridge, over which I crossed, and went to the South-west side of the Suspension Bridge. It was there that I saw that the bars of iron before mentioned, to which the cable was attached, were broken.

Seven days before the accident I had passed over the Suspension Bridge, for at that time the road to the old Bridge was closed, and there was no other road to pass than the one over the Suspension Bridge. We were very much afraid in crossing it, for we had heard that some of the bars of iron to which the cable was attached on the north-east side were broken. When the Bridge fell a strong north-east wind was blowing. The wind did not seem to affect the Bridge.

This deposition having been read to the witness, he persists therein, declares that it contains the truth, and hath signed.

(Signed,) LOUIS CLOUTIER.

Sworn before us, at Ange Gardien,  
this 13th August, 1856.

(Signed,) C. ALLEYN,  
A. POLETTE,  
T. TRUDEAU.

[*Translation.*]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

Joseph Coté, of Chateau Richer, farmer, aged 44 years, deposeth as follows:—

I am the brother of Ignace Coté, in his life-time farmer, of Ange Gardien. It is publicly known that the said Ignace Coté and Angelique Drouin, his wife, perished on the 30th April last by falling into the Montmorency Fall with the Suspension Bridge, which broke and fell on that day. Since that accident the said Ignace Coté and Angelique Drouin has disappeared and have never been seen. Search has been made for their bodies but without success. I knew that the said Ignace Coté and Angelique Drouin were going to Quebec on business which they had there. They told me so.

This deposition having been read to the witness, he persists therein, declares that it contains the truth, and hath affixed his mark thereto, being unable to write.

his  
JOSEPH X COTE.  
mark.

Sworn before us, at Ange Gardien,  
this 13th August, 1856.

(Signed,) F. ALLEYN,  
A. POLETTE,  
T. TRUDEAU.

[*Translation.*]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

Louis Huot, of Ange Gardien, farmer, aged 60 years, being sworn, deposeth and saith:—

I crossed the Suspension Bridge over the Montmorency River four days before it fell. I was afraid to cross it because it inclined on the north side. On the 21st April last, seeing a man at work on the south-west side, I remarked to him that the Bridge slanted very much, and asked how it was. He replied that it was a post which they had placed upon the bars of iron to which was attached the cable to support them; that the frost had made it fall; but that they would arrange it, and that it would be nothing. I did not wish then to pass over the Suspension Bridge, and crossed by the old Bridge, the road leading to it being open. I believe that on the following day, or the next day after, the old Bridge was closed, to oblige persons to pass on the Suspension Bridge. The individual who was working on the Bridge, and to whom I spoke, is Moïse Gagnon, cultivator, of l'Ange Gardien.

The foregoing deposition being read to the witness, he persists in the truth thereof, and hath made his mark, declaring his inability to write.

(Signed,) LOUIS <sup>his</sup> ~~X~~ HUOT.  
mark.

Sworn before us,  
this 13th August, 1856.

(Signed,) C. ALLEYN, }  
T. TRUDEAU, } Commissioners.  
A. POLETTE, }

[Translation.]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

Jacques Binet, of Beauport, aged 15 years, being sworn, doth depose as follows:—

I live with my father, Jean Baptiste Binet, in the said parish, at about two *arpens* from the River Montmorency, on the road leading to the old Bridge. My father is a trader, and sells bread. I recollect that on the 30th April last, at about half past eight in the morning, Louis Vezina, came to our house to get a loaf. I gave him two small loaves in place of one large one, and he went off again to return to the house of his father, Presque Vezina, where he was living. The road to the old Bridge was stopped up, and there was no other means of crossing the river, but by going over the Suspension Bridge. It was at this time that the Suspension Bridge fell. It is publicly know, that Louis Vezina, was on the Bridge at the time of its fall, and that he was carried away into the abyss. There may have been about a quarter of an hour after the said Louis Vezina, left our house, when I heard it said that the bridge had fallen.

The foregoing deposition being read to the witness, he persists in the truth thereof, and hath signed.

(Signed,) J. BINET.

Sworn before us, at l'Ange Gardien,  
the 13th August, 1856.

(Signed,) C. ALLEYN, }  
T. TRUDEAU, } Commissioners.  
A. POLETTE, }

[Translation.]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

Tiburce Charest, of Beauport, Esquire, Physician, aged 35 years, being duly sworn, doth depose as follows:—

I frequently visited the Suspension Bridge over the River Montmorency, during the time of its construction. The first thing of importance which I remarked in the Bridge, was when they were beginning to lay the platform and carpentry. This was the tending which the north cable appeared to have, to descend daily below the level of the other, a tendency which continued to increase up to the falling of the Bridge. At the same time I observed that the four large stones which served respectively to cap over each of the piers, were splitting and breaking in several directions to such an extent, that one of them, that of the North Beauport pier, showed clearly a considerable depression towards its centre. I saw also that the stones serving as a support to this capping-stone, and forming the cornice of the above-mentioned pier, were quite deranged and separated from one another, so as to shew interstices between them several lines in width. I noticed also, on this pier, that the iron support under the cable had become affected in such a way that the North-east extremity of this support projected several inches beyond the roller below it, and the South-west extremity corresponded almost to a line, let fall perpendicularly on the axis of the other roller. I observed moreover, on looking attentively at the junction of the wires with the iron ties, that these wires had been passed in so unequal a manner, that about one third of the wires served to support the Bridge, while the two other thirds, from the relaxed state in which they were, could be of but feeble assistance to the other third. It was easy to convince one-self of this fact by seeing that a great part of the wires described, by themselves, or on the slightest pressure, arcs and flexures of different dimensions, while those which were shorter yielded with difficulty to a strong pressure. About this time also, I first remarked, on the Beauport side, at the Northern anchorage, that the iron ties which come out at the level of the ground, were so far impaired on the side of the bridge as to leave behind them a vacant space between the masonry, which surrounded them closely when they were laid. I began to observe the vacant space left behind the ties about a month before the fall of the Bridge. On the 25th April I was able to ascertain that this space was about 8 or 9 inches. I ascertained these facts in presence of two witnesses. It was at the cable which failed that I remarked this vacant space.

The reason that induced me to lay stress on my observations on this space between the iron bars and the masonry is, that after the accidental fracture of 5 or 6 iron bars at the opposite extremity of the same cable, the manner in which this accident occurred caused me to entertain strong apprehensions that the same accident might happen at the place where this space was visible, because all parts of the anchorages were similarly made, and the iron ties, or chains, were also placed in the same manner. On the 25th April I addressed to Mr. William Henry Lemoine, one of the Turnpike Road Commissioners, a letter informing him of the fact last above cited, and containing some other observations; a copy of which letter I now produce, marked U. Mr. Lemoine acknowledged to me, on the day before the Bridge fell, that he had received this letter on the day of its date. On the same Monday, the 21st April, I could see the workmen in the act of repairing the 5 or 6 iron bars which had been broken on the north-east. At the moment when I made my visit, I was after the Commissioners, who had made their's on the same day, so that I can affirm that if they wished to take information of this accident, they were able to do so easily, since I, myself, who came after them, was able to establish, in spite of the progress of the works and repairs, the cause and manner of the accident; and it was after this visit of the Commissioners that they decided on closing the old Bridge and opening the new to the public. On Friday of the same week, I was required to go to the parish of Augé Gardien, when I was obliged to pass over the new Bridge, though much against my will, from the old Bridge being closed, and because, also, the road leading to the old Bridge, on the Beauport side, was quite impassable, the Com-

missioners having, as it would appear, purposely allowed this road to become so bad in order to be doubly sure that no one would cross on the old Bridge.

The foregoing deposition being read over to the witness, he persists in the truth thereof, and hath signed,

DR. TIBURCE CHAREST.

Sworn before us,  
this 14th August, 1856.

(Signed,)      C. ALLEYN,  
                    A. POLETTE,      } Commissioners.  
                    T. TRUDEAU,      }

[*Translation.*]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

Isaie Toussaint, of Ange Gardien, carpenter, aged 29 years, being duly sworn, doth depose, as follows:—

I have worked as a carpenter on the Suspension Bridge over the River Montmorency from its commencement to the day before its fall. At each of the corners of the Bridge I saw a shaft sunk of between 27 and 28 feet in depth. At the bottom of each of these shafts were placed iron plates. I perceived that these iron plates were fastened beneath the rock. I saw that in the two anchorage pits of the south cable, pieces of cut stone had been placed. In the anchorage pits of the north cable, I did not see the beginning of the mason's work. At the south cable the links of the chain were placed in summer, and the anchorage pits filled at a proper season; on the north side, on the contrary, the links were laid in winter, and the pits filled up at an improper time. I am certain that the iron links were all delivered here (at Montmorency) in summer. I perceived that that part of the anchorage pits on which the chain rested had been cut on a model.

Nevertheless, I remarked that the rock was not cut with sufficient exactness, and that the iron bars did not touch everywhere. We began to get the iron wire across in the depth of winter, about the beginning of January, 1856, and at this time there was no masonry under the anchorage chains. To resist the strain caused by the curvature of the chains, we placed pieces of wood under these chains in place of masonry. It was understood that this wood would be replaced by masonry in the Spring. These pieces of timber supported the weight of the Bridge from its commencement to a few days before its fall. As soon as the thaw commenced, that is, towards the end of March, I perceived that the Bridge began to lean over towards the North, and that this inclination increased slowly, day by day, until at length, on the 18th of April last, at about five o'clock in the afternoon, while I was alone on the Bridge, employed in laying the plank, and two masons were working on the masonry at the anchorage, on the South-west side of Beauport, I heard a great noise, and felt that the Bridge had sustained a violent shock, and that the North side had lowered at least 4 inches. Thereupon I called the two masons, and after having examined the Bridge, we perceived that there were five iron bars broken in the second link of the chain.

counting from above. This accident was at the chain of the North-east corner. One of the masons went immediately to inform Mr. Walker of the accident, and the other mason and myself took on ourselves to close the Bridge, and allow no one to pass. Mr. Walker arrived very early in the morning of the following day, the 19th, and with him Mr. Rankin. They brought out some workmen from Quebec who had already worked on the Bridge. The whole of Saturday was passed in taking to pieces the masonry in the anchorage pits. When we were able to see the broken bars, we saw that the accident had been caused by the middle of the bars resting on the bare rock. What prevented the other two bars from breaking was, that by chance the middle of the bars did not touch the rock. During Sunday and Monday, the 20th and 21st of April, they placed new bars, working night and day.

On the 21st, many of the Turnpike Road Commissioners came to visit the Bridge, and informed themselves of the accident, and of the means made use of to repair it. On Tuesday morning, the 22nd, the repairs were completed, and I remarked that the middle of the North side of the Bridge was about 15 inches lower than it should be. We began, on that day, to raise it by means of a hydraulic pump. After having worked at it all the day, we ascertained that we had raised it one inch. During this day the Bridge was left free to the use of the public. I did not perceive that the Bridge sank during the night of the 22nd, 23rd. On the 23rd, the Bridge was open to the public, and the old Bridge was closed. During the whole of that day they endeavoured to raise the Bridge. From some derangement in our hydraulic machines, we were unable to raise the Bridge more than a few inches during the early part of this week. About this time I remarked that another bar of iron at the corner of the North-west side was broken. On the 28th, Monday, I notified one of the Commissioners of the circumstance, and am certain that he visited the place. We labored at raising the Bridge every day, from the 22nd to the moment of its fall. We never succeeded in raising it to its original level, excepting for an instant on the 29th, the day before it fell. Frequently, while we were raising the Bridge, the stays which we placed under the chains, to support the weight of the Bridge, slipped or missed, and the Bridge descended to its former place with a pretty violent shock. It was I who took the toll from the foot passengers, while vehicles paid only at the Turnpike. There were at the same time four painters working on the Bridge, and when one of the shocks occurred they told me they were afraid the Bridge would drop into the Falls.

On the 29th, I left my work, with a determination not to return to it, for I was too much afraid of an accident, and it was on the 30th of April, at about 8 o'clock in the morning, that the Bridge fell. It is to my knowledge, that Mr. Wilson, master-mason, residing at Quebec, was sent by the Trustees, on the 29th the day before the fall, to examine all the works of the Bridge, with authority to inspect, and to take to pieces in furtherance of the objects of his visit, every thing connected with the Bridge. It is also to my knowledge, that Thomas Donaley, the overseer of the works, and employed by Mr. Walker, himself, threw stone and earth on the defective part of the works, manifestly to conceal the broken links of the chain; the defects were thus concealed. Mr. Wilson at the time of his visit, on the 29th, could not see the broken links. I believe that Mr. Wilson did not know that some of the links were broken. But I know, that he expressed the opinion, that the masonry which surrounded the anchorages should be entirely rebuilt. Mr. Wilson also expressed the opinion that the foundations of certain parts of the masonry covering the chains, should be relaid at a greater depth; and also that sufficient importance did not appear to have been attached to this part of the work. I warned Mr. Lemoine, one of the Trustees, on the evening of the 29th, that if the works on the Bridge were still continued, the Bridge would be in

great danger, and Mr. Lemoine told me, he would return on the following day, and that it was necessary to have it arranged.

[Cross examined by Mr. Lemoine.]

On the 21st of April, at the time of the visit of the Turnpike Road Trustees, Messrs. McPherson and McCallum told me that it was Mr. Lemoine who would arrange everything, and that the old Bridge would be closed on the Wednesday following, which was accordingly done. On that day the Suspension Bridge was opened and re-examined. The overseer, Thomas Donaley, is not here at present: I think he is at Quebec. The man named Fortin, who kept the turnpike before the Bridge fell, has also left, and I do not know where he is. He is not at present in the parish.

The foregoing deposition being read to the witness, he persists in the truth thereof, and hath signed.

(Signed,) ISAIE TOUSSAINT.

Sworn before us,  
this 14th August, 1856.

(Signed,) C. ALLEYN,  
A. POLETTE, } Commissioners.  
T. TRUDEAU, }

[Translation.]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

### In the matter of the Montmorency Suspension Bridge.

François Garneau, of Ange Gardien, aged 30 years, mason, being sworn, doth depose:—That he was employed as mason by Mr. Walker, contractor for the Montmorency Suspension Bridge, during last autumn.

It was I who placed the first foundation stone of the pit of the southern anchorage above the anchor. After that a man named Giroux took my place. While I was at work the masonry in this anchorage pit was solidly constructed, and consisted first of four pieces of cut stone and then of rubble masonry. I passed the summer in working on the towers, and Mr. Rankin used to come to inspect the work about three times a week. A man named King overlooked the masons during the time that I worked there. Last autumn I was employed two days in carting stone with my horse. This stone was cast into the pit of the northern anchorage on the Beauport side. It was there that the Bridge failed at the time of its fall. The pit was then about four feet in depth, and by casting the stone into the pit, as above mentioned, they saved the trouble of constructing masonry. In this manner I carted and cast in about fifteen loads of stone. The stones which I thus threw into the anchorage pit served only to cover one side of the links, the other was resting on the rock itself.

The foregoing deposition being read, the witness persists in the truth thereof, and hath made his mark, professing himself unable to write.

(Signed,) FRANCOIS <sup>his</sup> GARNEAU.  
mark.

Sworn before us,  
the 14th August, 1856.

(Signed,) C. ALLEYN,  
A. POLETTE, } Commissioners.

[Translation.]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

Jean Giroux, of Beauport, mason, aged 44 years, being sworn, doth depose as follows :—

I have worked as mason on the Montmorency Suspension Bridge for about six months. I worked the greater part of this time on the piers. I worked also on the masonry of the south anchorages. I saw the beginning of the mason's work in three of the anchorage pits, and in two of these pits I worked myself. It was I who placed in the two pits of the southern cable, the three pieces of cut stone which are at the bottom of the pits. The first of these pieces was three feet in length by 18 inches in width and 10 inches in thickness. It was placed close to the chain, and the space behind this piece was filled in, by myself, in rubble masonry. The two other remaining pieces were placed one upon the other, and the space at back was also filled with ordinary masonry. It is to my knowledge, that the cut stone, placed in the bottom of the pit at the north-east angle of the Bridge, was placed in the same manner. All the masonry constructed by me under the bar-links which close the chain, was composed of good stones and cement. It is to my knowledge that there were no large stones placed under the angles formed by the links of the chain, nor did I see any iron plates placed under the same angles. All our work was done under the direction of Mr. King, overseer of works. I am certain that Mr. Rankin and Mr. Walker saw the manner in which we performed this work. They never told us that the work was badly done.

The foregoing deposition being read, the witness persists therein, declaring the same to be true, and hath made his mark, professing himself unable to write.

(Signed,) JEAN <sup>his</sup> X GIROUX.  
mark.

Sworn before us,  
the 14th August, 1856.

(Signed,) C. ALLEYN,  
A. POLETTE, }  
T. TRUDEAU, } Commissioners.

[Translation.]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

Paul Paradis, of Ange Gardien, day labourer, aged 27 years, being sworn, doth depose, as follow:—

I know that Ignace Coté, and Angelique Drouin his wife, were on the Suspension Bridge at the time of its fall, and were precipitated into the abyss. I was myself on the Bridge when it fell, and saved myself by means of the chains on

the north side. I worked on the Bridge all last winter, and I know that the masonry of the anchorage was bad. It was done, in part, during the winter. It is to my knowledge that some of the links failed. I know that people passed on the new Bridge a few days before its fall, but I cannot say how many days.

The foregoing deposition being read to the witness, he persists therein, and hath made his mark, declaring himself unable to write.

(Signed,) PAUL <sup>his</sup> ~~X~~ PARADIS.  
mark.

Sworn before us,  
the 4th August, 1856.

(Signed,) C. ALLEYN,  
A. POLETTE, }  
T. TRUDEAU, } Commissioners.

[*Evidence of S. J. Dawson.*]

PROVINCE OF CANADA, PARISH OF L'ANGE GARDIEN.

**In the matter of the Investigation into the cause of the  
Fall of the Montmorency Bridge.**

*Before*

MESSRS. ALLEYN, POLETTE, AND TRUDEAU.

Samuel John Dawson, of the City of Quebec, Master Blacksmith, aged 40 years, being duly sworn, said:—

I have this day examined the iron links attached to the anchors, (as I am informed) at both sides of the Montmorency River, belonging to the late Suspension Bridge.

The links at the Beauport side are broken, and the iron, in my opinion, is not of the first quality. I judge from the appearance of the grain of the iron when it was broken; on one or two of the links there is a flaw in the welding, in one it extends nearly through one half of the link, this is at the South-west side; the other flaw is not so extensive. I have been, during the last 12 or 13 years, working for myself. I served my time with Mr. Tweddell, and afterwards worked for Mr. McQuilken. I cannot speak of the quality of the links on the North-east, or L'Ange Gardien side, as the links are not broken, and are painted over with tar, or black paint. Notwithstanding that I am of opinion that the iron is not of the best quality, the links would have borne an immense weight in a straight direction. I have seen iron works made for Mills, and have made frequently, the iron work for Ships. I am of opinion that the iron in said links was sufficiently good to support the bridge, and any weight which could be on it, but not a sudden snap or cross strain.

The foregoing deposition having been duly read over to the witness, he persists therein, and hath

(Signed,) S. J. DAWSON.

Sworn before us,  
the 14th August, 1856.

(Signed,) C. ALLEYN,  
A. POLETTE, }  
T. TRUDEAU, } Commissioners.

[*Evidence of G. R. Baldwin.*]

PROVINCE OF CANADA, L'ANGE GARDIEN.

**In the matter of the Investigation into the cause of the fall  
of the Montmorency Suspension Bridge.**

*Before*

MESSRS. ALLEYN, POLETTE, AND TRUDEAU.

George R. Baldwin, of the City of Quebec, Civil Engineer, aged 58, being sworn, saith :—

I went to the site of the Montmorency Suspension Bridge, on the fifth of May last, to examine into the causes of its fall, at the request of the Commissioners of the Quebec Turnpike Trust. From the examination made at that time, I attributed the immediate cause of the accident to the insufficient bearing of the upper part of the third set of bar-links, which were found to have rested on rubble masonry, laid in the Fall, and December previous. This masonry had, to the best of my opinion, yielded to the pressure of the bar-chain, as it turned from the anchor-plate, and perpendicular direction to the line in a direction with the back-stay on the North-West angle. The cause of the yielding of the rubble masonry, at the time of the fall, was owing to the thawing of the masonry and mortar. In consequence of this yielding of the upper part of the third set of links, the middle part was brought upon the incompressible rock, at which place most of the bars were broken. I heard the specification read, and the bearing stones and iron plates therein mentioned to be placed under the joints of the bar-links were omitted. Had they been placed as required by the specification, the accident, in my opinion, would not have taken place.

Two of the other anchorages, at one end of which the chain broke, being the South-west anchorage, exhibited a compression of the masonry, in the same manner as supposed to have taken place at the anchorage which first gave, on the day of the fall. At the South-west anchorage, the links or iron bars were found bent an inch and a half from the original shape; at the South-east side, the iron bars were found compressed into the masonry at their upper part four and a half inches, plainly shown by a cavity left above them. I saw the iron the day after the fall of the Bridge, at the Beauport side, while it was fresh at the fractures, and observed one of the bars at the South-West anchorage had a flaw which covered half the section of bar-link; other bars exhibited faults of less importance, the iron was crystallized to a very considerable extent, in all the sections, but I do not consider the quality of the iron the immediate cause of the accident.

I am of opinion, having examined the formation of the rock on both sides of the River, that the towers may stand a century where they now are. I perceived no indications of extensive fissures which might be the cause of their fall, either in the limestone strata on which the towers rest, or in the gneiss rock underlying the limestone; the surface of the gneiss immediately under the towers appeared to have the horizontal position. I estimate the thickness of the limestone strata, which is horizontal, immediately under the towers, on the West side, at thirty-five feet, and on the East, fifteen feet. In my opinion these pillars compare well, for solidity and safety, with others which I have seen, and which are considered safe. I consider there would have been some little advantage, had the bridge been placed some sixty or eighty feet above where it was situated, as the action of the wind would not have been so powerful, and the chances of ac-

cumulation of ice from the spray of the Falls would not have been so great. As a chain Bridge, properly constructed, would be safe at the present site, it is not necessary to remove it.

Question.—Supposing that some of the anchor links or iron bars had broken a few days before the thirteenth of April, on the East side, and that a link had broken on the twenty-ninth day of April on the West side, although the iron bars on the East side had been replaced, was the Bridge safe for passengers before the causes of such breakage had been ascertained, and all the iron bars at the four anchorages had been examined on the thirteenth of April?

Answer.—I should say that the cause of the accident should have been thoroughly inquired into, before allowing the public to pass.

Question.—Under such circumstances, would you have examined the iron links at all the anchorages?

Answer.—As soon as I had ascertained the subsidence of the iron links into the masonry, I should have adopted some efficient method for securing the iron links at all sides from further yeilding. The breakage of six links has an indication of immediate danger to the Bridge.

In my opinion the iron bars ought to have been placed upon incompressible supports, before attaching the cables and roadway.

Had the Suspension Bridge been constructed according to the plan and specification of Messrs. Keefer and Rubidge, of proper materials, reducing the span to that adopted in the late Bridge, I consider it would have been perfectly safe.

The foregoing deposition having been read over to the witness, he persists therein, and hath

(Signed,) GEO. R. BALDWIN.

Sworn before us, at l'Ange Gardien,  
this, 15th August, 1856.

(Signed,) C. ALLEYN, }  
A. POLETTE, } Commissioners.  
T. TRUDEAU, }

[*Evidence of Lt. Col. Renwick.*]

PROVINCE OF CANADA, L'ANGE GARDIEN.

**In the matter of Investigation into the causes of the Fall  
of the Montmorency Suspension Bridge.**

*Before*

MESSRS. ALLEYN, POLETTE, AND TRUDEAU.

William Turnbull Renwick, of the City of Quebec, Lieutenant Colonel in the Royal Engineers, being duly sworn, saith:—

I visited the site of the Suspension Bridge at Montmorency, at the request of the Turnpike Commissioners, on the fifth of May last, to trace professionally the cause of the fall which had taken place on the 30th April last. I came to the

conclusion, that the fall was caused by the defective construction of the anchorages; first, by the absence of bearing stones, and iron saddles, or bearing plates, to receive the joints of the bar plates.

Secondly.—By common mortar having been used instead of cement, in a position where common mortar would never have indurated, as it could not have dried, being so much below the surface, and exposed to the action of the water, without access of air.

Thirdly.—The evil was increased, this rubble masonry having been built in winter, at a temperature so much below zero.

I may remark also, that the manufacture of the bar links was unworkmanlike and rough, and the iron not of the best quality, but I hold, that had the iron been of the best quality, the defects already mentioned would have caused the destruction of the Bridge, and I may add, from the imperfect workmanship of the bar-links, they were not prepared for saddles. I have examined Mr. Keefer's plan, now present, and I am of opinion that the necessity of the bar-links being kept clear from the masonry as distinctly shown on that plan, was not understood by the parties executing the work. The fracture of the bar-links having been caused by coming in contact with the solid rock, on displacement of the unindurated rubble masonry.

Question.—Did you examine the mortar used in building the masonry, at the anchorages, especially that at the North-East side, on the fifth of May last, and if Yes, state its condition?

Answer.—Yes, it was partly frozen, and partly unfrozen, the latter was quite soft.

Question.—Should or should not the anchor links have been placed and built under with the stones and iron plates or saddles before the cables were attached to them, and the weight of the Bridge suspended by them?

Answer.—I am of opinion that the anchorages should have been completed, according to specifications, before being subjected to any strain.

Question.—Do you consider the towers are placed sufficient far back from the edge of the rock?

Answer.—Had I been consulted before the construction of the work, I should have preferred retiring them some feet, but I do not consider the position unsafe. The reason I should wish them further back is because the sub-stratum is limestone rock, in thin layers until it meets the trap rock forming the bed of the river, this has reference to the effect of time only.

Question.—What is your opinion of their workmanship, and the period they are likely to stand secure?

Answer.—The workmanship of the piers, as far as I have had an opportunity of judging, is quite sound and good, but I have not particularly examined them, but in the event of re-construction of the Bridge, I should prefer taking them down and rebuilding further back, especially on the Beauport side.

Question.—Do you consider the site of the late Bridge safe?

Answer.—I do not consider the site dangerous, but as a question of utility for a winter road I should be apt to consider it objectionable.

Question.—Why?

Answer.—From its very exposed situation.

Question.—Had the original plan and specification been carried out as given by Messrs. Keefer and Rubidge, and now here marked A, would the Bridge have been perfectly safe.

Answer.—I have examined the original plan and specification, dated 27th September, 1853; a Bridge constructed on that plan would have been perfectly safe.

The foregoing deposition having been duly read to the witness, he persists therein, and hath

(Signed,) W. T. RENWICK.

Sworn before us,  
the 15th August, 1856.

C. ALLEYN,	} Commissioners.
A. POLETTE,	
T. TRUDEAU,	

[*Evidence of William Chessell.*]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

William Chessell, of Quebec, Royal Engineer Department, aged 53, being duly sworn, saith:—

I had occasion to visit the site of the Montmorency Suspension Bridge on the fifth of May last, in order to ascertain the cause of the fall. My opinion is that the cause of the accident was the defective construction of the anchorages, generally, and in particular, the omission of the bearing stones with their plates to support the joints of the bar-links, and prevent a cross strain on the intermediate parts. The whole strain would then have been tensile, and the fracture which was caused by the centre of the bar bearing against the solid rock would not have taken place.

Another defect was the substitution of rubble masonry in the filling-in over the anchor plates in common lime mortar instead of cement. The mortar was still found soft and yielding; some portion of it still frozen. This soft and imperfect masonry appears to have been the only support to the joints of the bar-links, which yielding to the pressure, the centre of the bar-links acted upon by the leverage of the weight of the Bridge, impinged on the solid rock. A cross strain was thus thrown on the intermediate part of the bar-links, and perhaps acting on single bars in succession, until the whole were broken.

The masonry supporting the bar-links above the surface of the rock, was faced with cut stone and fitted in the usual manner, with cement rubble. On the centre or least compact part of the wall, the links were resting, and being built in common lime mortar, and at a season of the year, when, from the severity of the frost and a low temperature, water became frozen before it had time to set. This, thawing in the Spring, was easily displaced from the pressure, and the chain consequently was left without support at that point.

Question.—Are you of opinion that the masonry supporting the bar-links should have been built, before the attachment of the cables?

Answer.—Certainly, it should have been built at the proper season, and allowed time to consolidate, before the pressure was put on it.

Question.—Do you think that good masonry, composed of cut stone, could be built under the bar-links after the completion of the Bridge, when the strain

caused by the curvature of the anchoring chains had to be resisted by wooden props, which could not easily be removed?

Answer.—I think it would be extremely difficult to build masonry, and give a sound bearing, under such circumstances.

Question.—Did you have occasion to form an opinion with regard to the quality of the iron?

Answer.—The workmanship of the links was very inferior, and from the appearance of the fractures, in which flaws were visible, imperfectly manufactured. The adjusting links also were very badly forged.

Question.—Had the original plan and specification been carried out, as given by Mr. Rankin, for the construction of these anchorages, is it your opinion that they would have been safe?

Answer.—Yes, provided that they had been constructed at a proper season, and with good materials.

Question.—Have you examined the towers of this Bridge, and if so, what is your opinion, with regard to the masonry of which they are built?

Answer.—I have, and as far as can be judged from their exterior the masonry is sound and good, but a proper judgment could only be given by an inspection during its progress.

Question.—Did you think these towers were placed on a sound foundation?

Answer.—I consider them safe for the present, perhaps for many years to come, but their close proximity to the edge of the rock, composed of limestone in their horizontal strata, will in all probability affect their permanent stability.

Question.—Have you ever seen this Bridge during its construction, or since its completion, and can you give any opinion on its general stability?

Answer.—Nor since its construction previous to its fall, but on one occasion during the construction of the piers, casually on passing I examined the masonry, and considered it good and sufficient for the purpose.

Question.—When you examined the ruins of this Bridge in May last, were you aware that an accident had occurred to the bar links at the East end of the Bridge, and are you of opinion, that this accident at the East end occurred from the same reasons as those which caused the fall of the Bridge?

Answer.—I was informed both by the Engineer and Contractor, that such an accident had taken place some time previous to the breakage of the links on the West side of the Bridge. I am of opinion that these links had broken from the same cause, that is to say, the omission of the bearing stones and plates, and the imperfect description of the masonry made use of over the anchor-plates.

Question.—From your long experience in Public Works, are you of opinion that the breakage of six bars out of eight in these anchorages, was sufficient warning to any Engineer, Contractor, or Board of Trustees, of the immediate danger?

Answer.—Yes, certainly it was; and should have been sufficient to have induced the parties to have caused a strict examination to have taken place, to ascertain the state of the whole of the links in the remaining anchorages, and no time should have been lost in repairing the damage as far as practicable, as there was reason to fear not only that a similar could be found in the remaining anchorages, but that the two remaining links then supporting the whole weight of the Bridge, might be broken from the same defect which had caused the fracture of the six links.

Question.—Admitting that the six links were replaced, and with the knowledge which the Engineer, Contractor, and Trustees had, that the three other

anchorages were built upon the same principle as the one which this first accident had occurred to, do you not believe that the warning of danger was sufficiently great to have caused the immediate closure of the Bridge to the public?

Answer.—I do consider that it was sufficient, that the gates should have been closed, until the repair of the damages, as the danger was manifest.

The foregoing deposition being duly read over to the witness, he persists in the truth thereof, and hath

(Signed,) WM. CHESSELL.

Sworn before us,  
this 15th August, 1856.

C. ALLEYN,  
A. POLETTE,  
T. TRUDEAU, } Commissioners.

[Evidence of A. Learmouth.]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

Alexander Learmouth, of Quebec, Iron-founder, aged 32; being sworn, saith:—

I have followed the trade of Iron-founder for the last 13 years. I have examined this day the iron links attached to the anchors, at both sides of the Montmorency River, belonging to the late Suspension Bridge erected on that River. I have paid particular attention to the quality of the iron and the manner in which it was manufactured. The links on the Beauport side are broken. I do not consider that iron of a very bad quality, but could not examine it thoroughly on account of the fractures being too old. I could examine it as it ought to be, if I could get one of the bars and break it,

I have just cut pieces off of several of the bars that gave way, and that were the cause of the falling of the Bridge, and I find the iron good. I believe the cause of the breaking of the bars was in the bad workmanship in the construction of the links or in the supporting of them underneath, and not in the quality of the iron. I judge from the appearance of the grain of the iron, where it was broken. In one of the links, there is a flaw in the welding; in one it extends nearly through one half of the link, this is at the South-west side. From the appearance of the iron of the links of the North-East side, it seems to be of the same quality as that I have described. The links would have borne an immense weight in a straight line or direction, and better than in a curve, unless the links were supported immediately under the joints, or the links themselves were formed into a curve.

The foregoing deposition being duly read over to the witness, he persists in the truth thereof, and hath

(Signed,) A. LEARMOUTH.

Sworn before us,  
this 15th August, 1856.

C. ALLEYN,  
A. POLETTE,  
T. TRUDEAU, } Commissioners.

[Translation.]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

Edouard Bureau, of Ange Gardien, Cultivator, aged 26 years, being sworn, doth depose as follows:—

I kept the old Montmorency Bridge, during eleven months, up to the time when the Suspension Bridge over the same river was opened to the public, and I have again acted as Bridge-keeper, since the fall of the latter Bridge. I have often been to see them working on the Suspension Bridge, from the time of its commencement to its fall. The work on this Bridge was commenced in August, 1854. It is to my knowledge, that on Sunday the 20th April, 1856, Mr. Walker, and Mr. Rankin, were present while they were repairing the broken links of the chain, connected with the North-east corner on the Ange Gardien side. Curiosity led me to visit the work during that day, and I perceived that they endeavored to conceal the defects, by covering the place where the workmen were employed with planks. On the same day I saw that the North cable of the Bridge had lowered, at least seven or eight inches. It is also to my knowledge, that from the 21st April, to the 30th inclusive, four or five workmen were constantly employed in raising the Bridge. My opinion is, that the site of the Bridge was not well chosen. The mist caused by the Falls, deposited in the winter time, in the space of 24 hours, a coating of ice on the face of the Bridge, four or five inches in thickness. Often when I visited the new Bridge during the winter, I saw a man busied in cutting away the ice. Walker, of whom I have spoken, was the builder of the Bridge, whom also I have mentioned was the Engineer. Rankin lived at Quebec, and came three times a week, and sometimes once a fortnight, or once in three weeks, at the commencement of the works; when the works were farther advanced, he came twice or thrice a week. In my quality of keeper of the old bridge, Mr. Lemoine, one of the Quebec Turnpike Road Commissioners, gave me orders to close the old Bridge, and to allow on one to pass; the intention of this was to oblige the people to pass over the Suspension Bridge. This order was given me on the 21st of April last, and I carried it into effect. In consequence of this, the public passed over the Suspension Bridge. People were much afraid of passing over the Suspension Bridge, and I believe that very few would have passed if the old Bridge had been open. On the same day that the Suspension Bridge fell, the old Bridge was opened, (that is, after the Suspension Bridge fell,) without being repaired, and it was only during the following week, that they repaired the old Bridge. It was on a Wednesday that the Bridge fell.

The foregoing deposition being read over to the witness, he persists in the truth thereof, and hath

(Signed,) EDOUARD BUREAU.

Sworn before us,  
the 15th August, 1856.

(Signed,)	C. ALLEYN, A. POLETTE, T. TRUDEAU,	} Commissioners.

[Evidence of W. H. Rankin.]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

W. H. Rankin, of Quebec, Civil Engineer, aged 33, being sworn, saith:—

Question.—Had you any pecuniary interest in the Contract for the Bridge, or have you now any money interest in it?

Answer.—I never had nor have I now.

It was on the 21st April last, that I communicated to the Trustees, the fact of the first accident which had taken place on the 18th, and which was then being repaired, and they went down on that day to inspect the Bridge. It took the whole of the 19th to ascertain exactly what was the matter; and the 20th was a Sunday. The first intimation I had of the second accident, was from Mr. Lemoine, one of the Trustees, which was on the morning of Monday the 28th. I went down to the Bridge immediately, but it was impossible to get men to repair the accident, as it was raining so hard, but I left orders with the Contractor's foreman, to have the hole opened as had been done on the other side, and to see what was the matter. I did not go down on Tuesday the next day, as I was in attendance all day on the Board, but the minute of the Board was then communicated verbally to me. On my way down, next day, I heard of the fall of the Bridge. The three anchorages where the anchor bars were sound, were not opened or examined after the first accident, as I saw no cause for doing so. I made however a superficial examination, without disturbing the work. I gave no orders either on the 28th, or any other day to prevent passengers from going over the bridge, 1st, because I had no authority for doing so; and 2nd, because I had no fear of any danger. King, who was the Inspector of Masonry, is now in Nova Scotia, or New Brunswick.

I do not recollect ever having seen the letter of Dr. Chairst, nor was it communicated to me.

I inspected the bar links before they were put up, and approved of them.

I can say, of my own knowledge, that the inverted arches in each of the anchorages, were built according to the specification, for I myself inspected them and that they were built by Mr. Walker's foreman, and by the Trustees foreman, and by no others, to the best of my belief. These two foremen were named, Kaird and King. The other masons were afterwards employed to assist in building the rubble masonry over the arches. I saw all the bar links placed myself, what I mean to say is, that I saw the anchors with the bars attached, lowered into the pit, and the inverted arches built over. I got no orders of any description from the Trustees, to depart from the original specification, but I was allowed to make any improvement which I deemed proper, and they sent me up to Niagara, for the special purpose of obtaining information by an inspection of the Suspension Bridge. This was during the progress of the work. The Contractor performed all the work of the Bridge according to my direction, with the exception of the omission of the bearing-plates, of which I had no knowledge. I lived in town while the work was in progress, and I had to perform during that period, all the duty of Engineer to the Turnpike Trust, in the making of new roads, and repairing of old ones, on both sides of the river, as well as the indoor work at the office. There are about 150 miles under the control of the Trust. I was not present when the bar links were covered up with masonry. I occasionally saw and superintended the placing of the wires forming the cables, but not the whole of them.

On the 30th April last, the old Bridge at Montmorency was in a very dangerous state. It was repaired shortly or immediately after the fall of the new Bridge, but I got no instructions with regard to it. I had no assistants since the commencement of the Bridge on that work, or on any of the other various works of the Trust. I had personally to superintend the erection of the Bridge, and to make fortnightly measurements, and estimates for the Contractor's payments. I had to make all plans, specifications, and estimates, for smaller Bridges, Culverts and Roads. At this time there was upwards of twenty different Contracts on which measurements and estimates, were to be made fortnightly. One day out of each week being completely lost to me, as I had to be in attendance on the Board at their meetings.

The hydraulic press was placed under the heads of the links, and according as it lifted them they were blocked underneath, the press removed and blocked again, and so on.

I do not recollect having heard of any of the blocks having slipped or crushed. There was no additional strain caused by the application of this press, inasmuch as the weight of the Bridge itself and its load were the source of the strain which could only be increased by additional weight on the Bridge. The press merely moved or displaced this weight and lifted it off its bearings, or transferred the weight to another point. King was the only person representing the Trust, and superintending the erection of the Bridge. Kaird is also absent from the Province.

The foregoing deposition being duly read over to the witness, he persists in the truth thereof, and hath

(Signed,) WM. H. RANKIN.

Sworn before us, at Quebec,  
this 18th August, 1856.

C. ALLEYN, }  
A. POLETTE, } Commissioners.  
T. TRUDEAU, }

[*Evidence of Wm. Wilson.*]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

William Wilson, of Quebec, mason, aged 53 years, being duly sworn, saith:—

On the 29th of April last, I was requested by the Turnpike Trustees to go down and inspect the Suspension Bridge, at the Falls of Montmorency, in consequence of some of the anchorage bars having given way.

I first received my instructions from Mr. DeBlois and Mr. Lemoine, and afterwards from the Secretary Mr. Porter, and Macpherson. I accordingly went down, and I perceived that the Bridge had sunk towards its centre, I should say from 15 to 18 inches, to the best of my knowledge. I also examined the iron-work at the anchorages as far as I could see, without removing the masonry, for I had no authority to remove the mason-work, and I could see nothing wrong. I perceived, however, that new links had been put in at the North-east end. I enquired

from the workmen whether any accident had occurred but they all denied it. I found the mason-work of the anchorages very defective. I found that a portion of the masonry seemed as if it had been crushed. The reason assigned by the workmen was, that it had been done by the hydraulic ram. That portion of the masonry, however, seemed very bad, the stones being too small for the purpose, and carelessly put together.

Question.—What report did you make to the Commissioners of the Turnpike Trust, with regard to the state of the Bridge, and to the condition of the masonry more especially?

Answer.—I reported that the Bridge was down in the centre some 15 or 18 inches, and that the masonry was very defective, that is, the anchorage masonry. I did not, to my recollection, say anything to the Commissioners with regard to the other masonry.

I have been a builder of houses and stone bridges, since the year 1819 or 20.

I cannot, from my practical knowledge, say that the bridge was in danger, on the 29th April, 1856. I attributed the yielding of the bridge to the cable being too long.

Question.—Could the anchor-bars be as well laid and as solidly, on the masonry and solid rock, after the cables were suspended and the bridge attached to them, as if they were laid before the bridge was erected and supported by them?

Answer.—No, not in my opinion; it seems to me nearly impossible. Mr. Lemoine told me before I went down that some bars were broken, but the persons employed below there, including the foreman Mason, denied it, stating it was a false report. I was on the Bridge for three or four hours. There was no break as far as the surface, at the anchorages which I examined, with the exception, as I have already stated, of the bars at the North-east anchorage. These were being newly painted, and the reason assigned by the workmen, was to keep the rust off. When I came up I did not believe that there was anything wrong with any of the iron bars from what I heard and saw.

[Cross-examined by Mr. DeBlois, one of the Trustees.]

I made my report in the presence of the board. I did not recollect being asked whether the bridge was dangerous or not, but I did not consider the Bridge to be dangerous. I recollect that after having left the room where the Trust had assembled, Mr. DeBlois asked Mr. Rankin and Mr. Walker whether new arches would be necessary. Mr. Rankin or Mr. Walker answered, that there was no necessity for such a thing. It was then suggested by one of the Trustees to bore the solid rock and fasten the cables with ring bolts or ships' anchors, to be brought there to secure the anchorages. This suggestion was also regarded as unnecessary.

Upon that occasion, Mr. Walker or Mr. Rankin led me to understand, as well as Mr. DeBlois, then present, that there was not the least danger to fear, with regard to the safety of the Bridge, and that there was no need for him or any one else to trouble his head about the matter, or something to this effect.

Question.—Did you examine the masonry which supported the fourth or top-most set of bar links in the anchorages, and what is your opinion as to the character of this masonry?

Answer.—I did, and considered it very deficient. It was badly put together, and the stones were too small.

My opinion is that this wall should be entirely composed of cut stone.

The foregoing deposition being read over to the witness, he persists in the truth thereof, and hath signed.

(Signed,) WILLIAM WILSON.

Sworn before us, at Quebec,  
this 19th August, 1856.

C. ALLEYN, }  
A. POLETTE, } Commissioners.  
T. TRUDEAU, }

[*Translation.*]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

Antoine Paquet, of Quebec, Baliff, aged 37 years, being sworn, doth depose as follows:—

On Sunday, the 20th April last, I proceeded from Quebec to Ange Gardien, to give notifications at the church door. I passed over the old Bridge of the said River Montmorency. Having returned from Ange Gardien on the same day, I went off with Edouard Bureau, to see the North-east end of the Suspension Bridge, where they were working. Having come within a short distance, about half an arpent, of the Bridge, a man especially appointed to prevent persons from going on the Bridge, came to us, to prevent our going on it, telling us that we could go no farther, and that we could not see the Bridge, as it was not allowed. We were at this time a little on one side, about an arpent, and could see nothing. The person who thus prevented us from approaching, told me that there had been some mistake in the work, and they did not wish it to be seen. I then returned, passing over the old Bridge. On the Sunday following, I passed over the new Bridge, and I remarked that some wires of the cable on the South side, were unfixed. The Bridge inclined a little on the North side. I was afraid of crossing, nevertheless I did so. On the Sunday that I passed over the Suspension Bridge, I remarked that the masonry towards the North, on the Beauport side, had been impaired by the frost.

I know nothing more.

(Signed,) ANTOINE PAQUET.

Sworn before us, at Quebec,  
the 20th August, 1856.

(Signed,) C. ALLEYN, }  
A. POLETTE, } Commissioners.  
T. TRUDEAU, }

[Translation.]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

David Valin, of Charlesbourg, day-laborer, aged 25 years, being sworn, saith, as follows :—

I am aware that Mr. Rankin was the engineer who superintended the works of the Suspension Bridge over the River Montmorency, and that Mr. Walker was the contractor, and built the Bridge. I have frequently had occasion to bring in a vehicle Mr. Rankin and Mr. Walker, together, and sometimes separately, at the time that the road was being constructed, and I have often brought them to this Bridge. I have several times seen Mr. Rankin give Mr. Walker money which he had brought from Quebec. I cannot say whether Mr. Rankin and Mr. Walker were in partnership for the construction of the Suspension Bridge.

The foregoing deposition being read over to the witness, he persists in the truth thereof, and hath made his mark, declaring himself unable to write.

(Signed,)      DAVID <sup>his</sup> VALIN.  
mark.

Sworn before us, at Quebec,  
the 20th August, 1856.

(Signed,)      C. ALLEYN, }  
                  A. POLETTE, }      Commissioners.  
                  T. TRUDEAU, }

[Translation.]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

Jacques Matthieu, of Ange Gardien, Carpenter, aged 44 years, being sworn, doth depose as follows :—

About the 4th or 5th of May last, I was employed by the Quebec Turnpike Trustees, to repair the old wooden Bridge erected over the River Montmorency. It was then about three or four days subsequent to the falling of the Suspension Bridge, thrown over the same river. It was just five days after the Suspension Bridge fell, that I began to work on the old Bridge. The Bridge-work was in a very bad condition, and the planks below were decayed, as well as some of the joists. The wharf on the Beauport side, was also in a bad condition. It was dangerous to cross on this Bridge. The Bridge had been in this state for some time. I repaired it, replacing the decayed timber, and doing other things which made it safe for the time, for it still requires other repairs. It was about two years ago last winter, when they placed supports for the rafters, which were bad. I am not aware that any other repairs have been made from that time to the month of May, when I made some myself. I believe it is now four years ago, that the said Trustees purchased this Bridge, under an Act of the Legislature; when I passed over this old Bridge in the month of March last, I paid toll.

The foregoing deposition being read over to the witness, he persists in the truth thereof, and hath signed.

(Signed,) JACQUES MATTHIEU.

Sworn before us, at Quebec,  
the 21st August, 1856.

(Signed,) C. ALLEYN, }  
A. POLETTE, } Commissioners.  
T. TRUDEAU, }

[*Translation.*]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

### **In the matter of the Montmorency Suspension Bridge.**

William Henry Lemoine, of Chateau Richer, one of the Quebec Turnpike Trustees, aged 69 years, being sworn and examined at his own request, doth depose as follows:—

I made application to the Board of Turnpike Commissioners, to have the Suspension Bridge open to the public before it was delivered to the said Commissioners, by the contractor, Mr. Walker. I first inquired of Mr. Walker if this would inconvenience him in the construction of the Bridge, and he told me it would not, and even that he would be glad of it, because by so doing the public would be satisfied as to the safety of the Bridge. I then put the same question to Mr. Rankin, and he told me that there would be no danger whatever in allowing people to pass on the new Bridge. The reason that I wished to have the new Bridge opened to the public, was, that the old Bridge was decayed, and I feared that some accident would happen if the public continued to pass over it. The Trustees decided on visiting the Bridge on Monday the 21st April last, to satisfy themselves of its being in a fit state to be opened to the public, and they determined on opening it the following Wednesday. At the time of their visit, after having examined the Suspension Bridge, the Trustees instructed me to open the new Bridge on the following Wednesday; to place a keeper there to receive the toll, and to close the old Bridge, all of which I did. Last Autumn I had planks laid on the old Bridge, but nothing was done during the Winter. I did not see anything more dangerous about the old Bridge in the month of April last than last Autumn, but I knew that it was decayed. I received the letter of Dr. Charest, on Friday the 25th April last, and gave communication of this letter to Mr. McPherson, one of the Trustees, on Monday the 28th of April, and I then requested him to examine it, because the letter of Dr. Charest contained some judicious observations.

On Tuesday, the 29th, Mr. McPherson, was in the chair as Vice-President, and had this letter with him, which however was not taken into consideration for the reason that it was addressed to myself personally, and not to the Board of Trustees. It was at the Falls of Montmorency that the Commissioners decided on opening the Suspension Bridge, on the 23rd April; there was no entry made in the registers of the office, as the Secretary, Mr. Porter, was not there, but Mr. Gibb, the president, Mr. McPherson, Mr. McCallum and myself were present. I cannot say whether there were any others or not. The Trustees are twelve in number, namely:—Messrs. James Gibb, President; Thomas Laughlin McPherson,

Vice-President; John Rowley, Edward T. DeBlois, W. H. Lemoine, E. Dalair, Simon Acteau, J. B. Carrier, H. Gowen, A. C. Buchanan, D. McCallum and Dr. Nault. On the evening of the 26th April, I learned that an iron bar in one of the links of the North side, towards Beauport, was broken. I proceeded thither on Monday morning, and after having taken away some stones, I saw that in effect this bar was broken. Two men in the employ of Walker had told me not to touch anything, as it was not allowed, and no one should do so; but I did not listen to them. I then came to town, and meeting Rankin the engineer, I informed him of the accident, desiring him to go down to the Bridge immediately with Walker and to have it repaired. When I spoke of the accident, he did not appear surprised. On the following day, the 29th April, Walker confessed to me that he knew of it on the preceding Saturday. Afterwards, Mr. McPherson and myself sent Wilson the mason, to examine the work, with instructions to take down the masonry as far as the joints, telling him, however, not to do so, if Mr. Walker objected to it; from what I have learned he was there on the following morning. He subsequently made a report to the Board.

The foregoing deposition being read over to the witness, he persists in the truth thereof, and hath signed.

(Signed,) W. H. LEMOINE.

Sworn before us,  
the 21st August, 1856.

(Signed,) C. ALLEYN,  
T. TRUDEAU,  
A. POLETTE, } Commissioners.

[*Evidence of James Gibb.*]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

### **In the matter of the Montmorency Suspension Bridge.**

James Gibb, Esquire, of the City of Quebec, one of the Trustees of the Quebec Turnpike Trust, aged 57 years, being duly sworn, and examined at his own request, doth depose and say:—

Previous to any derangement of the Bridge, I was one of a Committee appointed to go down and see the Bridge loaded with stone, to the extent of from fifty to sixty tons. We did so, and when so loaded, we crossed and recrossed upon the said Bridge several times, when everything appeared perfectly safe and strong. A short time after that, the Trust was notified that some links had given way on the North-east side, which links were at once repaired, when I had occasion to pass that way with a number of friends and carriages, when we all passed over the Bridge, the links being to all appearance perfectly secured, and at that time I was informed by Mr. Rankin the Engineer, and Mr. Walker, Contractor, that the Bridge was perfectly secure and safe, I believe, the reason the Bridge was open to the public, was by the representation of Mr. Lemoine, that the old wooden Bridge was perfectly rotten and insecure, which I saw was the case afterwards when under repairs.

The Suspension Bridge was open to the public on the express understanding and consent of Mr. Walker, Contractor, he stating that it would be of no inconvenience to him, and that there was no risk whatever in allowing persons to pass over it.

To the best of my recollection, I never heard of any thing else being broken or deficient in the Bridge, until the day before the Bridge went.

In my opinion the reason that the Bridge gave way, was owing to the deficiency of foundation, and want of such stones as were mentioned in the Contract and specification, which was not to my knowledge done, having depended upon our Engineer, to see that the work was done according to our Contract.

[Cross Questioned.]

The Trust sent Mr. Rankin, to see the Suspension Bridge at Niagara, to obtain information in relation to the Montmorency Bridge. It is not to my knowledge that he was afterwards authorized to alter the construction of the Montmorency Bridge, or to depart from the specification.

I went down with Messrs. Lemoine, McPherson, and McCallum, about the 21st April last, to see the new Suspension Bridge.

It was I think, in town about the same period, that Mr. Lemoine was authorized to have the old Bridge shut up, he representing it to be very unsafe, which I afterwards ascertained to be the fact from seeing it repaired. It was however understood by both Mr. Rankin, Mr. Walker, and the Trustees, that this was not a reception of the Suspension Bridge, which was not to be received until complete.

This authority to Mr. Lemoine was not entered in the book of the minutes, but was understood by the Trustees present. It was a regular meeting of the Board, and there was a quorum I believe, but I do not recollect the names. I did not see Dr. Charest's letter, until after the fall of the Bridge, nor do I think I heard any thing about it until the day before the Bridge gave way. I had frequently heard that the old Bridge was in a bad state, but it was about the 21st April last, that Mr. Lemoine, as I have before stated, reported it as being so bad.

The foregoing deposition being read to the witness, he persists in the truth thereof, and hath signed.

(Signed,) JAS. GIBB.

Sworn before us, at Quebec,  
this 23rd August, 1856.

(Signed,) C. ALLEYN,  
T. TRUDEAU,  
A. POLETTE, } Commissioners.

[Translation.]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

Charles Baillargé, of the City of Quebec, Architect, aged 29 years, being duly sworn, doth depose as follows:—

At the request of the Coroner and the sworn jurors, I examined the Suspension Bridge over the River Montmorency. I am of opinion that the accident described by the witnesses, must be attributed to the bad quality and execution of the masonry supporting the iron bars, which composed the links of the anchor chains, and to the omission of certain stones of large dimensions, and of cer-

tain iron plates or castings, which according to the specification and contract, of which I took communication, would form a very essential part of the works, and on which depended the safety of the Bridge. It was immediately above the points of juncture of the above mentioned links, that the above mentioned stones and iron plates should have been placed: These stones were to have been four feet square, and eighteen inches in thickness, and were to bear, throughout the extent of their interior surface, either on the solid rock, cut and reduced for this purpose, to an even surface, or on stone masonry, well adjusted, and incapable of compression. None of these precautions appear to have been taken; on the contrary, the sole support which the chains had, was a rubble masonry of the coarsest kind, with mortar of lime and sand, in place of cement, as required by the specification; and besides this, this masonry was in part built during the winter, and time was not given it to dry and solidify, before submitting it to the enormous superincumbent pressure of the entire weight of the iron wire cables, and the flat of the Bridge suspended between the supporting piers. I am therefore of opinion that it is to the crushing down and compression of the masonry, under the different bars forming the ties of the anchorage chains; that the fracture of these bars must be attributed, and that by a transversal force exercised upon them. For if we suppose any bar of iron whatever, larger at the two ends and smaller in the centre, like those of which the chains in question were composed, and let this bar be supported at either end on compressible points of support, it is evident that the crushing back of these points of support will bring the bar to bear, by its central part, on the salient angles of the stones, or of the rock lying between these points of support. Now, this, I think, is exactly what has happened in the present case. The compression of the masonry lying under the points of junction of the links (and this compression has taken place, as I have myself been enabled to establish it by actual measurement, to the extent of four inches and a half in one place, and eight or nine inches, according to several witnesses in another place) has necessarily brought the iron ties to bear on some intermediate point on the salient angles of the solid rock, or of the stones forming the masonry; and as the strain at the place of the fracture of the bars was exercised,—not in the direction of their length, (for at this spot the chains were not in a right line with the iron wire cables,) but in a slightly transversal direction. It was impossible for the bars in question to resist this strain, and they were necessarily broken under the enormous pressure. To understand how impossible it was for the broken bars to resist a transversal strain, however capable they were of supporting one in the direction of their length, it will be sufficient to say that a bar of iron one inch square, is capable of holding suspended, a weight of at least sixty thousand pounds before fracture, while the same bar, supposing it to be seven feet in length, the length of the links in question, would yield to a transversal weight of not more than six hundred pounds. Each bar-link in question, is three quarters of an inch in thickness, and five inches in width, and supposing them to be made of good wrought iron, they would each be capable of resisting a direct strain of two hundred and twenty-five thousand pounds. Now even, supposing the iron to be as bad as possible, and in reality it is far from being the best, the least weight capable of breaking them would be seventy-five thousand pounds, if applied in the direction of their length; while for the best wrought iron, one of these same bar-links would be incapable of resisting a transverse strain of more than ten thousand pounds; which clearly shews the extreme importance of placing under the points of support of the links, large stones, as required by the specification and contract, or at least to have in their stead, masonry of the most solid kind, laid in cement, and constructed in the most favorable season of the year. When I state, as above, that I suppose the iron to be of the worst quality possible, I should add, that it is rare to find wrought iron so bad as I have supposed; I have only done so to shew more

clearly the difference between the strength of a bar exposed in succession to a transversed and longitudinal strain. I have examined the site of the Suspension Bridge; I have observed the rock serving as a foundation to the piers, and I am of opinion that there was no immediate danger in respect to the safety of these piers, but in a certain number of years, the combined action of water and frost might have acted on the rock serving as a foundation, as above mentioned, so as to lead to the fall of the piers in question, inasmuch as these piers are a little too near the banks of the River. In the event of the Bridge falling, the site chosen was more dangerous than any other, in reference to the lives of those who might then be upon it. In the present case it was not absolutely necessary to build a Suspension Bridge, a Bridge might have been built on piers. Knowing that the masonry on the other side of the Bridge was done nearly in the same manner as that where the bars had broken in the first instance, the engineer must necessarily have apprehended the occurrence of the same accident, on the opposite side. After having examined the position of the links at the place of their fracture, I am enabled to say, that the amount of transversal compression exercised on these bars at this point, and on the masonry, or on the rock supporting it, was at least 215 tons, allowing that the tension of the iron wire cables, was 200 tons, which I have not myself calculated. Now, as I have said above, the transverse strength of one of the bars composing the links of the anchorage-chains, was only ten thousand pounds, or about forty tons for the eight bars, thus evincing their incapacity to resist the much more considerable pressure of two hundred and fifteen tons, to which they must have been subjected.

The foregoing deposition being read over to the witness, he persists in the truth thereof, and hath signed.

(Signed,) CHARLES BAILLARGÉ.

Sworn before us,  
the 26th day of August, 1856.

(Signed,) C. ALLEYN,  
T. TRUDEAU,  
A. POLETTE.

[*Evidence of John Porter.*]

PROVINCE OF CANADA, DISTRICT OF QUEBEC.

**In the matter of the Montmorency Suspension Bridge.**

*Present,*

MESSRS. ALLEYN, POLETTE, TRUDEAU.

John Porter, of Quebec, Esquire, Secretary to the Quebec Turnpike Trust, being duly sworn, saith:—

The amount paid for the purchase of the old Bridge over the Montmorency River by the Trust, was two thousand pounds currency, leaving for the erection of New Bridge, three thousand pounds, under the 14 and 15 Victoria, cap. 133. A further sum of three thousand pound was authorized to be raised, under 16

Vic., cap. 235, and was taken out of the thirty thousand pounds authorized to be raised by that Act for general purposes, connected with the roads on the North shore of the River St. Lawrence, under the control of the Trust.

The further sum necessary to pay for the New Suspension Bridge, has been taken out of the general funds at the disposal of the Turnpike Trust, for the making and repairing the roads on the North and South shores—there is no provision of Parliament on the subject, beyond that of the 14 and 15 Vic. cap. 133, and 16, cap. 235.

No consent was obtained from the Government, by the Trust, to contract for the price tendered, which was beyond the six thousand pounds authorised by above Acts.

A letter was written by me, as Secretary, to the Provincial Secretary, dated 10th June, 1854, asking permission to make engagements, and enter into the contract to the extent of two thousand five hundred pounds beyond said sum of six thousand, if necessary—but no answer was received, and at a meeting of the Commissioners, held on 25th June, 1854, the contract was decided to be entered into. The letter of the 10th June was written by order of the Commissioners, at the meeting of 6th June, 1854. Mr. Lemoine at the meeting of 20th June stated, that from conversation he had had with some of the members of the administration, he was sure there would be no objection to the contract being entered into. The old Bridge was purchased by Trust on the 23rd of April, 1854.

Mr. Rankin, the engineer, always received assistance when he applied for it. Mr. Lecourt was employed in his office for some time, but his services were dispensed with, in consequence of Mr. Rankin saying there was nothing more for him to do; this was in the month of eighteen hundred and fifty Mr. Lecourt was employed as draughtsman in the office.

The foregoing deposition being read, the witness persists therein, declaring the same to contain the whole truth, and hath signed,

(Signed,) J. PORTER.

Sworn before us,  
this 30th August, 1856.

C. ALLEYN,  
T. TRUDEAU.

**LIST of EXHIBITS filed in the matter of the MONTMORENCY SUSPENSION BRIDGE.**

- No. 1.—Specification for the construction of a Suspension Bridge over the Montmorency River, above the Falls.—S. Keefer.
- No. 2.—Specification for the construction of a Suspension Bridge over the River Montmorency.—W. H. Rankin.
- No. 3.—Contract between Walker and Trustees.
- No. 4.—Mr. Rankin's report as to the cause of the fall of the Montmorency Suspension Bridge.
- No. 5.—Rankin's answer to the report of Lt. Col. Renwick, and Messrs. Chessell and Baldwin, as to the cause of the fall of said Bridge.
- No. 6.—Report of Commissioners appointed by the Trustees of the Quebec Turnpike Roads, to discover the cause of the fall of said Bridge.
- A.**—Mr. Porter's letter to the Secretary of the Board of Works.
- B.**—Mr. Begly's answer thereto.
- C.**—Mr. Porter's letter to Mr. S. Keefer.
- D.**—Mr. Keefer's answer thereto.
- E.**—
- F.**—
- G.**—
- H.**—
- I.**—
- J.**—
- K.**—
- } Correspondence between Messrs. Porter, and Keefer.
- L.**—T. Walker's tender for Montmorency Suspension Bridge.
- M.**—Joseph Archer's tender for                   do                   do.
- N.**—J. Lyon's,                   do                   do                   do.
- O.**—W. O. Buchanan's do                   do                   do.
- P.**—Estimate of the Cost of a Wire Suspension Bridge, over the River Montmorency.
- Q.**—W. H. Rankin's report upon Messrs. Keefer and Rubidge's claim to be paid for the plan of the new Montmorency Suspension Bridge.
- R.**—Letter of Mr. Porter to Mr. S. Keefer.
- S.**—Extracts from the minute book of the Quebec Turnpike Trust.
- T.**—Letter of Mr. Rubidge to Mr. S. Keefer.
- U.**—Letter of Dr. Charest to Mr. Lemoine.
- V.**—Letter of Mr. Rubidge to Mr. Porter.
- W.**—Deed of Agreement between Thomas A. Walker and the Trustees of the Quebec Turnpike Roads, 23rd January, 1856.
- X.**—Protest from T. A. Walker to the Turnpike Road Commissioners, 13th December, 1855.
- Y.**—Comparative list of Amounts certified by Engineer, and sums paid to T. A. Walker by Trust.

C. ALLEYN,  
Commissioner.

## No. 1.

**SPECIFICATION for the CONSTRUCTION of a SUSPENSION BRIDGE over the RIVER MONTMORENCY, above the FALLS.**

**1.—Site.**

The intended Bridge will span the River Montmorency, above the Falls, a few feet back from the pitch of the Cataract, or sufficiently far removed to afford a safe and solid bearing for the foundations of the Towers.

But the exact centre line will be marked out by the Engineer in charge.

The site may be varied at the discretion of the Commissioners of the Road Trust to any point between the place above indicated, and the position of the existing Bridge.

**2.—General Dimensions.**

The substance between the points of suspension will be about.....	400 feet, English.
The span between the abutments at the level of roadway..	374 feet, do.
The breadth of roadway $16\frac{1}{2}$ feet, of foot-path (on one side only) $3\frac{1}{2}$ feet, making in all.....	20 feet, do.
Versed sine of Catenary or depression of cables.....	26 feet, do.
Height of Roadway above highest flood, about.....	50 feet, do.
Total length of wire cable from centre to centre of shackle bolts.....	528 feet, do.
Length of bar chain cable, East side.....	39 feet, do.
Length of bar chain cable, West side.....	375 feet, do.
Total developed length of cables from anchor to anchor..	6045 feet, do.
Height of masonry towers from level of Roadway to the bearings of the cables in their saddles.....	25 feet, $73\frac{1}{2}$ in.
Number of strands of wire in each cable.....	1200 strands.

**3.—General Description.**

A light wooden Roadway is to be suspended from two wire cables, one on each side of the Bridge, which are to be supported on four towers of solid masonry, of the dimensions represented in the plan.

The Roadway and the masonry of the abutments are to be elevated to the level of the West bank of the River.

The wire cables are not to be extended below the ground line, but will terminate within the entrance to the anchorage from whence they will be prolonged to the anchor plates, secured to the solid rock by means of bar chain cables of double the sectional area of the wire cables themselves, and descend in a

curvilinear direction through solid masonry, arranged in the manner represented in the plan.

At the points where the cables pass over the Towers, they are to be borne upon cast iron saddles, moveable upon solid cast iron cylindrical rollers, rolling upon cast iron plates, embedded in the cap stones of the Towers, all of the form and dimensions represented in the plan.

At the middle, or lowest point of the curve, the cables are to be drawn in  $2\frac{1}{2}$  feet on each side, giving thereby a raking position to the suspenders and a cradle form to the entire system of suspension.

#### 4.—The Anchorage.

Excavations are to be made in the solid rock, in the position represented in the plan, to the depth of 22 feet on the West side, and 27 feet on the East side, below the level of the Roadway, observing due care not to disturb the solid rock unnecessarily. After removing the more loosely stratified rock at the surface, a neat vertical cut of  $3 \times 6$  feet is to be made to admit of the introduction of the cast-iron anchor plate  $3 \times 4$  feet in area, and enlarged above the last link sufficiently, to admit the large bearing stones which are to support the chain cable in its curvilinear position.

As the last link of the chain cable is to occupy a vertical position, the pit for this portion of the anchorage is to be cut out neatly with a drill to the size above stated  $3 \times 6$  feet, but for a depth of three feet above the anchor plate it is to be enlarged gradually from  $3 \times 6$  at top to  $3\frac{1}{2} \times 6$  at bottom, to allow for the introduction of an inverted arch of cut stone resting upon the anchor plate, as shown in the plan.

On the West side a similar enlargement is to be made above the joint of the last link to admit of a second inverted arch.

At the bottom of the anchorage, the pit is to be enlarged sufficiently to allow one half of the anchor plate to bear against the solid rock, and the space below it is to be filled up with rubble masonry, after the ultimate link has been set in its proper place and secured to the plate.

The inverted arches are to be of cut stone, dress to joints not exceeding  $\frac{1}{8}$  of an inch in thickness, and the sides of the pit to which they are to be filled are likewise to be similarly dressed. A vertical groove is to be cut in one side of the pit to receive the thickness of the cable.

At the angles or joints of the cable, large stones, not less than  $4 \times 4$  feet area, and 18 inches in thickness, are to be placed and firmly bedded in rubble masonry, in positions corresponding with the tangent to the curve, at each joint.

The top surface of these stones are to be cut and dressed to receive the bearing plates under the joints, which are to be of wrought iron  $\frac{3}{4}$  inch thick, and  $10 \times 16$  inches in area.

All the masonry in the anchorage to be laid in Thorold Hydraulic lime (that being the best preservative of iron) mixed in the proportion of one of lime to two of sand. After the cables have been set in their proper places, they are to be built about with solid rubble masonry, laid in full mortar made of Thorold cement, and then well grouted with the same.

### 5.—The Anchor Plates.

These plates are to be of cast iron, 4 feet long by three feet broad, and have a general thickness of two inches, and to be strengthened by deep flanges as shown on the plan.

In the central part of it are to be two openings  $7\frac{1}{2} \times 3\frac{1}{4}$  inches each, to receive the end of the chain, and having a deep flange 3 inches thick, between and upon each side of them, and side flanges again between the latter of 2 inches in thickness. A semi-circular groove is to be turned out of the top edge of the three bearing flanges to receive fairly the iron bolt.

### 6.—Anchor Chains.

The links are to be generally 7 feet in length between the bolts, and formed of 7 and 8 bars alternately, to each link. Upon the East bank of the River, the link is to be 10 feet in length. In all cases the ultimate link will be made up of 8 bars, and in order that they may be made to fit properly, in the anchor plates, they are to be slightly bent at the ends, as represented in the plan.

The eight bar-links are to be made up of bars of 5 inches wide by  $\frac{7}{8}$ ths of an inch thick. The bars are to be forged of the best English or Three Rivers iron, with their ends enlarged and rounded to a circle of  $7\frac{1}{2}$  inches in diameter, to admit of a hole being bored out for a bolt  $2\frac{1}{2}$  inches in diameter, and still leave the same sectional area for the bar, at the bolt, as at any other part of it.

To insure a perfect joint and uniform tension between the several links, the bars forming each are to be laid up side by side, in their proper situations, relatively to each other, and beginning at one end the bars are all collectively to be bored out, in the same manner, and the second bolt inserted, and so on to the end of the cable. The bolts are to be of the best wrought-iron, neatly turned to a diameter of  $2\frac{1}{2}$  inches, are to be 16 inches in length.

On the West bank of the River there are to be adjusting links to admit of a change of 10 inches in the length of the cables. These links are to be made up of 7 and 8 bars alternately, lapping past each other, so as to receive the split bolts and wedges, at the points of adjustment, as shown in the plan. They are to be carefully and faithfully forged, of the very best iron, and the same is to be observed in the boring out of the bolts, as above prescribed, for the cable joints, in order that every bar should do its duty, and take its proper share of the strain.

### 7.—The Cables.

The cables are to be composed of 1200 strands each of the best annealed charcoal manufactured iron wire, No. 10, arranged in parallel lines formed in endless skeins and bound up in a cylindrical form by means of a continuous wrapping of iron wire of the same size and quality.

The 1200 strands, with the wrapping, will form a cable about 5 inches in diameter.

As it is the intention that the cables shall be made *in situ* or nearly so, they cannot of course be commenced until the Towers have been erected, saddles and rollers provided and set, and the anchor chains placed and secured.

The process of fabrication will be as follows :—

Each cable will be made up of 7 smaller ones, having each from 170 to 180 strands (the whole 7 making 1200 strands) and each to be temporarily bound up with ligatures at every 4 or 5 feet, until they are all in place, when the ligatures are to be taken off and the whole 7 cables wrapped in one. Each of the 7 smaller cables is to form an endless skein, and to be complete in itself, and made of the exact length, that when coupled with the chain cable at the entrance of the anchorage shall give the versed sine or depression of 26 feet in the middle of the catenary as before specified.

At the two ends they are to be separated into two equal portions for a short distance, and between these they will receive one of the bars of the chain cable with which they will be coupled, by means of wrought iron shackle-plates, fitting neatly upon the bolt at the end of it. To the eighth bar in like manner is to be attached the stays which are to be fastened to the platform of the suspended roadway, and which are to occupy positions on the lower side of the cables, where they rest on their saddles.

The wires in bundles or reels, as they are received, are first to be examined, tested and approved, by a competent person in the service of the Road Trust, and then, to prevent oxidation, and to be boiled in linseed oil, in which is to be mixed a small quantity of litharge, sufficient to give it a proper consistence, and afterwards hang up to dry. The test for the strength of the wire is to submit a single strand placed in a vertical position, to a weight of 1400 lbs. If it breaks with a less weight it is to be rejected. Its uniformity of tension is also to be tested, by stretching a piece, say 4000 feet long horizontally between two posts and reducing the deflection by a power applied at one end, until by calculation from the deflection produced by its own weight, it has been ascertained to bear a strain equal to that above specified.

If much coated with rust it must likewise be rejected as unfit for the work, but all rust must be cleared off, such as may be received previously to submitting it to the varnishing process above described.

In commencing a cable, one strand of wire is to be attached, in the first place, to the shackle at the end of the chain cable of the Eastern anchorage, the reel is then to be passed over the top of the Eastern tower and carried across the river upon a traversing carriage, which moves upon a wire rope, previously suspended, at a proper elevation above the cable, and then passed over the Western tower and round the shackle on the West bank, which has previously been attached to an immovable post placed far enough in rear of the anchorage to cause the cable to assume a deflection of about 15 feet, between the point of support, then passed back to the Eastern side, around the shackle at the Eastern anchorage, back again to the West side, and so on, till the whole 170 strands forming a small cable have been laid on. Great care is to be observed in giving to each strand precisely the same amount of deflection, and also in guarding the temporary post on the West bank from being in the slightest degree disturbed, as any movement there would alter the length of the cable. Each of the seven cables is to be formed in like manner, one after the other upon the same terminal points and intermediate supports, and lifted from them and seated in their proper places in the saddles, and attached successively to the separate links at the anchorage, giving the specified deflection of 26 feet when in place. For the intermediate supports of the smaller cables during construction, wooden saddles are to be laid from top of the towers alongside of the iron ones, rounded on the top, and the circular grooves cut in them to receive the strands, so as to facilitate the binding of them afterwards in a round form, by means of ligatures at every 4 or 5 feet, as previously specified; as one reel is run off the strand, the end of it is to be spliced to the end of the next reel, so as to unite the whole into one continuous

wire from end to end. The splices are to be made by flattening out the ends to be united for 4 inches in length gradually tapering from the shoulder to a sharp chisel like edge, and lapping the two together and binding them tightly with a close continuous wrapping of annealed iron, No. 30.

The ends beginning and ending each cable, are either to be united in like manner, or else secured to the adjoining part of the cable, where they may end by a similar kind of attachment, to keep them from slipping round the shackles.

The splicings are occasionally to be tested by weight or levers, and must be strong enough to resist rupture, until the strand is torn asunder elsewhere than at the splice.

The shackles are to be of wrought iron,  $\frac{1}{4}$ th of an inch in thickness. The bracket-stays are to be composed of 100 wires and formed around shackles temporarily placed upon the land for that purpose.

The stay is to occupy the lowest position in the centre of the saddle.

On each side of it will then be laid one cable; on these two again will be laid three cables, and on the latter two cables, by which arrangement they will be in the best position to form an entire cable, which after the removal of the temporary ligatures from the smaller ones, will receive a close continuous wrapping from end to end. The stays between the towers are to be wrapped at intervals of 12 inches, with wire No 18, the wrapping to extend also 12 inches, but upon the land side they are to be bound up with the large cable, all in one, as far as the wrapping can be carried.

During the process of wrapping the cable is to be kept saturated with linseed oil, mixed with litharge, and after it is completed and dry, the wrapping is to be painted with two coats of paint, of such color as may be directed.

### 8.—Saddles and Rollers.

The castings of the saddles are to have a general thickness of two inches, the bed to be planed off so as to bear evenly upon the rollers, which are to be 12 inches in diameter turned off to a perfect cylinder, with projecting flanges of one inch deep and  $1\frac{1}{2}$  inches in thickness. The bed plate is to be  $2\frac{1}{2}$  inches thick, with its top surface evenly planed off. It is to be sunk  $1\frac{1}{2}$  inches into the capstone, and laid in a bed of hydraulic cement. The rollers are to be coupled by side plates of wrought iron, 4 inches wide by  $\frac{1}{2}$  inch thick, and axles of  $1\frac{1}{2}$  inch in diameter.

### 9.—Roadway.

The side trusses, cross-beams, longitudinal bearers, and first floor are all to be of the best sound tamarack, sawn to order. The second floor is to be of oak  $1\frac{1}{2}$  inches thick, in pieces not less than 16 feet long, laid lengthwise, breaking joints with each other, and spiked to the cross beams with  $6\frac{1}{2}$  inches spikes, weighing 5 to the lb., and at the rate of 12 lbs. to the square. The second floor is to be fastened to the first, with 4 inch spikes, weighing 12 to the lb. Both floors to be laid in close joints, and the rain water is to be carried off through 2 inch scuppers at the sides, at regular intervals. All the truss work is to be of clear stuff neatly planed and framed according to the dimensions given in the plan, and giving a slight curvature of about 18 inches rise in the middle of the arch. A sub-sil of

8 x 8 is to be bedded in the masonry of each abutment, and extend over 42 feet to the end of the bracket stay, as a support for the end of the truss, this sill is to be of oak, in one whole piece. The top and bottom chords of the truss are to be built up of long pieces, from 32 to 48 feet in length, breaking joints with each other at regular intervals.

For further particulars reference to be had to the plan.

After suspending the cross-bearers and laying the floor, the materials for the side trusses are to be brought upon it, and uniformly distributed over it, opposite to their respective places, and before building them in place, a load of 50 tons of stones is to be uniformly distributed over the floor, after which the suspenders are to be adjusted to bring the roadway to the proper curvature, and then the trusses are to be put up, and braced upon the outside, and the footpath laid according to plan.

After the completion of the roadway, the trusses and the ends of the cross-beams outside of them are to be painted with 3 good coats of white lead and oil. The cross-beams, curb-stringers, and the underside of the first floor are to receive two good coats of whitewash. The upper side of the first floor and cross-beams are to be well coated with mineral tar before receiving the covering.

The end of the truss is to be terminated by a post, to which the top chord is to be connected by an iron strop 6 feet long,  $2\frac{1}{2} \times \frac{3}{4}$  inches lapping on each side and bolted together through the cord. The masonry of the abutments is to be checked out to receive the Post and the ends of the bottom chords and sills—and the attachment to the masonry is to be such as to admit of a limited movement sufficient to allow for the rise and fall of the roadway due to the contraction and expansion of the cables.

### 10.—Suspenders.

The Suspenders are to be made up of 28 strands of annealed wire No. 10, the same as specified for the cables, formed in skeins and spliced at the end. They are to be made upon their proper shackles fixed in positions distance apart as they are to occupy when in place, and the wire wound round them with a sufficient degree of uniform strain to bring the strands well up to their duty, when they are to be bound up with ligatures of wire No. 18, forming bands 3 inches broad and 6 inches asunder. The attachment of the suspenders to the cables is to be made by means of bands of wrought iron  $2\frac{1}{2} \times 38$  inches made to encircle the cable and having two depending lugs between which the shackles of the suspender is to be introduced, and secured by means of a Screw Bolt, one inch in diameter. The attachment to the cross-beam will also be somewhat similar. A band of iron of the same size will be made to fit around the beam, and the end of the Suspender will be coupled to it as above described. Any adjustment which may afterwards be necessary, must be done by means of wedges or plates of iron, inserted between the band and the underside of the cross beam.

At the middle of the Bridge and for the two beams upon each side of it, bands for the cable and beams may be dispensed with and the cable may be bound down to the beams by means of iron wire neatly laid on and wedges inserted between the cable and the beam to bring them together more tightly.

### 11.—Masonry.

The basement of the Towers and the walls between them are to be of rock-dressed ashlar cut to  $\frac{3}{4}$  joints and laid in regular courses not less than 18 inches in thickness—to have good heavy backing and all laid in common lime mortar with the exception of the joints for 8 inches, back from the face which is to be laid in hydraulic cement.

The face stones are to consist of leaders and stretchers so arranged with each other and with the backing as to make good band throughout. The bed joints of the ashlar to be full for 18 inches back, and the end joints for 12 inches back from the face of the wall. No leader to be less than 3 feet broad upon the face and not less than 4 feet long, and no stretcher to be less than 3 feet long. As nearly as possible there must be one leader to every two stretchers. The backing is to be levelled up even with every face stone and there are to be headers also in the backing, midway between those of the face. Two courses of backing may be used to make up one of ashlar. The Towers are to be of cut stone of large dimensions neatly boucharded, having full bed and joints, and laid in hydraulic lime. The courses are to be arranged as represented in the plan and none to be less than 18 inches in thickness. The Cap-stone is to be in one whole piece  $4\frac{1}{2} \times 6\frac{1}{2}$  feet  $\times$  12 inches in thickness. Bolts and dowels are to be used to bind together the four courses next below the cap-stone in such manner as may be directed.

The entrance to anchorage above the ground line is to be of hammered dressed stones, dressed to  $\frac{3}{4}$ th inch joints, and laid in common lime. A brick arch is to be turned inside, and the top covered with cut flagging laid in cement.

The abutment walls between the towers and anchorage on the East-side of the river, are to be built of heavy rubble masonry of the dimensions represented in the plan, laid in common lime, and forming a solid substantial wall, and the joints to be neatly painted. The remaining portion of the Eastern approach may be built either of an earthen embankment, with side slopes of 2 to 1 or it may consist of a mass of refuse stones retained between dry rubble walls, having a batter of 3 inches to a foot, at the option of the contractor.

The spaces between the masonry walls of the Eastern abutment, and about the anchorage on the West-side are to be fitted up with refuse stones, and both approaches to be covered with 10 inches of macadamized stone, forming a good carriage road. A suitable wooden parapet and hand-rail is to be set up on the abutment walls as represented on the plan.

### 12.—Cast Iron.

The castings are to be of the best quality—perfect in form and perfectly sound. After being heated to a perfect degree, they are to receive an anticorrosive coating of linseed oil and mineral tar, applied hot.

The contractor will be furnished with copies of the plans and specifications, from which he will make and provide at his own expense all the patterns for the castings. All this work is to be executed in the best and most workmanlike manner, in strict accordance with the plans and specifications, and the directions and instructions which may from time to time be given to him by the person appointed for that purpose by the Road Trust.

It must also be done by competent persons in each department, and no part shall be let to inferior workmen, nor shall any person be employed upon the

works, whom the person so put in charge by the Road Trust, as above mentioned, may consider unfaithful or deficient in skill.

The contractor is also to provide his own service ground, and find all materials, tools, utensils, and machinery; all staging, hawsers, ropes, blocks, &c.,—tackles necessary for the erection of the Bridge, and is to complete the Bridge according to the plans and specifications, on or before the 30th November, 1854.

(Signed,) SAMUEL KEEFER.  
Civil Engineer.

QUEBEC, 27th September, 1853.

## No. 2.

### SPECIFICATION for the CONSTRUCTION of a SUSPENSION BRIDGE over the RIVER MONTMORENCY, above the FALLS.

#### 1.—Site.

The intended Bridge will span the River Montmorency, above the Falls, a few feet back from the pitch of the Cataract, or sufficiently far removed to afford a safe and solid bearing for the foundations of the Towers, but the exact centre line will be marked out by the Engineer of the Road Trust.

The site may be varied at the discretion of the Commissioners of the Road Trust, to any point between the place above indicated and the position of the existing Bridge.

#### 2.—General Dimensions.

The distance between the points of Suspension will be about	327 feet, English:
The span between abutments at the level of roadway....	316 feet, do.
The breadth of roadway $16\frac{1}{2}$ feet, of foot-path (on one side only $3\frac{1}{2}$ feet) making in all.....	20 feet, do.
Versed sine of Catenary or depression of cables.....	26 feet, do.
Height of Roadway above highest flood, about total length of wire cable from centre to centre of shackle-bolts.....	464 feet, do.
Length of bar chain cable, East side.....	39 feet, do.
Do. do. West side.....	37 feet, do.
Total developed length of cable from anchor to anchor....	540 feet, do.
Height of masonry towers from level of Roadway to the bearings of the cables in their saddles.....	25 feet, $7\frac{1}{2}$ in.
Number of strands of wire in each cable.....	1000 strands.

### 3.—General Description.

A light wooden Roadway is to be suspended from two wire cables, one on each side of the Bridge, which are to be supported upon four towers of solid masonry of the dimensions represented on the plan.

The Roadway and the masonry of the abutments are to be elevated to the level of the West bank of the River.

The wire cables are not to be extended below the ground line, but will terminate within the entrance to the anchorage, from whence they will be prolonged to the anchorage plates, secured to the solid rock by means of bar chain cables of double the sectional area of the wire cables themselves, and descend in a curvilinear direction, through solid masonry, arranged in the manner represented on the plan. At the points where the cables pass over the towers, they are to be borne upon cast iron saddles, moveable upon solid cast iron cylindrical rollers, rolling upon cast iron plates embedded in the cap stones of the towers, all of the form and dimensions represented in the plans.

At the middle or lowest point of the curve, the cables are to be drawn in  $2\frac{1}{4}$ th feet on each side, giving thereby a raking position to the suspenders and a cradle form to the entire system of suspension.

### 4.—The Anchorage.

Excavations are to be made in the solid rock, in the positions represented on the plan to the depth of 22 feet on the West-side, and 27 feet on the East-side, below the level of the Roadway, observing due care not to disturb the solid rock unnecessarily; after removing the more loosely stratified rock at the surface, a neat vertical cut is to be made sufficiently large to admit of the introduction and setting in its place of the cast iron anchor plate  $3 \times 4$  feet in area, and enlarged above the last link sufficiently to admit the large bearing stones which are to support the chain cable in its curvilinear position.

As the last link of the chain cable is to occupy a vertical position, the pit for this portion of the anchorage is to be cut out neatly with a drill to the size of  $3 \times 6$  feet, but for a depth of 3 feet above the anchor-plate it is to be enlarged gradually from  $3 \times 6$  at top to  $3\frac{1}{2} \times 6$  at bottom, to allow for the introduction of an inverted arch of cut stone resting upon the anchor plate as shewn on plan.

At the bottom of the anchorage, the pit is to be enlarged sufficiently to allow one-half of the anchor plate to bear against the solid rock, and the space below it is to be filled up with rubble masonry after the ultimate link has been set in its proper place and secured to the plate. The inverted arches are to be of cut stone, dressed to joints not exceeding one eighth of an inch in thickness, and the sides of the pit to which they are to be fitted are likewise to be similarly dressed. A vertical groove is to be cut in one side of the pit to receive the thickness of the cable.

At the angles or joints of the cable, large stones, not less than  $4 \times 4$  feet area, and 18 inches in thickness, are to be placed and firmly bedded in rubble masonry, in positions corresponding with the tangent to the curve at each joint; the top surfaces of these stones are to be cut and dressed to receive the bearing plates under the joints, which are to be of wrought iron, three-fourths of an inch thick and  $10 \times 16$  inches in area.

All the masonry in the anchorage to be laid in Thorald Hydraulic lime, (that being the best preservative of iron) mixed in the proportion of one of lime to two

of sand. After the cables have been set in their proper places, they are to be built about with solid rubble masonry laid in full mortar, made of Thorold cement, and then well grouted with the same.

### 5.—The Anchor Plates.

These plates are to be of cast iron 4 feet long by 3 feet broad, and have a general thickness of two inches, and to be strengthened by deep flanges as shown on the plan. In the central part of it are to be two openings  $7\frac{1}{2} \times 3\frac{1}{2}$  inches each to receive the end of the chain, and having a deep flange 3 inches thick between and upon each side of them, and side flanges again between the latter of 2 inches in thickness. A semicircular groove is to be turned out of the top edge of these three bearing flanges, to receive fairly the iron bolt.

### 6.—Anchor Chains.

The links are to be generally 7 feet in length between the bolts, and formed of 7 × 8 bars alternately to each link—upon the east bank of the river the ultimate link is to be 10 feet in length. In all cases the ultimate link will be made up of 8 bars, and in order that they may be made to fit properly in the anchor plates, they are to be slightly bent at the ends as represented in the plan.

The eight bar links are to be made up of 5 inches wide by three-fourths of an inch thick, and the 7 bar links, of bars 5 inches wide by seven-eighth of an inch thick. The bars are to be forged of the best English or Three Rivers Iron, with their ends enlarged and rounded to a circle of  $7\frac{1}{2}$  inches in diameter, to admit of a hole being bored out for a bolt  $2\frac{1}{2}$  inches in diameter, and shall have the same sectional area for the bar at the bolt as at any other part of it. To insure a perfect joint and uniform tension between the several links, the bars forming each are to be laid up side by side in their proper situations relatively to each other, and beginning at one end the bars are all collectively to be bored out at the same operation, the bolt inserted and retained there until the second joint is bored out in the same manner, and the second bolt inserted, and so on to the end of the cable.

The bolts are to be of the best wrought iron, neatly turned to diameter of  $2\frac{1}{2}$  inches, and are to be 16 inches in length.

On the West bank of the River, there are to be adjusting links to admit of a change of 10 inches in the length of the cables.

These links are to be made up of 7 × 8 bands, alternately lapping past each other, so as to receive the split-bolts and wedges at the points of adjustment as shown on the plan. They are to be carefully and faithfully forged of the very best iron, and the same care is to be observed in the boring out of the bolts as above prescribed for the cable joints, in order that every bar shall do its duty and take its proper share of the strain.

### 7.—The Cables.

The cables are to be composed of 1000 strands, each of the best annealed charcoal manufactured iron bridge wire No. 10, arranged in parallel lines, formed

in endless skeins and bound up in a cylindrical form by means of a continuous wrapping of iron wire of a suitable size and of the best quality. The 1000 strands with the wrapping will form a cable of nearly 5 inches in diameter.

Each cable will be made up of 7 smaller ones, having each from 140 to 150 strands (the whole 7 making 1000 strands), and each to be temporarily bound up with ligatures at every 4 or 5 feet until they are all in place, when the ligatures are to be taken open and the whole 7 cables wrapped in one. Each of the seven smaller cables is to form an endless skein and to be complete in itself, and made of the exact length, that when coupled with the chain cable at the entrance of the anchorage shall give the versed sine or depression of 26 feet in the middle of the catenary as before specified.

At the two ends they are to be separated into two equal portions for a short distance, and between these they will receive one of the bars of the chain cable with which they will be coupled by means of wrought iron shackle-plates, fitting neatly upon the bolt at the end of it.

To the eighth bar, in like manner, is to be attached the stays which are to be fastened to the platform of the suspended roadway, and which are to occupy positions on the lower side of the cables where they rest on their saddles.

The wires in bundles or reels as they are received are first to be examined, tested and approved by a competent person in the service of the Road Trust, and then to prevent oxidation are to be boiled in linseed oil, in which is to be mixed a small quantity of litharge sufficient to give it a proper consistence, and afterwards hung up to dry. The test for the strength of the wire is to submit a single strand, placed in a vertical position, to a weight of 1500 lbs. If it breaks with a less weight it is to be rejected.

Its conformity of tension is also to be tested by stretching a piece, say, 400 feet long, horizontally between two posts, and reducing the deflection by a power applied at one end until by a calculation from the deflection produced by its own weight it has been ascertained to bear a strain equal to that above described. If much coated with rust it must likewise be rejected as unfit for the work, but all rust must be cleared off, such as may be received previously to submitting it to the varnishing process above described. Each of the seven cables is to be formed, one after another upon the same terminal points and intermediate supports and lifted from them and seated in the proper places in the saddles, and attached successively to the separate links at the anchorage, giving the specified deflection of 26 feet when in their final position.

The process of fabrication will hereafter be determined by the Engineer in charge.

For the intermediate support of the smaller cables during construction, wooden saddles are to be laid upon top of the towers, alongside of the iron ones, rounded on the top, and circular grooves cut in them to receive the strands so as to facilitate the binding of them afterwards in a round form by means of ligature at every 4 or 5 feet as previously specified.

As one reel is run off the strand, the end of it is to be spliced to the end of the next reel so as to unite the whole into one continuous wire from end to end.

The splices are to be made by flattening out the ends to be united for 4 inches in length gradually tapering from the shoulder to a sharp chisel like edge, and lapping the two together and binding them tightly with a close continuous wrapping of annealed wire, No. 30. The ends beginning and ending each cable are either to be united in the like manner or else secured to the adjoining part of the cable where they may end by a similar kind of attachment to keep them from slipping round the shackles.

The splicings are occasionally to be tested by a weight or levers, and must be strong enough to resist rupture until the strand is torn asunder elsewhere than at the splice.

The shackles are to be wrought iron, one-quarter inch in thickness. The bracket-stays are to be composed of 100 wires, and formed around shackles temporarily placed upon the land for that purpose. The stay is to occupy the lowest position in the centre of the saddle. On each side of it will then be laid one cable, on these two again will be laid three cables, and on the latter two cables, by which, arrangement they will be in the best position to form an entire cable; which, after the removal of the temporary ligatures from the smaller ones will receive a close continuous wrapping from end to end. The stays between the towers are to be wrapped at intervals of 12 inches, with wire No. 18, the wrapping to extend also 12 inches, but upon the land-side they are to be bound up with the large cable all in one as far as wrapping can be carried.

During the progress of the wrapping, the cable is to be kept saturated with linseed oil mixed with litharge, and after it is completed and dry, the wrapping is to be painted with two coats of paint of such color as may be approved of.

### 8.—Saddles and Rollers.

The castings of the saddles are to have a general thickness of 2 inches, the bed to be planed off so as to bear evenly upon the rollers which are to be 12 inches in diameter, turned off to a perfect cylinder with projecting flanges of one inch deep, and  $1\frac{1}{2}$  inches in thickness.

The bed plate is to be  $2\frac{1}{2}$  inches thick, with its top surface evenly planed off. It is to be sunk  $1\frac{1}{2}$  inches into the cap stone and laid in a bed of hydraulic cement. The rollers are to be coupled by side plates of wrought iron, 4 inches wide by three-fourths of an inch thick, and axles of  $1\frac{1}{2}$  inches in diameter.

### 9.—Roadway.

The Roadway is to be supported by cross beams four feet apart at their centres. These beams are to be 14 × 14 inches section at the centre, and 12 × 4 inches at the side truss. The side trusses, cross-beams, longitudinal bearers and first or lower floor are all to be of the best sound tamarack, sawn to order. The second, or upper floor is to be of oak,  $1\frac{1}{2}$  inches thick, and laid crosswise. The lower floor is to be 3 inches thick in pieces not less than 16 feet long laid lengthwise, breaking joints with each other, and spiked to the cross beams with  $6\frac{1}{2}$  inch spikes, weighing five to the lb., and the rate of 12 lbs. to the square. The second floor is to be fastened to the first with 4 inch spikes, weighing 12 to the lb. Both floors are to be laid in close joints, and the rain-waters carried off through 2 inch scuppers at the sides in regular intervals; all the truss work is to be of clear stuff, neatly planed and framed according to the dimensions given in the plan, and giving a slight curvature of about 18 inches rise in the middle of the arch. A subsill of 8 × 8 is to be bedded in the masonry of each abutment, and extend over 42 feet to the end of the bracket-stay as a support for the end of the truss; this sill is to be of oak, in one whole piece. The top and bottom chords of the truss are to be built up of long pieces, from 32 to 48 feet in length, breaking joints with each other at regular intervals. For further particulars, reference to be had to the plan.

After suspending the cross beams and laying the floor, the materials for the side trusses are to be brought upon it and uniformly distributed over it opposite to their respective places, and before building them in place, a load of 50 tons of stones is to be uniformly distributed over the floor, after which the suspenders are to be adjusted to bring the Roadway to the proper curvature, and then the trusses are to be put up and braced from the outside, and the foot-path laid according to the plan.

After the completion of the Roadway, the trusses and ends of the cross-beams, outside of them, are to be painted with three coats of white lead and oil. The crossbeams, curbstringers and the underside of the first-floor are to receive two good coats of white wash. The upper side of the first floor and cross-beams are to be well coated with mineral tar before receiving the covering.

The end of the truss is to be terminated by a post to which the top chord is to be connected by an iron strap, 6 feet long,  $2\frac{1}{2} \times \frac{3}{4}$  inches, lapping on each side and bolted together through the chord.

The masonry of the abutments is to be checked out to receive the post, and the ends of the bottom chords and sills, and the attachment to the masonry is to be such as to admit of a limited movement sufficient to allow for the rise and fall of the Roadway due to the contraction and expansion of the cables.

### 10.—Suspenders.

The suspenders are to be made up of 28 strands of annealed wire, No. 10, the same as specified for the cables, formed in skeins and spliced at the ends. They are to be made upon their proper shackles, fixed in positions the same distance apart as they are to occupy when in place, and the wire wound round them with a sufficient degree of uniform strain to bring the strands well up to their duty, when they are to be bound up with ligatures of wire, No. 18, forming bands 3 inches broad and 6 inches asunder, or, "Patent Improved Iron Wire Rope," of  $2\frac{1}{2}$  inches in circumference, weighing  $5\frac{1}{2}$  lbs. per fathom, may be substituted at the option of the contractor.

The attachment of the suspenders to the cables is to be made by means of bands of wrought iron  $2\frac{1}{2} \times \frac{3}{4}$  inches, made to encircle the cable, and having two depending legs between which the shackles of the suspenders is to be introduced and secured by means of a screw bolt one inch in diameter. The attachment to the cross-beams will also be somewhat similar. A band of iron of the same size will be made up to fit around the beam, and the end of the suspender will be coupled to it as above described. Any adjustment which may afterwards be necessary, must be done by means of wedges or plates of iron inserted between the band and the underside of the cross-beam. At the middle of the Bridge, and for the two or three beams upon each side of it, bands for the cable, and beams may be dispensed with and the cable may be bound down to the beams by means of iron wire neatly wound on, and wedges inserted between the cable and the beam to bring them together more tightly.

### 11.—Masonry.

The basement of the towers and the walls between them are to be of rock-dressed ashlar, cut to  $\frac{1}{4}$ ths of an inch joints, and laid in regular courses, not less than 18 inches in thickness, to have good heavy backing, and all laid

in common lime mortar, with the exception of the joints for 8 inches back from the face which is to be laid in hydraulic cement.

The face-stones are to consist of headers and stretchers, so arranged with each other, and with the backing as to make good bound throughout. The bed-joints of the ashlar to be full for 18 inches back, and the end-joints for 12 inches back from the face of the wall. No header to be less than 3 feet broad upon the face, and not less than 4 feet long, and no stretcher to be less than 3 feet long. As nearly as possible there must be one header to every two stretchers. The backing is to be levelled up even with every face stone, and there are to be headers in the backing midway between those of the face. Two courses of backing may be used to make up one of ashlar. The towers are to be of cut-stone of large dimensions neatly boucharded, having full beds and joints throughout, and laid in hydraulic lime. The courses are to be arranged as represented in the plan, and none to be less than 18 inches in thickness. The thicker courses to be placed at bottom. The joints not to exceed  $\frac{1}{8}$ ths of an inch in thickness; the cap-stone is to be in one whole piece  $4\frac{1}{2} \times 6 \times 1$ . Bolts and dowels are to be used to bind together the 4 courses next below the cap-stone in such manner as may be directed. The entrance to anchorage above the ground-line is to be of hammer-dressed masonry, dressed to  $\frac{3}{8}$ th in joints, and laid in common line. A brick arch is to be turned inside, and the top covered with cut flagging laid in cement. The abutment walls between the towers and anchorage on the East side of the River are to be built of heavy rubble masonry of the dimensions shewn on the plan, laid in common lime and forming a solid substantial wall, the joints to be neatly pointed, as also the examining portion of the Eastern approach, as far as the solid road which rises abruptly, and terminates what may be considered the Bridge approaches on this side of the River, or an earthen embankment, with side slopes of 2 to 1 properly sodded and sown with grass seed, may be substituted between the towers and anchorages at the option of the contractor. The spaces between the masonry walls of the Eastern abutment, and about the anchorage on the West-side are to be filled up with refuse stones, and both approaches covered with 9 inches of macadamized stone, forming a good carriage road.

A suitable wooden parapet and handrail is to be set up on the abutment walls, as represented on the plan.

## 12.—Cast Iron.

The castings are to be of the best quality, perfect in form and perfectly sound; after being heated to a perfect degree, they are to receive an anti-corrosive coating of linseed oil and mineral tar applied hot. The contractor will have to provide, at his own expense, all the patterns for the castings.

All the work is to be executed in the best and most workmanlike manner, in strict accordance with the plans and specifications, and the directions and instructions which may from time to time be given to him by the Engineer of the Road Trust. It must also be done by competent persons in each department, and no part shall be re-let to inferior workmen, nor shall any person be employed upon the works whom the Engineer of the Road Trust may consider unfaithful or deficient in skill.

The contractor is also to provide his own service ground and find all materials, tools, utensils and machinery, all staging, hawsers, ropes, blocks and tackles necessary for the erection of the Bridge, and is to complete the Bridge according to the plans and specifications, on or before the First day of December, 1855.

This is the specification referred to in the contract executed on this day, by and between the undersigned parties, and before the undersigned Notaries, and to which contract the present specification is hereby annexed according to the tenor of the said contract.

(Signed,) SIMON OCTEAU,	(Signed,) THOMAS A. WALKER,
" E. DELAIRE,	By procuration for
" WM. H. LEMOINE,	ROBERT WALKER,
" J. B. CARRIER,	" CHARLES WALKER,
" JOHN ROWLEY	" GEORGE HALL,
" JAMES GIBB,	
" EDOUARD J. DEBLOIS,	
" F. LANGLOIS, N.P.	" I.S. PREVOST, N.P.

QUEBEC, 28th July, 1854.

(A True Copy.)

I.S. PREVOST, N.P.

### No. 3.

#### CONTRACT between WALKER and TRUSTEES.

ON the Twenty-eighth day of July, in the year of our Lord one thousand eight hundred and fifty-four, Before us, the undersigned Notaries Public, duly commissioned and sworn, and dwelling at the City of Quebec, in the Province of Canada, personally came and appeared, Thomas Andrew Walker, Engineer and Contractor, residing at the City of Quebec, of the one part; and James Gibb, Esquire, residing on the St. Lewis Road, near Quebec; John Rowley, Esquire, Physician, residing at the City of Quebec; Edouard Joseph DeBlois, Esquire, Advocate, residing at LaCanardiere, within the Banlieu of Quebec; William Henry Lemoine, Esquire, residing in the Parish of Chateau Richer, in the County of Montmorency; Etienne Dalairé, Esquire, residing in the Parish of Notre Dame de la Victoria, in the County of Lévis; Simon Octeau, Esquire, residing in the Parish of St. Joseph, Pointe Lévy, and Jean Baptiste Carrier, Esquire, residing in the Parish of St. Henry, in the said County of Lévis, all Trustees duly appointed for the management of the Turnpike Roads, in the neighbourhood of and leading to the City of Quebec, under and in virtue of an ordinance of the Governor and Special Council for the affairs of Lower Canada, passed in the Fourth year of the reign of Her Majesty, chapter seventeen, intituled, "An Ordinance to provide for the improvement of certain Roads in the neighborhood of and leading to the City of Quebec, and to raise a fund for that purpose," acting also under the provisions of an Act of the Legislature, passed

in the Fourteenth and Fifteenth years of the reign of Her Majesty, chapter one hundred and thirty-three, intituled, "An Act to authorize the Trustees of the Quebec Turnpike Roads to issue Debentures to a limited amount for the purpose of buying and re-building the Montmorency Bridge," acting also under the provisions of another Act of the Legislature, passed in the Sixteenth year of Her Majesty, chapter two hundred and thirty-five, intituled, "An Act to authorize the Trustees of the Quebec Turnpike Roads to issue Debentures to a certain amount, and to place certain Roads under their control," the said Trustees, parties hereto, being a majority of the said Trustees, and acting in this behalf in their capacity of Trustees of the Quebec Turnpike Roads, of the other part:

Which said parties have covenanted, stipulated and contracted as follows, that is to say:—

The said Thomas Andrew Walker doth hereby bind and oblige himself to build, erect, and construct, finish and complete, in a good, strong workmanlike manner, with the best of materials and workmanship, subject to the inspection and judgment of competent persons under the superintendence of the Engineer of the Road Trust, a Suspension Bridge over the River Montmorency above the Falls, the said Bridge to span the said River Montmorency above the falls, a few feet back from the pitch of the Cataract, or sufficiently far removed to afford a safe and solid bearing for the foundations of the Towers, but the exact centre line to be marked out by the Engineer of the Road Trust; and for the purpose aforesaid, the said contractor, doth hereby bind and oblige himself to perform all the works mentioned and detailed in the specification for the said Bridge, identified by the signatures of the said parties; and us the said Notaries, and hereunto annexed; all the said work to be executed in the best and most workmanlike manner, in strict accordance with the plans and specifications, and the directions and instructions which may from time to time be given to him by the Engineer of the Road Trust.

The said contractor doth hereby bind himself to find and provide all materials, tools, utensils and machinery and other things necessary for the erection of the said Bridge, the said materials of their respective kinds and descriptions to be of the best in every way, and to be subject to the survey and inspection of competent persons.

The said contractor binds himself to commence the said works immediately, after the execution of the present contract, and to finish, complete and deliver the whole to the said Trustees, on or before the first day of December, one thousand eight hundred and thirty-five.

The said Trustees to purchase all ground required for the ascents and approaches of the said Bridge on both sides thereof.

The present contract is thus made and entered into for and in consideration of the price or sum of Seven thousand two hundred pounds, current money of this Province, and which the said Trustees of the Quebec Turnpike Roads do hereby promise and bind themselves in their said capacity of Trustees, to pay to the said contractor in Debentures, to be issued under the provisions of the said Acts of Parliament, or any other Act of Parliament authorizing other issues of Debentures, or out of any funds hereafter to come into the hands of the said Trustees, in and by instalments as the said works shall be progressed with, upon the Engineer's certificate, the last instalment to be paid on the completion and delivery of the whole of the said works to the satisfaction of the said Trustees and by them received; the said Debentures to become due in fifteen years from the day of issue, and to bear interest from the date of issue, at the rate of six per cent per annum, the said interest payable semi-annually, and which said Debentures shall be taken and received by the said contractors at par or the value expressed upon the same in current money of this Province, and without any pre-

tended depreciation in the market value of the said Debentures in any shape or way whatever.

And to these presents personally came and appeared Charles Walker, of the City of Qubec, Engineer, acting in this behalf as the Attorney, duly appointed for the special purposes of these presents, of Robert Walker, Esquire, of the Township of Stanfold, in Canada East, under a certain letter of Attorney, executed in the office of F. H. Pratt and another, Public Notaries on the twenty-sixth day of June, now last past, an authentic copy whereof is hereunto annexed, and George Hall, Esquire, of the City of Quebec, Merchant Grocer, and a member of the City Council, who after having had and taken communication of the present contract and of the specification thereunto annexed, did and do hereby become joint sureties (*cautions solidaires*) for the said contractor, in favor of the said Trustees of the Quebec Turnpike Roads, hereof accepting for the due and entire fulfilment, by and on the part of the said contractor of the present contract, and of all obligations by him also contracted, under these Presents, to all which the said Robert Walker, by and through his said Attorney, and George Hall, do hereby bind and oblige themselves and their heirs and assigns, jointly and severally (*solidairement*) with the said contractor, one for the other, and each of them for the whole, under the several renunciations required by law, the said sureties hereof making their own proper affair as sole and principal obligee.

The said Contractor binds himself to pay to the undersigned Notary his fee for the present contract, including a copy of the same, with the said specification, for the said Trustees; and for the due execution hereof the said parties have made election of domicile irrevocable as follows, that is to say, the said Contractor and sureties at the place of abode of the said contractor at Quebec, and the said Trustees at the office of the Road Trust at the said City of Quebec.

Thus done and passed at the said City of Quebec, in the office of Louis Prévost, one of us the said Notaries, on the day and year first above written, under the number five thousand and forty-one, in faith and testimony whereof the said parties to these presents, acting as aforesaid, have to these presents first duly read, set and subscribed their names and signatures in the presence of us the said Notaries, also hereunto subscribing.

(Signed,) THOMAS A. WALKER,  
by procuration for Robert Walker.  
“ CHARLES WALKER.  
“ GEORGE HALL.  
“ JAS. GIBB.  
“ JOHN ROWLEY,  
“ ED. J. DeBLOIS.  
“ W. H. LEMOINE.  
“ E. DALAIRE.  
“ SIMON OCTEAU.  
“ J. B. CARRIER.  
“ L. PRÉVOST, N. P.

F. LANGLOIS, Notary.

A true copy of the Original remaining of record in my office.

L. PRÉVOST, N. P.

## No. 4.

**REPORT to the TRUSTEES of the QUEBEC TURNPIKE ROADS on the accident to MONTMORENCY BRIDGE.**

Gentlemen,—Immediately on receiving the news of the accident to Montmorency Suspension Bridge, I went to the spot, accompanied by Mr. T. A. Walker, the contractor, and examined into the cause.

We found that the 2nd set of bar links of the north-west anchorage had broken from 3 feet to 4 feet 6 inches below the level of the ground. The cross-strain thrown by the failure of this anchorage upon the opposite cable caused the first set of bar links on the south-west to snap across, when the cable rushed over the tower, carrying a part of the cornice of the south-west tower away with it. The anchorage on the east side of the river remains perfectly safe, and the cables hung from them over the towers down the Falls. Almost the whole of the timber has been swept away by the water. All the towers stand perfectly uninjured, with the exception of the cornice, which was injured by the cable sweeping over.

My impression is that this anchorage being set in the beginning of the winter was upheaved bodily by the frost, and the heads only being let down in the thaw, a cross strain came upon the bars which they were unequal to sustain. Had the bars been double or treble the strength the same thing would have occurred under the same circumstances.

The bars, without any unfair play, were capable of sustaining a strain of six times that upon them. We examined seven of the fractured bars of the North-west anchorage, and with the exception of slight flaws in the edges of two of them, the rest were perfectly sound. These flaws were not sufficient to cause fracture.

I am, &c.,

(Signed,) WM. H. RANKIN.

1st May, 1856.

## No. 5.

**To the TRUSTEES of the QUEBEC TURNPIKE ROADS.**

QUEBEC, 12th May, 1856.

Gentlemen,—In compliance with your instructions I beg to make the following remarks on the Report of Messrs. G. R. Baldwin, C.E.; Wm. Chessell, R.E. Dept.; and Lieut. Col. Renwick, R.E.

It is satisfactory to find that these gentlemen consider the towers uninjured, with the exception of the cornices of three of them which were disturbed by the

passing of the cables, because, in the first place, the masonry was the most expensive part of the work, and secondly it refutes the malicious statement so industriously spread before the accident, namely, that the towers had sunk several feet and canted over.

The immediate cause of the destruction of the bridge is attributed to the masonry of the anchorage having been built in winter (see 5th and 6th paragraphs of Report). With this opinion I perfectly concur, and must plead in excuse that no objection was raised by any one interested or otherwise in the work better acquainted with the effects of frost in this climate than myself; on the contrary many masons in whom I had implicit confidence assured me that they were constantly in the habit of building in the very depth of winter. From the badness of the times, and many other conflicting causes, the contractor was unable to go on spiritedly with the work in the summer, and it was not until the fall that a push was made to complete the work. The bar links had not yet arrived. The anchorage was thus left over until late in the year, when an effort was made to complete it, as otherwise it would have delayed the whole work for another year.

The Contractor was making all the haste in his power with the work, as from the dangerous state of the old Bridge he was frequently urged to do so.

Referring to the latter part of the 6th paragraph of Report, I beg to remark that in a conversation I had with the Contractor (Mr. Walker) on the subject of the stones referred to, I concurred in his opinion that they were unnecessary where the rock was solid, and that he could not put any artificial support under the heads of the links so good as nature had placed there.

The iron plates, however, I considered absolutely necessary, and until very lately I was sure they had been inserted in the S. E. anchorage, which was first built.

For the truth of my intentions in this respect, see enlarged drawing of anchorage made by me in September, 1855, about the time the first anchorage was being built—a copy of which I gave the Inspector of Masonry for his guidance, which shows the large bearing stone under the head of the links which gave way.

Subsequently, however, it was deemed now advisable to build the anchorage in raking courses, which the gentlemen in reporting on the failure seem not to have noticed, and that it would have supported a considerable pressure from the cable, which was raised out of the direct line between the heads of the last links and the points of suspension, the pressure would, as the upper part of the work was built, have tended to obviate any movement in the lower part of the anchorage, and do away with the great importance which the bearing-stones would have, had the anchorage been built according to plan.

The raising of the cables out of the straight line made it impossible for passing loads to disturb the anchorage towers, as they have been found to do at Niagara.

With respect to the iron, I have only to say that it bore such a good character in Quebec, that if there was one place that required it better than another, I should have placed it in that position.

I have the honor, &c.,

(Signed,)

WM. H. RANKIN,  
Civil Engineer.

## No. 6.

**To the COMMISSIONERS, QUEBEC TURNPIKE TRUST.**

QUEBEC, 6th May, 1856.

Gentlemen,—Having in conjunction with Mr. G. R. Baldwin, Civil Engineer, and Mr. Chessel, Royal Engineer Department, proceeded on Monday, the 5th instant, according to your request, to Montmorency Falls to examine the remains of the Suspension Bridge, which fell on the 30th ultimo, after being open to the public but a few days, and endeavour to trace the cause of its fall, we found—

1st.—One pier uninjured, and the tops only of the remaining three piers disturbed by the passing of the cables on fall of Bridge. The bodies of all sound.

2nd.—The cables and part of Bridge hanging from piers, left bank of river, and cables but slightly moved on the saddles, the loose extremities of cables hanging over precipice, immersed in cascade of 220 feet.

3rd.—At the anchorages at right or west side of river, the iron bar links 7 feet by 5 inches by  $\frac{3}{4}$ ths of an inch, broken about 5 feet below surface of ground.

4th. It was ascertained that the fatal fracture took place at the north-west anchorage on this right side, the after demolition was instantaneous. The 8 iron bar links had broken near their middle.

5th.—The masonry of this anchorage, we found had been built in December last.

The anchor-plate was described to us as fixed about 20 feet below surface, secured to the solid rock.

We found the filling in masonry of rubble, the lime-mortar soft and but partly unfrozen.

The two first set of links, and about one-half the third set from the anchor-plate, appeared to have their bearing against the solid rock, but above this the bearing was on the rubble masonry; as the direction rounded from the vertical line to that from anchorage to pier.

The weight of the bridge had compressed the rubble masonry, and brought the middle part of third set of bar links to meet the resistance of the solid rock.

The immense weight of the bridge acting on such leverage producing a cross-strain snapped, successively, bar after bar.

The bridge twisting in fall then caused a similar breakage at adjacent anchorage on the same side, and at the opposite or south-east anchorage the links at surface embedded themselves  $4\frac{1}{2}$  inches into the rubble masonry, though this anchorage was built in October.

At the north-east anchorage, built in November last, it appears that immediately before the opening of the bridge to the public, six bar-links out of eight were discovered to be broken, but which had been replaced, two bar-links having, probably, for some period supported that part of the bridge.

6th.—The immediate cause of the destruction is already expressed in the 5th paragraph.

Referring to the original plan of Messrs. Keefer and Rubidge, and the specification signed by Contractors, it was provided that large stones, not less than 4 feet by 4 feet by 1 foot 6 inches, were to be placed, and firmly bedded in rubble

masonry, in positions corresponding with the tangent of the curve at each point. The top surfaces of these stones were to have been cut and dressed to receive the bearing plates under the joints, which were to have been of wrought iron  $\frac{1}{4}$  inch thick, and 10 inches by 16 in area; all the masonry in the anchorage was to have been laid in Thorold hydraulic lime (that being the best preservative of iron), mixed in the proportion of one of lime to two of sand. After the cables had been set in their proper places, they were to have been built about with solid rubble masonry, laid in full mortar made of Thorold cement, and then grouted with the same.

The above described stones and iron bearing plates appear to have been altogether omitted, and the necessity for, and that these bearing plates should have been so secured as on no account by yielding to permit pressure on middle of bar links, does not seem to have been understood, but building in winter at a temperature so much below zero we hold to be the cause that the demolition was so immediate.

We are of opinion that the masonry of the anchorages should have been built according to specification, and so as to have become solidified before they were subjected to any strain.

We did not consider the iron of these broken bar links satisfactory.

We have the honor, &c.,

(Signed,) GEO. R. BALDWIN, C. E.  
 " WM. CHESSELL, R. E. D.  
 " W. T. RENWICK, Lt. Col. R. E.

## A

QUEBEC, 29th January, 1852.

Sir,—I have been directed by the Trustees of the Quebec Turnpike Roads to request that a Gentleman attached to the Department of the Board of Works may be allowed to furnish them with a Report upon the present condition of Montmorency Bridge which they are about to purchase in accordance with an Act of the last Session of Parliament.

It agreeable to the Commissioners of the Board of Works the Trustees would be glad to avail themselves of the services of Mr. Rubidge who has already been permitted to act for them.

I have the honor to be, Sir,  
 Your most obedient Servant,

J. PORTER,  
 Secretary to Trustees.

T. A. BEGLY, Esquire,  
 Secretary Board of Works,  
 Quebec.

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**B.**

PUBLIC WORKS,

QUEBEC, 31st January, 1852.

Sir,—I am directed to acknowledge the receipt of your letter of the 29th inst., and in reply to inform you that the Commissioners have pleasure in complying with the request of the Quebec Turnpike Trustees, by placing at their disposal the services of Mr. Rubidge for the purpose of inspecting the Montmorency Bridge.

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

THOMAS A. BEGLY,  
Secretary.

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**C**

QUEBEC, 5th February, 1853.

Sir,—As the period for the re-assembling of Parliament is now close at hand the Trustees of the Quebec Turnpike Roads would be glad to receive the plan and the specification of the Projected Suspension Bridge over the River Montmorency, and they have therefore desired me to communicate with you on the subject.

I am, Sir,  
Your most obedient Servant,

J. PORTER,  
Secretary to Trustees.

SAM'L. KEEFER, Esquire,  
Montreal.

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**D.**

MONTREAL, 7th February, 1853.

Dear Sir,—In reply to your note of the 5th inst., I beg to state that I have been so much occupied with my Railroad Survey and other duties undertaken for the Commissioners of Public Works, that I have not had time to make another specification of the Montmorency Bridge. The plans are before me, and it is my instructions to prepare the specification and send the whole to you before the re-assembling of Parliament.

You will please inform the Trustees of your Road, that I take too deep an interest in the beautiful edifice they propose building to allow it to be neglected, and that I will endeavor to send it down as soon as it can possibly be prepared.

I remain, my dear Sir,  
Yours very truly,

(Signed,) SAMUEL KEEFER.

J. PORTER, Esquire,  
Secretary, Quebec Turnpike Roads,  
Quebec.

### E.

QUEBEC, 4th August, 1853.

Sir,—I am directed by the Trustees of the Quebec Turnpike Roads to draw your attention to the Specification of the projected Suspension Bridge over the River Montmorency, which you were kind enough to promise to prepare for them.

The Trustees are very anxious to commence the work, but cannot advertise for tenders until put in possession of the document in question.

I am, Sir,  
Your obedient Servant,

J. PORTER,  
Secretary to Trustees.

SAMUEL KEEFER, Esquire,  
Montreal.

### F.

QUEBEC, 10th August, 1853.

Dear Sir,—I had the pleasure on the 4th inst. informing you of the anxiety of the Trustees of the Quebec Turnpike Roads to commence the Suspension Bridge over the River Montmorency, which they cannot do until they receive the plan and specification from you. By their direction I again take the liberty of addressing you to request that you will favor them with those papers at as early a day as practicable, as the summer is already far spent.

I am, dear Sir,  
Your obedient Servant,

J. PORTER,  
Secretary to Trustees.

SAMUEL KEEFER, Esquire,  
Montreal.

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**G.**

[Letter from Samuel Keefer, Esquire; no Signature in Original.]

MONTREAL, 11th August, 1853.

My Dear Sir,—Your letters of the 4th and 10th inst. are before me, and I have to apologize for the delay which has unavoidably occurred in the preparation of the Specification for your Bridge.

Since my return from the States I have been so constantly occupied with Railway matters that I have been unable to do any thing else.

It is my intention to make every exertion to get the Specification prepared in the course of the ensuing week, and as the plans are prepared and sent to Mr. Rubidge, I trust you will then be furnished with all the information necessary to put the work under contract.

I remain, my dear Sir,  
Yours very

J. PORTER, Esquire,  
Secretary, Quebec Turnpike Trust,  
Quebec.

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**H.**

QUEBEC, 17th August, 1853.

Dear Sir,—I have much pleasure in acknowledging the receipt of your letter, dated the 11th instant, promising that the specification of the Suspension Bridge over the River Montmorency, shall be prepared and forwarded in a few days.

I have since been desired to remind you that you were kind enough to say to one of the Trustees, that you would give the names of such contractors as you considered competent to undertake the work.

Will you do this at the time of furnishing the Specification.

I am, dear Sir,  
Your obedient Servant,

J. PORTER,  
Secretary to Trustees.

SAMUEL KEEFER, Esquire,  
Montreal.

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## I.

MONTREAL, August 22, 1853.

Sir,—I am fully aware of the anxiety which is felt by the Trustees respecting the Specification for the Montmorency Bridge, and I had hoped to have forwarded them ere this, but in consequence of being called to Toronto, ten days more must elapse before I can send them down.

I remain, Sir,  
Your obedient Servant,

(Signed,) SAMUEL KEEFER.

JOHN PORTER, Esquire,  
Secretary, Quebec Road Trust.

## J.

QUEBEC, 27th September, 1853.

Dear Sir,—I now send you the Specification for the Bridge at the Montmorency Falls, and only regret that it has not been in my power to furnish it at an earlier period.

As you have desired me to give the Commissioners the names of such gentlemen as are capable, and would be likely to contract for the work, I may add that there are to my knowledge three persons in the Province who have had experience in work, each of whom would be likely to give in a tender for the Bridge.

1.—Mr. D. W. Hughes of Beauharnois, was employed as the Contractor's foreman at the Bytown Bridge, and also at the one at Fairmount, Philadelphia. His peculiar work is the Iron work, but he will probably tender for the whole.

2.—Oliver Buchanan, Esquire, of Niagara Falls, from the commencement had the charge of the works at the Suspension Bridge at the Falls, directly under the Chief Engineer, and I think he will make you an offer for this.

3.—There is a third person whose name I cannot now call to mind, who has superintended the construction of the Bridge at Queenston, and Burlington heights, near Hamilton. I have never seen him, but have heard him well-spoken of, and I think he also would give a tender. He was living at Hamilton when last I heard of him.

I feel confident that any of these gentlemen would be capable of executing the work, in accordance with the plans and specifications.

In preparing the latter, I have aimed at making it sufficiently descriptive and detailed, to enable almost any practical mechanic to comprehend the nature and character of the work.

I would suggest in case of difficulty in obtaining good tenders for the whole, that the work be divided into two classes, as Contracts, one for the Excavation, Masonry, and approaches, the other for the Iron, and Wood work.

I have, &c.,

(Signed,) SAMUEL KEEFER.

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**K.**

QUEBEC, 26th January, 1854.

Dear Sir,—The time for receiving tenders for the Suspension Bridge over the River Montmorency, has been extended in order to afford to Contractors at a distance an opportunity of competing with those nearer home, and the Trustees of the Quebec Turnpike Roads, have requested me to apply to you for a Bill of Quantities of the work in detail, with an Estimate for their guidance in the matter, at your earliest convenience.

I am, &amp;c.,

(Signed,) J. PORTER,  
Secretary to Trustees.SAMUEL KEEFER, Esquire,  
Montreal.

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**L.****To the Trustees of the Quebec Turnpike Roads.**  
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Gentlemen,—I hereby offer to construct and complete, in a satisfactory manner, according to your plans and specifications, the Suspension Bridge over the River Montmorency (span 327 feet) for the following prices:—

The masonry and approaches for four thousand two hundred pounds, currency, (£4200.)

The superstructure for three thousand pounds, currency, (£3000.) Being for the whole Bridge £7200.

The whole to be completed by or before the 1st December, 1855.

I am, Gentlemen,  
Your obedient Servant,

(Signed,) THOMAS WALKER.

QUEBEC, June 1st, 1854.  

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**M.****To the Commissioners of the Turnpike Trust, at Quebec.**

QUEBEC, 1st June, 1854.

Gentlemen,—In accordance with your advertisement calling for tenders for the constructing of the Suspension Bridge, near the Falls of the River Montmorency, I beg to state that I am ready to execute the works, furnishing all labour and materials necessary for the full completion of the same, agreeable to the Plan and Specification, for the sum of twelve thousand pounds, currency, (£12000.)

(Signed,) JOSEPH ARCHER.  
Contractor.

**N.****Tender for construction of Suspension Bridge,  
"Montmorency."**

Masonry and approaches .....	£4445	13	6
Iron-work and superstructure .....	4035	19	2
			£8481 12 8

Names and residence of securities :—

D. E. BOULTON, Cobourg, Canada West.  
W. WELLER, do, do.

(Signed,) JAMES LYONS.

J. PORTER, Esquire, Secretary,  
Quebec Turnpike Trust.

**O.****Tender for the Montmorency Suspension Bridge.**

The undersigned proposes to build the Wire Suspension Bridge across the Montmorency River, near the Falls, according to the plan and specification prepared by Samuel Keefer, Esquire, Civil Engineer, at the following rates:—Cut-stone masonry in Towers, and over the Anchor-vaults:—

(Dimension Stone) per cubic foot .....	£4	10	0
Masonry in Abutments (rock face) .....	3	2	6

Rubble Masonry, laid in lime.....	£1	7	6
Do do, dry .....	0	17	6
Earth Excavation .....	0	1	3
Rock do, not in pits .....	0	5	0
Do do, in anchor-pits.....	5	0	0
Tamarack timber, per cubic foot .....			
Do plank, per 1000 feet Bur.....			
Oak timber, per cubic foot .....			
Do plank, per 1000 feet Bur.....			
Framing Superstructure, per foot, run. ....	1	10	0
Cables and Suspenders, per lb. ....	0	0	7½
Wrought Iron.....	0	0	7½
Cast Iron.....	0	0	5

The above prices will include all tackle, machinery, patterns, &c.

(Signed,) W. O. BUCHANAN,  
Superintendent Bridge, P.O.,  
C.W.

November 24, 1853.

## P.

QUEBEC, July 23rd, 1852.

Sir,—In the absence of Mr. Samuel Keefer, I have the honor to lay before you, for the information of the Gentlemen of your Board, Preliminary Plans, and a General Estimate for carrying a Suspension Bridge over the Falls of the River Montmorency within a few feet of the edge of the Cataract.

Although no specification for the work has been yet prepared, and which will of course be requisite before submitting the Bridge to public competition, I beg to transcribe a part of Mr. Keefer's instructions to the undersigned, which will put the Board in possession of many of the general features and details of the proposed Montmorency Suspension Bridge, as follows:—

The single arch has been adopted; it is the cheapest, handsomest, and best. By the dimensions of the timbers the Roadway will be very light, and yet sufficiently strong. The wood and iron within the Roadway will not exceed 50 tons; the suspenders, 1 ton; and the suspended part of the cables, 20 tons. The maximum load 187 tons. Breadth of Road, 20 feet;—16½ feet for carriages, and 3½ feet for foot passengers. On the side towards the fall supported by two cables only, one on each side of the Bridge; 1200 strands of wire in each cable, about 4½ or 5 inches diameter, wrapped from end to end with wire of the same size. At the centre they are perfectly cylindrical, and will be lashed down to the end of the cross-beams with wire fastenings. At the towers, they will be flatted out to a bearing of 12 inches on the saddle. From thence spread out into three separate cables (shewn on sheet No. 2) of equal size, and each fastened to an anchor 4 inches diameter, let 7 feet into the rock, fox-wedged, and after the bar-links have been set and adjusted, the bolts are to be "run" with sulphur and pounded iron ore, &c., &c. Masonry arches solidly, with best description of rubble masonry.

A new principle is to be adopted in the fabrication of the cables. These are to be built or woven in their places, or the sites they are to occupy when the

Bridge is completed. Commencing with a strand attached to the Anchor at **A** (or west side) it will pass over the two towers, and around the shackle at **B** (or east side); then back and round the first shackle at **A**, giving the exact depression required of 26 feet between the points of support, and so on continuing until the whole 1200 strands are put in. That done, the bar-chain of the anchorage is to be added, and the whole built in with good rubble laid in Thorold cement, as it has been found on trial that this cement does not impair the quality of the iron imbedded therein.

A slight deflection is given to the direction taken by the cable at the entrance to the ground. This is done purposely to check anything like vibration, which would take place if the cable were not made to bear somewhat sensibly upon the masonry. Grooved stones will be laid to take the bearing off the cables, and the intermediate spaces built in with biton.

Two forms of tower are submitted, one a simple obelisk, the other Egyptian in character. "The basement of towers to be rock-dressed ashlar, good heavy backing, all laid in common lime with the exception of the joints for 8 inches back from the face." The towers to be of cut-stone, but no bolts or dowels are to be used until near the top courses of masonry. The entrance of cables at ground line to be hammer-dressed stone, brick arch turned inside, and the top covered with cut flagging.

To retain the embankment at the east side, there must be a drag-wall extending from the towers to the extremity of the anchorage, having the same slope or batter as basement of towers. The wall between towers to be 4 feet at top and 5 feet at bottom, on the west side, and 7 feet on the east side.

The dry wall, East side, also to be 7 feet at base and 3 feet at top.—No Clay to be used to fill between walls, but the quarry refuse, gravel or stones, must be used for this purpose. The dry wall to be surmounted by a wooden parapet and hand rail. The space between macadamized.

There will be one bracket-stay or wire suspender extending from each Tower to a point 48 feet distant, to which point a subsil will also extend out from the Towers to be 8 x 8. The stay to be 1½ diameter. The second flooring of oak, 1½ thick, laid crosswise.

All the timber in the superstructure of Tamarack sawed to order.

The cables rest in a saddle which moves on two Cast Iron rollers 12 diameter, with spokes of same size, placed so as to bear the weight. The two rollers to be coupled by plates of wrought iron 4 x ½ and axles 1½ diameter. Rollers to move upon a bed plate 2½ thick, having flanges raised 1 inch and the whole well bedded in the Cap stone.

I make the estimate £5,200 0s. 0d. and of one thing I am satisfied,—No cheaper plan ought to be adopted; and the only way of cheapening it would be to reduce the quantity of wire which I would not do. There is the same amount of wire in this as in the Bytown Bridge. I am able to do with less in consequence of having a lighter and narrower roadway. Assuming your quantities of Masonry, excavation, embankment &c., to be correct, I have set certain prices to them; viz:—

Masonry, &c.....	£1725	12	9
Roadway, Cables, Suspenders, &c.....	3140	2	3
Superstructure & Contingencies.....	334	5	0
	<hr/>		
	£5200	0	0

As the total, and I consider such a fair and liberal estimate, it is most probable however, that when the work is advertised, the work will be taken within the £5000.

Mr. Keefer further states that "should the parties interested desire to advertise "for tenders before his return to Quebec" (which will now probably be in a few days) you can prepare a specification but I would prefer they would wait until my return so that I may be responsible for that part of the affair.

Concurring in this latter arrangement, I beg to lay the whole before your Board. Considering that sufficient data is in the meanwhile afforded them, to assist the Gentlemen in any further Parliamentary application.

I have the honor to be, Sir,  
Your obedient humble Servant,

(Signed,) F. P. RUBIDGE.

JOHN PORTER, Esquire,  
Secretary of the Quebec Road Trust.

Q.

**To the Trustees of the Quebec Turnpike Trust.**

—  
QUEBEC, November 6th, 1854.

Gentlemen,—Mr. Rubidge's letter of the 25th ult., having been referred to me, for my Report, I beg to make the following observations thereon:—When the plans furnished by Mr. Rubidge first came into my hands, as Engineer to the Trust, I naturally felt interested in them, thinking it probable that I should have the superintendence of their execution.

I therefore made a careful survey of the site proposed, and ascertained, beyond a doubt, that a mistake of from 50 to 60 feet had been made in the breadth of the river at the point chosen for the erection of the Bridge; I communicated this fact to Mr. Rubidge, and showed him my notes of measurement. Mr. R. scouted the idea of such an error, but said he would go to Montmorency and check his measurement, which he did the following day, and on his return he acknowledged that he had made a mistake, but seemed to think it of very little consequence. The Board, however, were of a different opinion, and ordered me to prepare a new set of plans, modified of course, to suit the correct dimensions, which affected a saving to the Trust of at least £2,000 in the cost of the work, a large portion of which sum the Contractor would have pocketed in addition to his profits, had the contract been let on the original plans.

It would appear from the second paragraph of Mr. R's. letter, that he entirely repudiated the idea of any mistake whatever having been made by him, and that the only error committed was on our side, in having (as he asserts) placed the towers nearer the edge of the bank than he or Mr. Keefer considered safe. To a professional man, a mere glance at the respective plans would be sufficient to show the fallacy of such a statement, but in order to leave no doubt whatever on the minds of any of the Board, I will prove it by the following figures, viz. :—

Distance between the points of suspension according to Mr. Rubidge's plan as figured on drawing No. 1. . . . . 384 feet.  
 Distance from edge of bank to edge of opposite bank, according to plan also figured on same. . . . . 360 "

Difference . . . . . 24 feet.

Half difference . . . . . 12 feet.

Which proves that the point of suspension was intended to be only 12 feet from the edge of the bank on either side.

Distance between points of suspension as now intended. . . . . 337 feet.

Correct distance found from edge of bank to edge of opposite bank 306 feet.

Difference . . . . . 31 feet.

Half difference . . . . . 15½ ft.

This proves that the towers will be 3½ feet farther from the edge of each side than proposed by Mr. Keefer, (at that time) and consequently at a safer distance.

The base of the Tower now in course of erection on the east bank of the river, stands 11 feet back from the edge of the bank, and 50 from the waters-edge at high flood.

The points of suspension on this side will, therefore, be 18 feet from the edge of the bank, which would seem to be about the position finally decided on by Mr. Keefer. As in his specification dated 27th September, 1853, fifteen months later than the date of the plan, he directs the points of suspension to be placed about 400 feet apart, instead of 384 feet as shown on Mr. Rubidge's plan; from 400 deduct 360 feet, the breadth of the river, as Mr. Keefer supposed it to be, and half the difference, namely, 20 feet, will be nearly the same as now intended, an error of 60 feet would still exist. There were other errors in Mr. Rubidge's plan, though, comparatively speaking, of little consequence, nevertheless making a most serious difference in the cost of the work, for instance, the retaining walls are shown 50 feet longer than could be required by any possibility, and an embankment shown 16 feet high and length indefinite, where only a little filling of two or three feet was required for a short distance.

I should not have occupied your time with these details, but that I felt Mr. Rubidge's letter called for such an explanation.

Before concluding this report, I feel bound to state that every credit is due to Mr. Keefer for the general design of the Bridge, which, though altered by me (not only in span, but in many of its details), is unquestionably his, and as such entitling him and his assistant, Mr. Rubidge (in my opinion), to a fair remuneration for their services.

I have, &c.,

(Signed,)

WM. H. RANKIN.

## R.

QUEBEC, 13th January, 1855.

Dear Sir,—Your letter has been under the consideration of the Trustees of the Quebec Turnpike Roads, and they desire me to say in reference to your observations, that although the labor of preparing the original plans for Montmorency Bridge may not have been any less on account of the error in the plan, still a new set of plans had to be prepared at a considerable loss, both of time and money, and had not that error been discovered in time, the Trustees might have been led into an additional expense of over £2,000, as the following figures will show:—

Lowest tender on original plan.....	£9378
do present plan.....	7200
	£2170

The present Contractor's tender at £7200 was considerably lower than the others received, still it is £2000 over your estimate for the original plan.

In answer to your remarks regarding the strength of the proposed structure, the Trustees beg to observe, that if the Bridge was strong enough according to your original design, it is now quite as strong, if not stronger, the only alteration of consequence in the superintendence being a reduction in the number of strands of wire in the cables and suspenders, the former having been reduced from 1200 to 1000, which their Engineer informs them is a less reduction than was due to the diminished span and weight.

Under all these circumstances the Trustees desire me to offer the sum of £50 in full of your account, it being understood that that sum covers every charge for assistance from gentlemen connected with the Board of Works, or others.

I am desired to add that upon your notifying me of your acceptance of this proposal, the money will be immediately paid.

I am, Dear Sir,  
Very truly yours,

J. PORTER,  
Secretary to Trustees.

SAMUEL KEEFER, Esquire,  
Brockville.

## S.

TUESDAY, 8TH APRIL, 1856.

*Present:*

MESSRS. GIBB, BUCHANAN, MCPHERSON, ROWLEY, LEMOINE, MCCALLUM, DELAIRE,  
OCTEAU, NAULT.

Resolved, That Pierre Fortin be appointed to the Toll Gate to be erected on the Beauport Road, half a mile westward of the Montmorency Suspension Bridge, at a salary of £75 per annum, including fuel and light as well as house rent.

Resolved, That the House and Lot at the old Montmorency Bridge be advertised for sale at public auction at the locality, on the 10th day of May next, at 11 o'clock, A. M., that the same be cried at the church doors of Beauport and Ange Gardien churches, and that Mr. Lemoine be requested to attend the sale along with the Secretary.

A discussion then arose as to the proper time for opening Montmorency Suspension Bridge to the public, and it was finally decided that the day for that purpose should be fixed at the next meeting, and in the meantime Messrs. McPherson, McCallum, Gowen and Nault were named as a Committee to make the necessary arrangements.

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TUESDAY, 15TH APRIL, 1856.

*Present:*

MESSRS. GIBB, LEMOINE, DEBLOIS, MCCALLUM, GOWEN, DELAIRE, NAULT.

Mr. Lemoine then informed the Board that he had secured a proper site for the new Toll Gate on the Beauport Road, and he was requested to charge himself with the superintendence of the erection of a proper Toll Gate, the Engineer being at the same time directed to prepare the plan of a Gate for the purpose.

Mr. Fortin, the Toll Collector, was then admitted, and ordered to hold himself in readiness to commence taking tolls on Tuesday next, and meanwhile it was

Resolved, That the Trustees do visit Montmorency Suspension Bridge on Monday, leaving town at noon, in order to examine and ascertain whether the said bridge will then be ready to be opened for traffic, but that the formal visit of the Trustees to be made on the occasion of the receiving of the said Bridge be postponed until later in the season, and until the Bridge be completed.

Resolved, That on Monday next, the Trustees will take into consideration the expediency of exchanging with Mr. Hall the lot and house at the old bridge, for a certain quantity of ground, and a new building at the present new bridge.

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TUESDAY, 22ND APRIL, 1856.

*Present:*

MESSRS. GIBB, BUCHANAN, MCPHERSON, MCCALLUM, GOWEN, OCTEAU, DELAIRE, CARRIER.

Resolved, That the house and lot, belonging to the Trustees at Montmorency old bridge, be not sold under the sum of £200, currency.

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TUESDAY, 29<sup>TH</sup> APRIL, 1856.

*Present:*

MESSRS. GIBB, BUCHANAN, MCPHERSON, LEMOINE, DEBLOIS, MCCALLUM, GOWEN,  
OCTEAU, NAULT.

Mr. Lemoine Reported, That the fact of one of the iron links, connecting the cable of the Montmorency Suspension Bridge with the anchorage, being broken, having come to his knowledge yesterday, he had with the concurrence of Mr. McPherson sent down Mr. Wilson to examine the Bridge, and desired him to attend the present meeting and make his report as to the result of such examination. Mr. Wilson was then called in, and stated, That he could see nothing the matter with the Bridge, and never saw finer mason work—that he could not tell if any thing was wrong with the iron links, and that to ascertain properly that fact it would be necessary to take down the mason work in which they are enclosed.

Mr. Rankin, who was in attendance, was then directed to go down to the Bridge and superintend personally the repair of the fracture, and endeavour to discover the cause of it, and to remain upon the place constantly until all was properly put to rights, and the masonry relaid with cement.

**T.**

(Copy.)

QUEBEC, April 28th, 1856.

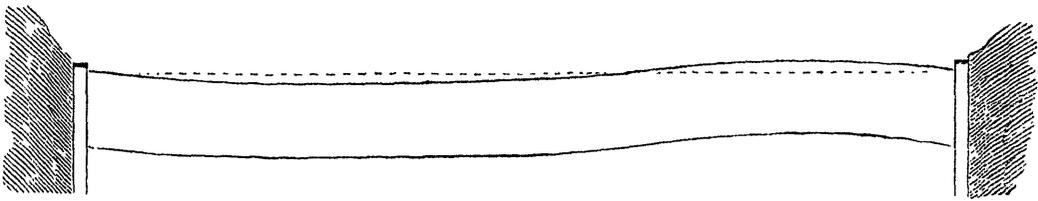
My dear Keefer,— \* \* \* \* \*

Having to examine the Custom House, I dropped down here on Saturday last, and amongst other matters of interest I wanted the opportunity of inspecting the Montmorency Bridge.

The first information I received on the subject was, that something had given way or gone wrong. Mr. Dunscombe of the Custom House mentioned, that on visiting it lately with Mr. Gilmour, the latter remarked upon certain defects and deficiencies, which Mr. Gilmour asserted, he had not observed in the Bytown Bridge; of these defects he made a note upon the spot. Moreover, the paragraph from an evening paper, the Mercury, and which I enclose, further excited my curiosity to examine the Bridge. Accordingly being limited for time, I drove out yesterday morning, and I must say my first impression upon seeing it, was sorrow and disgust at its miserable appearance as a new work.

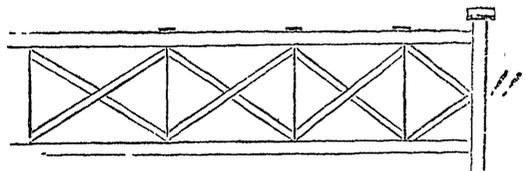
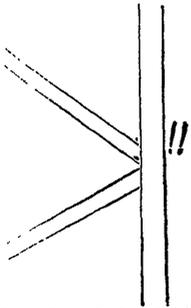
Wherever the proportions, dimensions and details, furnished by yourself have been carried out, all is well enough; the deficiencies and departure from your plans, and, more than all, the carrying the work into execution by other hands have been the errors committed. \* \* \* \* \*

The platform at the first view, instead of a Roadway "crowning" to the centre, a tortuous sunken set of lines that create an impression of weakness and insecurity. I should judge that the capping is about 9 inches below the horizontal line in the centre and it rises beyond the horizontal line towards the Eastern abutment as sketched.



The terminating Posts are hard up against the masonry, without play for contraction and expansion of Cables during heat and cold extremes, and as the cables will lengthen in July and August, the effect will be a more tortuous line than at present.

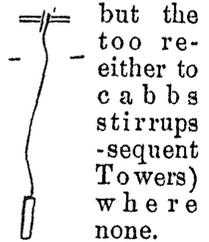
The truss or wood work is abominable and instead of being an assistance to the Roadway, is a dead weight on the Cables, the  $\times$  braces are many of them brought to a bearing surface with slips of wood stuffed against the prisons, or want this point of contact altogether. The last half space at the abutments gives no support to the truss, being finished as sketched.



The Cap appears to be an inch piece of hardwood, with little projection, and the

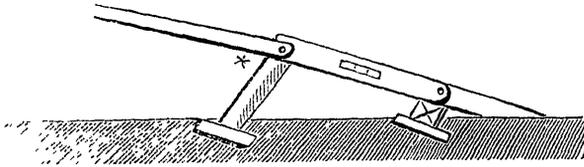
heads of the bolts are without plate or washer to spread the bearing.

The Suspenders near the abutments are, some of them thus, most serious deficiency, which (I understand,) Mr. Gilmour marked, was the want of stirrups or saddles, collars the suspenders where they clasp the bolts, or to the main where they connect with the anchor-bars, in no case are these provided and the wire has to bear the effect of friction upon the least movement. The saddles and rollers (on Top of are well enough, but no lead or other material is interposed, the wire and cast iron come in contact, at least I discovered



The supplementary Cables near the Towers are abominably made, one-half the strands I observed on the South-west side being loose and swelling out from the line of tension. The Main Cables are at this date wrapped with wire and partly painted between the Towers, but if they are like the portions of cable landward of the Towers, which are neither put together in bundles nor bound in any way, or protected by paint or other preservative, they are full of moisture and oxydation.

The anchor plates or bars are daubed over with mineral tar. The masonry is tolerable, but wants pointing. One of the greatest mistakes however has been the course pursued in the construction, (and to which the unsightly settlement, I think, is due) is the fact, that where the chains leave the ground to connect with the cables, the present support (in lieu of the solid bearing points of masonry as intended) is supplied by upright blocks of wood, thus—



They have now a Bramah Press to lift the subsided platform and chains, but I think you will bear me out in saying that they are working against nature and principle, as by applying the lifting power to this point \* in order to raise the platform by shortening the cable, the immense leverage of the Suspension Bridge and chains operates unfairly upon the shorter and fixed portion of the anchor-bars, and the result has been proved by one of the plates being, as I was informed on the ground, torn asunder, which however I learn has been attributed to frost!

There are other points which I could allude to, but I think I have given you sufficient to prove that the Commissioners of the Road Trust would have better secured their object had they refrained from listening to the pretensions of their new Engineer, and that the safer and more creditable course of having left the matter in your hands would have been the cheapest and the best.

I have since cut out the paragraph from the Colonist which I enclose, and with kind remembrances, &c. &c. &c., I beg to subscribe myself

Yours faithfully,

F. P. RUBIDGE.

SAMUEL KEEFER, Esquire,  
Superintendent and Engineer,  
Grand Trunk Railway,  
Brockville.

*To the Editor of the Mercury.*

### **False Statement of the "Colonist."**

Sir,—The slanderous statement of the "Colonist" regarding the Montmorency Bridge, has only just reached my ears. Please contradict it as entirely false in every particular.

The abutments are founded on solid rock, and the nearest is over 15 feet from the precipice, and sinking whatever would completely destroy the whole structure, which I am happy to state is now in perfect order. I have this moment (4, p.m.) returned from the Bridge, which was opened to the public on Monday last. The span is 342, not 300 feet, as stated by the "Colonist."

W. H. RANKIN.

QUEBEC, 26th April, 1856.

(Paragraph alluded to from "Colonist.")

THE MONTMORENCY BRIDGE.—We learn that the New Suspension Bridge at the Falls of Montmorency has given way, one of the abutments having sank several feet. The plan drawn by Mr. Keefer was for a span of 320 feet. The Engineer of the Turnpike Trust reduced the span to 300 feet, thus putting the piers nearer the edge of the precipice, and the result is most unfortunate.

## U.

[Translation.]

BEAUPORT, 25th April, 1856.

My Dear Sir,—As I have occasion, or rather, am compelled to pass almost every day over the Bridge at Montmorency Falls, I think myself fully justified in addressing to you, officially, as one of the Commissioners of the said Bridge, the few remarks which each of those persons whose business compels them to pass over the Suspension Bridge, deem themselves justified in making relative to the doubtful state of its solidity and safety. Besides, in the remarks which I intend submitting to your consideration, I believe that I am but humbly expressing the opinions of persons who are competent in some degree to judge of this matter, and who after having examined the weak points of this erection, have been convinced, as I am, that until steps have been taken to ascertain the strength of certain essential portions of the work, the fate of those who have to cross this abyss cannot but be very hazardous.

A circumstance which astonishes me, and which I cannot explain is, that the Commissioners, after having witnessed themselves the accident which happened recently to one of the attaching points of one of the cables, decided almost at the same time to close the old Bridge, and compel travellers *volentes volentes* to cross over this New Bridge, which is in danger of being engulfed in the Falls, without having submitted it to further test. But I will be perhaps answered that this defect has been remedied, that the portion which had thus given way to excess of traction had been repaired? Very well, let us admit that the repairs placed matters in the condition they were before, which appears to me to be very doubtful. But was any attention paid to the fact that the cause by which five bars of iron out of seven broke at the extremity of one of the cables, exists or is thought to exist equally at the three corresponding points at the three other extremities of the cables. There is a very strong presumption, especially as regards the South-western extremity of the North cable, that the same cause exists to the same degree. For the extremity of the iron bars which issue from the surface of the earth, and which support the whole weight of the Bridge, have given way to the force of tension, and have been forced from the side of the Bridge not less than 8 or 9 inches, of which any one may be easily convinced by noticing the empty space between them and the masonry with which they are surrounded. Well, suppose in the case mentioned above, that the iron bars displacing themselves at their highest extremity sustained towards their centre a resistance sufficiently great to cause them to break at the moment perhaps when a certain number of them are already broken or on the eve of being so. We cannot judge for they are embedded in masonry. Ought not the importance of this matter to cause some means to be taken to have them examined before covering the ends with masonry, which, by concealing the danger, will only make it greater.

In the consideration of such uncomfortable facts, we are led to forget to make mention of the state of one of the towers which has a very bad appearance, but which may perhaps only be dangerous at some remote period.

All the evil results which come to light at present can be attributed to no other cause than the having allowed all these works to be done during the winter, whilst they ought strictly to have been performed during the summer season.

It is to be hoped that the Commissioners will promptly and scrupulously attend to the defects I have the honor to make known to you, and upon which the public at present look with an eye of marked want of confidence since the accident which occurred the other day. It should be their interest to see that the Contractors perform their duty rather than to see complaints in the public papers, showing in a disagreeable manner to them the alarming and wretched state of an undertaking which, on account of its position, its beauty and solidity, was destined to reflect honor upon the Commissioners, and be a source of wonder to foreign travellers.

I have a right to hope that the facts by which I am sustained will fully justify in your eyes the liberty I have taken in addressing you this letter. The simple fact that out of seven rods which support this immense work, five break off suddenly and all together, and that it was only by pure chance that the two remaining iron rods having bent, prevented the whole of this immense structure from being precipitated into the Falls; this fact, I say, is important enough to cause every individual for his own self-preservation to evince a little anxiety as to what might happen to the three other points which are perhaps in the same condition. This last circumstance, in my opinion and in that of several others, leaves the Commissioners no excuse or pretext for allowing the public to pass over the bridge without submitting it to a new test.

I have the honor to be, Sir,  
With the highest esteem,  
Your most obedient Servant,

(Signed,) D. T. CHAREST.

W. H. LEMOINE, Esquire,  
Commissioner, Turnpike Roads,  
Chateau Richer.

## V.

QUEBEC, October 25th, 1854.

Dear Sir,—With reference to the subject of your verbal communication to me, that the Commissioners of the Quebec Road Trust expected I would reduce my charge for plans &c., furnished for the first proposed Suspension Bridge over the Montmorency River I beg respectfully to state that the determination of the "Trust" or their Officer, to contract the span of the Bridge by placing the Towers at a less distance apart than was proposed by Mr. Keefer, furnishes, I conceive, no just ground for lessening my account on the plea of cost and trouble of making new plans.

The Towers built at the further and consequently safer distance from the edge of either Bank, than it would appear you have decided on, was, I conceive, the

most prudent recommendation in the first instance in a situation particularly exposed to moisture and frost, and where the character of the rock for solidity appeared doubtful. Since the width near the Fall was first taken by Sextant, I have never been able to find my notes of measurement, but I have by me Mr. Keefer's memorandum, for my guidance in drawing the plan submitted, shewing the Towers 384 feet apart between the points of Suspension, which I presume he considered their advisable position for permanent security and in which opinion I fully coincide. Although the drawing furnished, may, as I believe it does, represent the adjacent banks wider apart than they are actually found to be.

I therefore anticipate that the amount for my services in the matter will shortly be forthcoming.

Very respectfully &c.,

(Signed) F. P. RUBIDGE.

J. PORTER, Esquire.

## W.

### AGREEMENT between WALKER and the QUEBEC TURNPIKE TRUSTEES.

ON the twenty-third day of January, in the year of Our Lord one thousand eight hundred and fifty-six, Before us the undersigned Notaries Public, duly commissioned and sworn, and dwelling at the City of Quebec, in the Province of Canada, personally came and appeared, Thomas Andrew Walker, of the City of Quebec, Contractor, of the one part; and James Gibb, residing on the St. Lewis Road, near the City of Quebec, Alexander Carlisle Buchanan, Chief Emigrant Agent, residing at the City of Quebec, Laughlan Thomas Macpherson, Notary Public, residing at the Little River St. Charles near the City of Quebec, Edouard Joseph DeBlois, Advocate, residing at the Canardière near the City of Quebec, William Henry Lemoine, residing in the Parish of Chateau Richer in the County of Montmorency, Hammond Gowen, residing at the City of Quebec, and Jean Baptiste Carrier, residing in the Parish of St. Henry in the County of Levis, Esquires, all Trustees of the Quebec Turnpike Roads, duly appointed for the management of the Turnpike Roads in the neighborhood of and leading to the City of Quebec, under and in virtue of an Ordinance of the Governor and Special Council, for the affairs of Lower Canada, passed in the fourth year of the Reign of Her Majesty, chapter seventeen, intituled, "An Ordinance to provide for the improvement of certain Roads in the neighborhood of and leading to the City of Quebec, and to raise a fund for that purpose;" acting also under the provisions of an Act of the Legislature of this Province, passed in the sixteenth year of the Reign of Her Majesty, chapter two hundred and thirty-five, intituled, "An Act to authorize the Trustees of the Quebec Turnpike Roads to issue Debentures to a certain amount and to place certain Roads under their control, the said Trustees, parties hereto; being a majority of the said Trustees of the Quebec Turnpike Roads, and acting in this behalf in their capacity of Trustees of the Quebec Turnpike Roads, of the other part;

Which said parties have entered into the following arrangement, that is to say :—

Whereas difficulties having arisen between the said parties, in relation to the several contracts entered into between them, before the undersigned Notaries, and hereinafter referred to, and in order to avoid litigious questions and law proceedings and costs, they the said parties have agreed to cancel the said contract upon certain conditions as hereinafter expressed.

Now these presents, and We, the said Notaries, witness, that the said Trustees of the Quebec Turnpike Roads, and the said Thomas Andrew Walker, in furtherance of the said agreement, do hereby cancel, rescind and make null and void the said several contracts hereinafter referred to, that is to say :—

1. A certain contract entered into by and between the said parties, in the office of the undersigned Notaries, on the fifteenth day of March, one thousand eight hundred and fifty-four, for the macadamizing the following portion of the St. Henry Road, known as the *Trente-sous* Road, to wit, commencing at the sixth mile-post and terminating at the St. Féréol Road.

2. A certain other contract entered into by and between the said parties, in the office of the said Notaries, on the eleventh day of April, one thousand eight hundred and fifty-four, for the macadamizing of the following portions of the St. Nicholas Road, to wit, five miles and a half of the said Road, commencing at the point where the said road intersects the newly projected line of the St. Henry Road, near Louis Nolet's, as shewn on the plan of the said St. Henry Road, drawn by William H. Rankin, Esquire, Engineer to the Road Trust, for a distance of five miles and a half as aforesaid.

3. A certain other Contract entered into by and between the said parties, in the office of the said Notaries, on the eleventh of April, one thousand eight hundred and fifty-four, for the macadamizing of the Ste. Claire Road, commencing at the point where it intersects the St. Charles Road North, near Scott's Bridge, as far as the St. Joseph Road.

4. A certain other contract entered into by and between the said parties, in the Office of the said Notaries, on the eleventh day of April, one thousand eight hundred and fifty-four, for the macadamizing of the following portions of the said St. Henry Road, known as the *Trente-sous* Road, to wit, the third Section, commencing at the letter K on the plan of said Road, drawn by William H. Rankin, Engineer to the Road Trust, at Halle's, and terminating at Michel Guay's; and also the fourth Section of the said Road, commencing at the last mentioned point at Michel Guay's, and terminating at the sixth mile post.

5. A certain other contract entered into by and between the said parties, in the Office of the said Notaries, on the 26th day of June, one thousand eight hundred and fifty-four, for the macadamizing of the following parts or sections of the said St. Henry Road, known as the *Trente-sous* Road, to wit, from the point marked D on the plan, drawn by William H. Rankin, Engineer to the Road Trust, to the point marked H on the said plan, being a distance of about three thousand nine hundred and forty feet in length; and also commencing at the point marked G, to the point K on the same plan, at foot of Halle's Road, being a distance of one mile and a quarter.

6. A certain contract entered into by and between the said parties, in the Office of the said Notaries, on the twenty-sixth day of June, one thousand eight hundred and fifty-four, for the macadamizing of the following portions of the said St. Henry Road, that is to say, commencing at the Lauzon Wharf and terminating at the top of Labadie's Hill, passing by the route known as Davidson's Hill.

7. And, lastly, a certain other contract entered into by and between the said parties, in the office of the said Notaries, on the nineteenth day of September,

one thousand eight hundred and fifty-four, for the opening and macadamizing of the road, which the said Trustees were, by the Act of Parliament hereinbefore referred to, authorized to open to connect the North Road of the little River St. Charles with the Charlesborough High Road.

In consequence whereof, and the consideration hereinafter mentioned, the said Thomas Andrew Walker doth hereby transfer, make over, and abandon to the said Trustees hereof accepting all the stone, whether broken or unbroken, to him appertaining upon any part of the said several roads, or in the vicinity of the said roads, or in any quarry or quarries, and upon any land or lands, as also all materials prepared for the said road, consenting that the said Trustees shall remain in possession of the same, and all right, claim, and demand of the said Thomas Andrew Walker to all or any stone or materials intended for the said roads and works wheresoever lying or being, and for that purpose the said Thomas Andrew Walker doth hereby promise and bind himself, at the first request of the said Trustees, the said stone and materials upon a statement establishing the approximate quantity of such stone and materials acknowledged and identified by the signatures of the said Thomas Andrew Walker and the said Trustees; the said Trustees to be put in actual possession of the said stone and materials, rights, claims, and demands in a secure and proper manner. The said Thomas Andrew Walker doth further bind himself to sign all further documents, and do all other things, matters and acts which may be necessary to secure to the said Trustees the possession of such stone and materials and rights aforesaid.

And in consideration of the delivery of the said stone and materials and rights, and as a compensation as well for the same as for the labor performed for preparing the same, the said Trustees do hereby promise and bind themselves to pay to the said Thomas Andrew Walker, in debentures, a sum of one hundred and twenty-five pounds, as soon as they, the said Trustees, shall have been put in possession of the said stone, materials and rights in a proper manner and according to their own instructions; the said debentures to be taken at par and without any pretended depreciation in the value of the same.

The said Thomas Andrew Walker doth hereby admit and acknowledge to have from time to time, since the execution of the said several contracts, and previous to the first day of December last, received from the said Trustees, in debentures, according to the said contract, various sums of money, amounting altogether to the sum of twenty thousand three hundred pounds four shillings and six pence, for and on account of the works performed under the said contracts, exclusive of the said sum of one hundred and twenty-five pounds; and in consideration of the premises the said Trustees of the Quebec Turnpike Roads do hereby acquit and forever discharge the said Thomas Andrew Walker, and all others concerned, of and from all obligations under the said several contracts.

And the said Thomas Andrew Walker, on his part, doth also acquit and forever discharge the said Trustees of the Quebec Turnpike Roads of and from all their obligations under the said several contracts, and from all claims and demands whatsoever on his part, as well for the said specific works performed under the said contracts as for all works extra of the said contracts, or otherwise performed by him, the said Thomas Andrew Walker, on the said Roads in connection with the said contracts, and of and from all claims, rights of action, and demands whatsoever which the said Thomas Andrew Walker now hath or ever had against the said Trustees, for and by reason of the said contracts, causes or transactions whatsoever in respect thereof.

And for the execution of these presents the said parties do hereby make election of domicile as follows, that is to say, the said Thomas Andrew Walker, at his office, in the Lower Town of Quebec, and the said Trustees at the office of the Road Trust at the City of Quebec.

Thus done and passed, at the said City of Quebec, in the office of Louis Prevost, one of us the said Notaries, on the day and year first above written, under the number five thousand nine hundred and sixty-two, in faith and testimony whereof the said parties have to these presents, first duly read, set and subscribed their names and signatures, in the presence of us the said Notaries, also hereunto subscribing.

(Signed,)	THOMAS A. WALKER,
"	JAS. GIBB,
"	A. C. BUCHANAN,
"	L. T. MACPHERSON,
"	ED. J. DEBLOIS,
"	W. H. LEMOINE,
"	H. GOWEN,
"	J. B. CARRIER,
"	LS. PREVOST, N.P.

WM. BIGNELL, N.P.

A True Copy of the original remaining of record in my office.

LS. PREVOST, N.P.

## X.

[*Translation.*]

ON the thirteenth day of December, p. m., in the year of our Lord one thousand eight hundred and fifty-five, at the request of Thomas Andrew Walker, of this city of Quebec, Esquire, Engineer, we, the undersigned, Notaries Public, residing in Quebec, repaired to the office of John Porter, Esquire, Secretary of the Quebec Turnpike Road Trust, situate in the Lower Town in St. James' street of Quebec, where, being and speaking to John Porter, Esquire, in person, we did state, declare, and signify to the said John Porter, in his said quality, for the information and knowledge of the Commissioners or Trustees of the Quebec Turnpike Roads:—

That during the spring of one thousand eight hundred and fifty-four the said *requerant* entered into an agreement and contracted with the said Commissioners of the Quebec Turnpike Road Trust for the erection of the Montmorency Bridge, and for the construction of nearly twenty miles of Macadamized road to the amount of thirty-two thousand four hundred and ten pounds currency, payable in Debentures of the said Trust. That at the period of the first instalment of the interest upon the Debentures issued by the said Trust, after the execution of the said contracts with the said *requerant*, the said Commissioners by their neglect and mal-administration only paid the said interest seven weeks after it became due, which greatly depreciated the value of the said Debentures in the eyes of the public.

That since that period the said Commissioners instead of reserving the revenues of the Trust to pay the interest upon their Debentures, laid them out in making and repairing macadamized roads, so that on the first day of July last they were again without funds to pay the interest on the said Debentures, and then sold to the Bank of Montreal at a discount of seventeen per cent, Debentures to an amount sufficient to pay the interest then due and to do the work on the roads, a system they have since continued to carry out, thus ruining the credit of the Trust, destroying public confidence, and causing considerable loss to the said *requerant*, who has been forced to sell his Debentures at twenty per cent discount and even more.

And whereas there is still owing to the said *requerant* by the said Quebec Turnpike Road Trust, a sum of seventeen hundred and fifteen pounds, six shillings and six pence currency, for extra works other than those mentioned in the said contract, which said works have been admitted and received as such by the said Commissioners; and whereas, at present, the said Commissioners, notwithstanding the repeated demands of the said *requerant*, and without any reason whatever, refuse to pay him the said amount, which further entails considerable loss upon him. Wherefore, we, the said Notaries, upon requisition aforesaid, have protested and do solemnly protest, by these presents, against the said Commissioners or Trustees of the Quebec Turnpike Roads, and all others whomsoever it may concern, for all losses, expenses and damages suffered or to be suffered by the said *requerant* by reason of all the allegations hereinbefore alleged, and of all which can and ought to be protested against in like cases.

And at the same time, we, the said Notaries, upon the above requisition, summoned, requested and demanded of the said Commissioners or Trustees of the Quebec Turnpike Roads, speaking as above mentioned, to cause to cease forthwith the injuries of which the said *requerant* complains, and to pay to him the said sum of seventeen hundred and fifteen pounds, six shillings and six pence currency, the amount of the said extra works, and, further, to pay him immediately the sum of five thousand pounds currency for damage and losses suffered by him up to the present time on account of the facts above alleged, declaring to them that in default of their so doing, the said *requerant* will be forced to stop and suspend his works and to proceed against them in a Court of Justice to compel them to pay the same, and for the recovery of the said sums and of all the said losses, expenses and damages suffered and to be suffered as aforesaid. To which the said John Porter answered:—"I shall lay this protest before the next meeting of the Commissioners." Wherefore, we have persisted in the said requisitions and protests.

This done, protested and notified at Quebec, on the day and year above written, under number one thousand one hundred and ninety-six, at the above mentioned office of the said John Porter, where we have left a copy of these presents, speaking as aforesaid, for the use of the said Commissioners of the Quebec Turnpike Roads, in order that they may not plead ignorance thereof.

(Signed,) E. G. CANNON, N.P.  
" PHI. HUOT, N.P.

A true copy of the Original remaining of record in my office.

(Signed,) PHI. HUOT, N.P.

## Y.

STATEMENT of ESTIMATES of WORK DONE upon MONTMORENCY  
BRIDGE by the Contractor, T. A. WALKER.

		£	s.	d.			£	s.	d.
December	4, 1854	1140	18	0	November	13, 1855	400	0	0
January	9, 1855	88	6	0	do	27, do	200	0	0
February	12, do	72	14	0	October	4, do	100	0	0
March	27, do	188	10	0	do	11, do	50	0	0
April	10, do	70	0	0	do	18, do	75	0	0
do	24, do	182	13	0	do	28, do	75	0	0
May	8, do	183	13	0	January	3, 1856	50	0	0
do	22, do	194	11	6	do	11, do	50	0	0
June	5, do	390	11	0	do	17, do	50	0	0
do	19, do	476	6	0	do	22, do	50	0	0
July	3, do	259	1	1	do	23, do	50	0	0
do	16, do	269	6	1	do	29, do	25	0	0
do	23, do	700	0	0	February	5, do	25	0	0
do	31, do	174	13	4	do	12, do	50	0	0
August	14, do	227	13	4	do	19, do	25	0	0
do	27, do	253	18	0	do	26, do	25	0	0
do	28, do	700	0	0	March	4, do	25	0	0
September	11, do	360	18	7	do	11, do	25	0	0
do	25, do	193	11	7	do	18, do	25	0	0
October	9, do	387	14	7	April	1, do	25	0	0
do	22, do	218	7	9	do	20, do	25	0	0
November	6, do	241	17	11					
do	6, do	650	0	0					
do	8, do	100	0	0	Total.....£	9109	4	11	

J. PORTER,

*Secretary to Trustees.*

QUEBEC, 21st August, 1856.

STATEMENT of ESTIMATES of WORK DONE by T. A. WALKER, and of the PAYMENTS made to him on Account thereof.

Date.	Estimates of Work Done.	Currency.		Date.	Payments Made.	Currency.	
		£	s.			£	s.
June 6, 1854		1470	7	June 8, 1854		1200	0
do 20, do		1216	19	do 24, do		1000	0
July 4, do		1993	19	July 5, do		1200	0
do 18, do		1857	0	do 14, do		700	0
August 1, do		1563	4	do 20, do		1800	0
do 15, do		835	19	August 8, do		1500	0
do 29, do		1349	7	do 22, do		1500	0
September 12, do		934	14	do 29, do		1000	0
do 26, do		901	16	September 20, do		1000	0
October 12, do		98	8	do 28, do		900	0
do 10, do		947	5	October 12, do		900	0
do 31, do		1007	10	do 31, do		500	0
November 14, do		531	1	November 8, do		400	0
December 4, do		789	18	do 17, do		500	0
do 5, do		496	5	December 13, do		1275	0
do 5, do		408	6	January 9, 1855		400	0
January 9, 1855		363	17	do 31, do		150	0
February 12, do		380	3	February 13, do		200	0
March 27, do		200	0	do 27, do		400	0
April 10, do		275	0	March 27, do		100	0
do 24, do		304	17	April 12, do		100	0
May 8, do		340	19	do 14, do		100	0
do 22, do		500	11	do 17, do		5	3
June 5, do		579	6	do 24, do		275	0
do 19, do		599	19	May 1, do		25	0
do 3, do		735	16	do 10, do		300	0
do 16, do		400	0	do 22, do		300	0
do 17, do		100	0	do 6, do		500	0
do 19, do		700	0	June 6, do		550	0
do 23, do		499	3	do 21, do		600	0
do 31, do				July 4, do		400	0
				do 17, do		400	0

On J. B. Carrier's Estate

E. Delaire's

STATEMENT of ESTIMATES of WORK DONE by T. A. WALKER, and of the PAYMENTS made to him on Account thereof.—(Continued.)

Date.	Estimates of Work Done.	Currency.			Date.	Payments Made.	Currency.		
		£	s.	d.			£	s.	d.
July 31, 1855	J. B. Carrier's Certificate	400	0	0	July 19, 1855		700	0	0
August 7, do	E. Delaire's	104	10	0	do 26, do		700	0	0
do 13, do	J. B. Carrier's	200	0	0	do 31, do		400	0	0
do 14, do	E. Delaire's	190	0	0	August 1, do		500	0	0
do do, do		443	13	4	do 7, do		100	0	0
do 22, do	E. Delaire's Certificate	95	0	0	do 14, do		200	0	0
do 28, do		483	18	0	do 16, do		500	0	0
do 28, do	J. B. Carrier's Certificate	700	0	0	do 22, do		100	0	0
September 1, do	do	200	0	0	do 28, do		500	0	0
do 4, do	J. B. Carrier's Certificate	100	0	0	do 30, do		700	0	0
do 4, do	E. Delaire's	300	0	0	September 1, do		200	0	0
do 11, do	J. B. Carrier's	100	0	0	do 4, do		300	0	0
do 11, do		600	18	7	do 4, do		100	0	0
do 18, do	J. B. Carrier's Certificate	200	0	0	do 11, do		100	0	0
do 25, do	do	100	0	0	do 11, do		600	0	0
do 25, do	E. Delaire's Certificate	285	11	7	do 18, do		200	0	0
do 29, do	do	57	0	0	do 25, do		350	0	0
October 7, do	E. Delaire's Certificate	64	0	0	do 5, do		50	0	0
do 9, do	do	415	14	7	October 9, do		450	0	0
do 22, do		218	7	9	do 16, do		100	0	0
November 6, do		241	17	11	do 24, do		100	0	0
do 6, do		650	0	0	do 31, do		100	0	0
do 8, do		100	0	0	November 6, do	Montmorency Bridge	550	0	0
do 13, do		400	0	0	do 6, do	do	200	0	0
do 27, do		200	0	0	do 6, do		100	0	0
December 4, do		100	0	0	do 10, do	Montmorency Bridge	400	0	0
do 11, do		50	0	0	do 15, do	do	200	0	0
do 18, do		75	0	0	do 28, do	do	100	0	0
do 28, do		75	0	0	December 6, do	do	100	0	0
January 3, 1856		50	0	0	do 13, do	do	50	0	0

Date.	Estimates of Work Done.	Currency.			Date.	Payments Made.	Currency.		
		£	s.	d.			£	s.	d.
January 11, 1856		50	0	0	December 18, 1855	Montmorency Bridge	75	0	0
do 17, do		50	0	0	do 27, do	do	75	0	0
do 22, do		50	0	0	January 3, 1856	do	50	0	0
do 23, do		50	0	0	do 11, do	do	50	0	0
do 23, do		125	0	0	do 17, do	do	50	0	0
do 29, do		25	0	0	do 23, do	do	175	0	0
do 29, do		25	0	0	February 1, do	Montmorency Bridge	25	0	0
February 5, do		50	0	0	do 9, do	do	25	0	0
do 12, do		25	0	0	do 16, do	do	50	0	0
do 19, do		25	0	0	do 22, do	do	25	0	0
do 26, do		25	0	0	do 1, do	do	125	0	0
March 4, do		25	0	0	do 15, do	Montmorency Bridge	50	0	0
do 11, do		25	0	0	do 17, do	do	50	0	0
do 15, do		125	0	0	do 24, do	do	25	0	0
do 18, do		25	0	0	do do	do	25	0	0
do 18, do		25	0	0	do do	do	25	0	0
do 1, do		25	0	0	do do	do	25	0	0
do 20, do		25	0	0	do do	do	25	0	0
	Total	30247	2	10		Total	29830	6	3

J. POTTER,  
Secretary, Turnpike Trust.

Quebec, 21st August, 1856.

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## R E T U R N

To an Address from the Legislative Assembly for copies of Reports or correspondence of Pierre Fortin, Esquire, commanding the Forces charged with the protection of the Fisheries in the Gulf of St. Lawrence during the season of 1856.

QUEBEC, 25th October, 1857.

SIR,—I have the honor to report to you, for the information of His Excellency the Governor General, that I arrived this morning, in the schooner "La Canadienne," having left the coast of Gaspé on Tuesday last.

Before transmitting to you my general report, I consider it my duty to give you an outline of the cruise of "La Canadienne," in the Gulf of St. Lawrence, for the protection of the Fisheries and of the public revenue.

As I had the honor to inform you, I proceeded on the 19th May to the Magdalen Islands, where I thought it necessary to remain three weeks, in order to afford the needful protection to our fishermen during the mackerel season.

From that place I proceeded, as often as I could, to the different points on the Canadian shore of the Gulf and the River where the fisheries are carried on, and where the foreign fishermen engaged in the Bank fishery take shelter in bad weather.

Thus I visited Gaspé Basin, Malbaie, Percé, Paspébiac, Carlton, the Bay of Plaisance in the Magdalen Islands, L'Anse aux Blancs Sablons, Bradore Bay in the Straits of Belleisle, Natashquan, Mingan, Shell Drake River on the north shore, besides many places of less note.

More than twenty wrecks have happened in the Gulf, within my knowledge, in the present year. A three-masted vessel, two barks, and two brigs struck on the coast of the Magdalen Islands. I was not there when these wrecks happened, my duty requiring my presence elsewhere, but as I arrived shortly after, I am able to state that no robbery or pillage took place, as in former years, on account, probably, of "La Canadienne" being on the station.

I brought up with me from Gaspé Basin the crew of the bark "Queen," of Hull, Thomas Chaplain, Master, which was wrecked on the island of Anticosti, on 26th September last. I found these men, twelve in number besides the mate, almost destitute of money and unable to procure a passage to Quebec.

I offered and gave to the officers of the Customs on the coast of Gaspé all the assistance which they needed, and during my stay at the Magdalen Islands the Collector of the port of Amherst always had my boat at his disposal.

I close this letter requesting that you will forward instructions to lay up the schooner in winter quarters.

I have the honor to be, Sir,

Your very obedient servant,

(Signed,)

P. FORTIN.

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## Annual Report of the Magistrate commanding the Expedition for the protection of the Fisheries in the Gulf of St. Lawrence, during the season of 1856.

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Having left Quebec in the evening of 13th May, on board the Government schooner "La Canadienne," I reached Percé on the 16th.

As it was my duty to arrive at the Magdalen Islands as early as possible, I remained at Percé only long enough to place myself in communication with the principal proprietors of the establishments there.

The next day we set sail. I did not, however, reach the Bay of Plaisance before the 21st. Strong easterly winds had delayed our progress, and we were compelled by a fog to lay to a day, near the east end of Gross Isle, where I was enabled, on the 20th, to be of some service to the Master of the bark "Sappho," of Sunderland, on his voyage from Shields to Quebec, by informing him of his true longitude and correcting his compass.

On my arrival at the port of Amherst, I proceeded at once, pursuant to instructions, to offer to the Collector of Customs there, Mr. John J. Fox, a boat and the assistance of the seamen of "La Canadienne," to convey him either on board of the vessels at anchor in the harbour, to the Bay of Plaisance, or to distant points of the coast where he might suspect that contraband goods were introduced.

I had the pleasure of meeting the Magistrates of Amherst and the other islands, and I assured them of my ready co-operation, and the aid of my men, if any attempt were made to resist them in the performance of their duty.

I have already had the honor to inform you that the herring fishery had terminated when I arrived at the Magdalen Islands, and that it had been unproductive. In fact, not more than 16,000 barrels of herrings have been taken in the present year in the Bay of Plaisance while the Customs Returns for preceding years shew an amount of 40,000 or 50,000.

The failure of this fishery does not proceed from any deficiency in the fish themselves; they appeared in the usual abundance. It must be imputed to the fact that the spring thaw was earlier than usual, and the shoals of herrings having appeared immediately afterwards, the fishermen were not in readiness to lay their nets in the spawning time. The shoals appeared, moreover, to have taken the direction rather of Le Havre aux Maisons than of the Bay of Plaisance. At the latter place they were so crowded and pressed together that great numbers of them perished, and the pestilential effluvia from the putrescent heaps of fish cast up by the sea was for many weeks a nuisance to the people in the neighbourhood.

About sixty schooners, nearly all from the Gut of Canso, had gone to Amherst Harbour for the herring fishery, the greater part of them being provided only with cast nets, a few having very fine seines.

When I arrived there were forty schooners in Amherst Harbour, and every day on which the wind was favorable others arrived.

The mackerel did not appear in the Bay till the 4th June. There were at that time more than sixty schooners, some from the United States, some from Nova Scotia, manned each with eight or ten seamen, and having on board twenty-five or thirty nets. These, when spread in the Bay of Plaisance, leave a passage by the sand bank hardly wide enough to allow ships to enter and leave the port.

Had the fish been as plentiful as usual this year the fishery would have been very productive, but the mackerel appeared in but small quantities, and frequent gales of wind drove them from the coast to deep water, which is less agitated.

There were, however, very successful days. On the 9th two or three fishermen caught 1,500 mackerel each, many took 1,000, and almost all more than 500. But the greatest success occurred on the 11th, on which day one master of a schooner hauled up more than 3,000 fish, and others from 500 to 2,000.

After that day the mackerel were no longer found in large quantity in the Bay, and on the 13th many of the fishermen set about taking up their nets, and prepared for their departure, to carry on the cod fishery on the coast of Labrador.

On the 2nd June the schooner "Tiber," Captain H. Vignault, had returned from the seal fishing on the floating ice, in the Gulf of St. Lawrence, having caught 177 of those animals. The other vessels despatched for the same purpose from the ports of Amherst and Havre aux Maisons, twenty-one in number, had returned some weeks earlier, some after a lucky voyage, others with barely enough of blubber and skins to pay expenses.

I think it is proper here to give a list of the vessels, their tonnage, the number of men in each, the date of their departure, and the number of seals taken by each.

SCHOONERS.	TONNAGE.	MEN.	DEPARTURE.	NUMBER OF SEALS.
Constantinople.....	42	9	April 10	900
Wide Awake.....	42	11	" 7	700
Temperance.....	36	10	" 6	340
Eliza.....	39	10	" 7	165
Lady.....	28	7	" 5	90
Adelina.....	40	11	" 10	230
Onésime.....	42	11	" 6	200
Sophie.....	29	7	" 5	87
Seal.....	27	9	" 7	148
Marine.....	48	9	" 8	65
Kent.....	33	7	" 5	50
Mariner.....	31	10	" 6	90
Sea Flower.....	36	10	" 7	50
Nancy.....	38	7	" 6	50
Haddock.....	35	7	" 5	60
Pandora.....	27	9	" 5	148
Mary.....	31	7	" 6	600
Sara.....	32	7	" 6	350
Zelie.....	35	7	" 6	150
Johnny.....	32	7	" 5	273
Tiber.....	30	5	" 9	177
Schooners—21.	733	177		4923

It will be seen that all these vessels are of light tonnage; the largest does not exceed 50 tons. Those employed in the same pursuit in Newfoundland are top-mast schooners and brigantines measuring from 100 to 300 tons, and manned with 40 to 60 hands. They are well stayed and covered with sheet iron on the outside planking in order to cut the ice, without springing a leak or being cut through.—Many of these vessels have made voyages yielding incredible profits.

The reports published in the Newfoundland newspapers shew that vessels sailing from the harbour of St. Johns, and other ports in the eastern side of the island, with

crews of 40 to 60 men, in pursuit of the young seals on the field-ice, have succeeded, in the course of three or four weeks, in capturing from 5000 to 10,000 or more of these animals.

It may be said that it is less easy to carry on this fishery in the gulf and its shores than on the ice-banks which cling to the east side of Newfoundland, after passing through the straits of Belleisle and southward by St. Pauls, St. Pierre and Miquelon; but a much larger number of vessels might be sent from the Magdalen Islands and several other places on the mainland; and, instead of the present schooners of 25 to 50 tons, vessels of larger burthen might be employed of more substantial construction, in which our fishermen might follow up the ice-fields wherever they may be driven by the winds and currents. Un fortunately, there is a deficiency of capital. Our fishermen are unable to equip large vessels, and the proprietors of the large fishing establishments attend only to the cod fishery, neglecting altogether the other sources of wealth which Canada possesses in the Gulf of St. Lawrence.

Since my arrival in the Bay of Plaisance, particularly during the mackerel season, I have been engaged in enforcing the observance of the fishery laws, relating to the Magdalen Islands, and particularly those clauses which prohibit the obstruction of the ports and roadsteads, and the discharging of ballast, fish-offal and other nuisances within their limits; and I have reason to believe that I have obtained strict conformity to those laws, for not a single complaint has been made before me on this behalf, nor before any other magistrate in the island, within my knowledge.

I have also the pleasure to report that during my stay at the Magdalen Islands, public order was maintained uninterruptedly.

On the 13th, in the evening, I left the Bay of Plaisance, to proceed to the coast of Gaspé, and on the 15th arrived at Percé. I there found a letter from Mr. C. Jones of Quebec, requesting me to proceed to Gaspé Basin to assist him to recover property remaining from the brig "Piscator," which was wrecked the preceding autumn on the Island of Anticosti. This property was detained by several persons, who refused to give it up.

Mr. Warren of Quebec, agent for the insurers of the "Piscator" and Messrs. Mitchell, the owners of the cargo, had given full powers to Mr. Jones to act according to his discretion. He had obtained a writ of *saisie*; but the bailiff to whom he had given it had failed to execute it. He had been prevented from making a seizure of the property and had been threatened to be thrown into the sea, and ill-treated in various ways.

I gave orders to make sail immediately; but a thick fog prevented us from seeing the land, and I did not succeed in getting away before the following day. Half way across I met Mr. Jones who proceeded with me to the Basin, in the expectation of finding the balliff there, who might then have received my assistance in getting possession of the property from the "Piscator." The latter, however, residing at Percé, that is, thirty-six miles off, did not make his appearance; and Mr. Jones thought it advisable to proceed to New Carlisle to obtain a new writ of *saisie* which might then be executed by the sheriff or his deputy. On leaving the Basin I promised to return thither on Tuesday or Wednesday in the following week, to give the necessary aid to the sheriff.

On the 19th I visited the fishing establishments at Point St. Pierre. I here met Messrs. Elias Collas and Fauvel, proprietors of cod fishing establishments, who informed me that the fishery had just commenced on that part of the coast and promised to be successful. There was a great abundance of fish, and the necessary bait was easy to be procured. Mr. Collas employs twelve boats and thirty men: Mr. Fauvel six boats and twelve men.

The same evening I proceeded to Percé, and the following morning set sail for the Magdalen Islands, where I arrived on the 21st in the evening.

I paid visits to the Hâvre aux Maisons, and Amherst Harbour. In the former quays preparations were in progress for the equipment of schooners for the codfishery

on the coast of Labrador. In the latter a few of those vessels remained which had been employed in the mackerel fishery. The crews were busily engaged in packing their fish.

From the 13th scarcely any mackerel had been taken in the Bay of Plaisance, and all the nets had been taken up.

It has been said before, that the mackerel fishery had not been successful. I believe that not more than 3000 barrels of that fish had been taken, either by foreigners or natives of the islands.

On the 22nd, in the evening, I gave orders to make sail, and on the 25th, in the morning, having touched at Percé, I arrived at Gaspé Basin.

I found Mr. Jones at the Landing and was informed by him that he had made a more expeditious journey to New Carlisle than he had expected, that having arrived on Monday with a writ of *saisie*, he had been to see the persons in whose hands lay the property of which he wished to obtain possession, and that he had experienced no resistance.

Mr. Jones was able, however, to recover only a part of the property of the "Piscator," a certain quantity having been previously sold.

From the 25th to the 1st July, the crew were busy taking in wood and water, and in the indispensable work of refitting the rigging.

On the 2nd, I touched at Percé on my way to the Bay of Chaleurs. A few hours after I had cast anchor, Mr. De la Parette, agent for the fishing establishment of the house of Robin & Co., wrote to me stating that he had good reasons for believing that several of their hands engaged for the season, who had already received considerable sums in advance, had been enticed to desert to a schooner belonging to the United States, which was then lying in the roadstead, and he requested me to interfere to prevent their desertion, as he had great need of them, being in the height of the cod fishery.

In consequence of this application, I gave orders to remain at anchor near the schooner which he had named, and the watch had orders to give notice if any canoe or fishing-boat should approach it during the night.

On the following day the suspected schooner weighed anchor and made sail for Cape Gaspé, without having succeeded in seducing any of the fishermen. I gave orders to set sail.

Off Pabos, we fell in with sixty fishing vessels, proceeding to the grounds where the cod is very plentiful. Capelin is used as the bait.

Peace and good order prevailed everywhere among them.

The American fishermen have not yet commenced the mackerel fishery in the Bay of Chaleurs.

On the 5th, I met at Carleton the agent of the Crown Lands, and offered to ascend the River Ristigouche and the Metapediac with part of the crew of *La Canadienne*, in case of need.

Mr. Verge informed me that, as no timber had been cut this year by foreigners, it was not necessary to proceed any further at that time. At the same time, he was convinced that the presence of *La Canadienne* in the River Ristigouche had produced a good effect last year, and he thought it advisable that I should return at a later period, in order to shew to persons who might be tempted to cut timber on the Crown Lands contrary to law, that he can call in to the support of his authority a force sufficient to compel the observance of the laws enacted for the preservation of the forests.

On the 7th I proceeded to New Carlisle, where I made arrangements with the collector of Customs, Mr. Frazer, to be useful to him if my interference were required.

On the 8th I visited at Paspébiac the fishing establishment of the house of Robin & Co., and that of LeBoutillier and Brothers. These are the most considerable on the Canadian shore, the former giving employment during the season

to nearly three hundred, and the latter to about two hundred men. These two establishments export annually more than 20,000 quintals each of dry cod to Brazil, Spain, and Italy.

All hands were deeply engaged in the cod fishing. Our fishermen devoted themselves to their avocation with the most perfect freedom from interruption; not a single foreign vessel had as yet appeared in the Bay of Chaleurs. We left the Bay that evening.

We met a great number of fishing-boats returning from the fishing grounds well loaded, and we saw, for the first time this year, a few schooners from the United States going to catch mackerel. They were at a considerable distance, but easily distinguishable by the sharp hull and the large white sails.

On the 9th I visited the fishery establishments on the Island of Bonaventure, and principally that of the house of LeBoutillier and Brothers. The cod fishery is very productive in the neighbourhood of the Island, several boats returning from the ground with eight or nine quintals of fish each.

During the past week there have been also shoals of mackerel around the Island, but our fishermen disregard this fishery. About sixty boats in all belong to the Island of Bonaventure, and of these about forty belong to the house of LeBoutillier. Each of these boats carrying two men, generally takes from eighty to a hundred and fifty quintals of codfish yearly. The greater part of it is exported to the markets of Spain and Italy.

On the 10th the sailors were occupied in taking in wood and water; and on the 11th I gave orders to make sail for the coast of Labrador, touching at Anticosti.

The next day, I fell in with the United States schooner, "Baltimore" engaged in cod-fishing on a bank half way between the Island of Bonaventure and Byron Island, and I landed at the light-house on the eastern point of Anticosti.

I was informed by Mr. Tulgan, the keeper, that he has no knowledge of any shipwreck having occurred this spring on the coasts of the Island. He gave me also a great deal of information relative to the fisheries carried on near the eastern point. Ten schooners of twenty or thirty tons each from the Island of Cape Breton, were engaged in the cod fishery on the coasts adjacent during the month of June. They found the fish in great abundance and left fully laden.

Off the light house, towards the south, halibut may be caught in large quantities, on a rocky bottom, in five or six fathoms water. In the months of July and August, many American schooners may also be observed engaged in the mackerel fishing, and generally with great success. The absence of good roadsteads, and secure anchorage will, however, always cause seamen to doubt the safety of vessels on the coast of Anticosti. This is no doubt the cause which has hitherto prevented the establishment of fishing stations there.

In the afternoon we made sail for Natashquan, on the coast of Labrador, where we arrived on the 13th. I found in the bay of Little Natashquan, twelve schooners engaged in the cod fishery.

Of these, eight belonged to the United States; they were as follows :

SCHOONERS.	TONS.	MEN.	NUMBER OF BOATS.	QUANTITY OF COD.
Roebuck .....	79	7	3	650
Elsenne .....	63	9	3	600
Orozimbo .....	65	9	3	500
Odeon .....	63	8	3	400
Tremont .....	63	8	3	650
Oreste .....	60	9	3	550
Wm. McKenzie .....	58	8	3	450
Four Sisters .....	62	6	3	250
Schooners—8.	513	66	24	4050

The others were schooners belonging to the Magdalen Islands, from 30 to 40 tons each. Each had on board 200 or 300 quintals of cod.

The cod had made their appearance on the coast of Natashquan about the beginning of May, and were so abundant that they might be taken at the mouth of the River Natashquan in no more than three fathoms water.

The fishermen had reached Natashquan only about the 10th June; this was the reason why they had not taken a larger quantity of fish.

I next visited the new establishment of the little Natashquan, founded by the inhabitants of the Magdalen Islands. This consisted of eight families, numbering in all fifty-five persons. They were well provided with fishing-boats, and one of them had a schooner of about thirty tons.

Should the cod fishery continue to be as good in the neighbourhood of Natashquan as it has been for years past, I have no doubt that these families may procure a good subsistence there, particularly if during the winter they devote themselves to the hunting of fur-bearing animals, of which there is always a considerable number on this coast.

Towards nightfall I availed myself of a fair breeze to make sail for Mingan, at which place I arrived on the 15th.

On the 14th we had fallen in with thirteen schooners; ten of them belonging to the United States, and three to Nova Scotia, engaged in fishing for cod on the Mingan Shoals.

The salmon fishery in the Rivers Mingan and St. John had been successful. Mr. Henderson, the chief of the Hudson's Bay Company's trading-post, informed me that he had no complaint to make against the foreign fishermen who frequent the Harbour of Mingan in bad weather, or to take in wood or water.

On the 17th we made sail for the eastern part of Labrador, and having experienced very rough weather and contrary winds, came to an anchor in Blancs Sablons Bay on the 24th. The following day I proceeded to Green Island, at the entrance of the Bay, the scene of one of the greatest disasters on record in the annals of the navigation of the coast of Labrador.

On the 1st July, in the night, during a terrific storm, twenty-nine schooners being at anchor in the bay of Green Island, in order to be near the fishing grounds, were driven ashore. Fortunately, the beach in that bay is sandy, and the crews had time to escape to land before their vessels broke up. On the following day more than three hundred men found themselves destitute of shelter and almost of

food, on the inhospitable shores of Green Island; but afterwards, the sea having gone down, they succeeded in saving the greater part of their provisions. All the salt and a part of the fish were lost.

The inhabitants of the Magdalen Islands were great sufferers by this calamity. Of the twenty-nine vessels cast away, nineteen belonged to the *Hâvre aux Maisons*; the remainder belonged to the United States and Cape Breton.

When I arrived at Green Island they had succeeded, after great labor, in raising fifteen schooners, ten of which belonged to the Magdalen Islands. All of them had suffered considerable damage.

I give a list of the schooners which were totally wrecked:

SCHOONERS.	TONS.	MASTERS.	NUMBER OF MEN.
Henry .....	32	Pierre Vignault .....	10
Pandora .....	27	Xavier Cormier .....	11
Nancy .....	38	Jos Boudrault .....	11
Mère de Famille .....	30	W. Thériault .....	11
Marie .....	30	Fred. Arsenault .....	11
Mariner .....	31	L. Bourque .....	10
Sea Flower .....	36	Sam. Doyle .....	11
Haddock .....	35	Cas. Harvey .....	11
Kent .....	33	Abel Arsenault .....	11
Louisa .....	97	P. Smith .....	13
Dan Webster .....	80	P. Small .....	12
Volunteer .....	75	P. Bunker .....	12
Three Brothers .....	37	.....	9
Mischief .....	35	.....	9
14 Schooners.	616		152

and one other from Cape Breton, the name of which I could not learn. The first nine on the list belonged to the Magdalen Islands, the two next to the United States, and the last to the island of Cape Breton.

I visited all the men belonging to these wrecked vessels, and tendered them all the assistance in my power. Most of them had shipped themselves or were about shipping themselves on other vessels, to proceed to the fishery in the Straits of Belleisle. Having ascertained that none of them were in want of provisions, I informed them that when the fishery should be ended, I would give them a passage to the Magdalen Islands, if they did not before that time find a way to return to their homes.

I visited all the fishing establishments in the Bay of Blancs Sablons and Bradore Bay.

Mr. Randall Jones, who, next to Mr. Samuel Robertson, of Fish Harbour, has, at Bradore Bay, the largest sedentary fishery for seal which exists on the coast of Canada, makes the same complaint as in former years. While the seal nets, which cost with their tackle and cordage not less than fifteen hundred pounds, are laid out to intercept the herds of seal which, on their return from the west, pass between the mainland and the islands forming the basin of Bradore, the fishermen, both British and American, do not hesitate to pass with their boats within the very limits enclosed by the nets, and to prosecute their fishery at the very opening through

which the seals would pass into them. It is easy to understand, that if herds of seals, making for the entrance of an enclosed space, concealed as much as possible beneath the water in order not to alarm the creatures to be entrapped, see a schooner under sail, or fishermen engaged in throwing or hauling a seine, they immediately dive and make for deep water, and that the owners of the fishery thus lose the opportunity of catching ten, twenty, or even fifty of them, worth £15, £30, or even £75. As there is no express statute for the regulation of those fisheries I have hitherto been unable to interfere for the protection of Mr. Jones and of the other proprietors of the sedentary seal fisheries, who are in the same circumstances as he is.

I trust, however, that the Government will take this subject into their serious consideration, and that a law may be passed granting power to the magistrate in command of the Government schooner "La Canadienne" to afford such protection to the proprietors of the sedentary seal-fisheries on the coast of Labrador as they may be entitled to, without detriment in any way to the other fisheries carried on in the neighbourhood.

In other respects, order and tranquillity prevailed in the Bay of Blancs Sablons, where lay thirty schooners, and in Bradore Basin, in which were ten.

On the 27th we left the Bay of Blancs Sablons, and, on the following day, anchored at Fish Harbour, at the establishment of Mr. Samuel Robertson, proprietor of the most important stationary seal fishery in Labrador. Its annual produce varies from six hundred to three thousand five hundred seals, which are worth, since the advance in the price of oil, £2 each.

I was informed by Mr. Robertson, that he is not disturbed in his fishing operations, because he lays his nets in November, when the foreign fishermen have left the coast.

I next visited Mutton Bay and Whales' Head Bay, where I was informed that the seals had resorted in considerable numbers, and the fishery had been productive. At all these different stations, the nets are laid for seals in the autumn. We held on towards the west, but foul weather prevented me from calling at the fishing stations on my route.

On the 2nd August, we came to an anchor at Percé, after being detained for two days by a thick fog off the island of Bonaventure. The cod was still abundant at that part of the Gaspé coast, but bait was hard to be procured. We remained the following day at Percé.

In the afternoon, six American schooners, engaged in the mackerel fishery, came to an anchor in North-East Bay. I give a list of these vessels, with the number of men in each, the quantity of fish, &c. :

SCHOONERS.	PORT.	MASTERS.	BARRELS.	MEN.
R. P. Randall . . . . .	Gloucester.	R. Allen . . . . .	40	12
G. Washington . . . . .	do	J. D. Brickland . . . . .	150	15
Friendship . . . . .	do	Jas. Thomas . . . . .	30	13
Surprise . . . . .	do	.....	35	12
David A. Brown . . . . .	do	D. Brown . . . . .	40	14
Margaret Ann . . . . .	do	.....	50	15

These schooners had arrived only a week or a fortnight before, and, as may be seen, had had tolerable success. They had fished off the Island of Bonaventure. They were all from 60 to 80 tons, and had sails of white cotton consisting of a

standing jib, a foresail, a mainsail, driver, and a maintop staysail. The two last are generally loose. Their light draught, seldom exceeding seven feet, and sharp build, give them great speed (particularly with a light wind.) This is indispensable when they are bound to follow the shoals of mackerel moving by their instinct in various directions.

On the 4th, having satisfied myself that all was quiet at Percé, I gave orders to set sail for the Magdalen Islands. During the run we fell in with forty-nine schooners engaged in the mackerel fishery. They seemed in general to have been successful, and those whom we spoke told us there was plenty of fish, particularly near the Magdalen Islands.

On the 7th I came to an anchor in Bay aux Maisons, where I found only two vessels. I then proceeded to Amherst Bay where lay several schooners repairing damages and taking in water.

Fifteen boats belonging to the Magdalen Islands, each manned by three or four hands, had commenced fishing for mackerel with the line in the Bay of Plaisance. Near Cape Allwright particularly they had good success. Some of the men take as many as five hundred in a day.

On the 10th, in the afternoon, we proceeded to Bird Island and Byron Island, and I visited the wreck of the ship "Jane," of 658 tons, from Belfast, cast away in a fog on the south-east point of the latter Island. The purchasers were busy in stripping off the copper sheathing and getting out the bolts. I was glad to understand that this wreck had not been marked with any of those circumstances of pillage and riot which occurred at the time of the loss of the "Lochmaben Castle" last summer, although during the whole summer more than 300 hundred schooners have been engaged in the mackerel fishery round Byron Island and the neighbouring Islands.

The "Jane" is not the only vessel lost in the present year on this part of the Magdalen Islands.

On the 24th July, in a thick fog, the bark "Brothers," of Newry, of 522 tons, went ashore on Bird Island, and remained with her hold full of water for some days. This enabled the crew to escape to land and to save a large part of the rigging and moveables. A gale of wind having afterwards sprung up, floated the wreck, and the remains were subsequently found near the coast of Labrador. I must not omit to mention the wreck of the brig "Success," John Furness, master, of Whitehaven, on her voyage from Richibuctoo to Donegal, on Amherst Island, at a place called the Basin. After a survey, the vessel had been condemned and sold at public auction, together with the cargo, consisting of pine deals. There was no complaint of any article being stolen from this ship.

On the 12th I again visited the Bay aux Maisons and Amherst Bay, and made sail for the coast of Gaspé.

On the 14th and 15th, we fell in with several schooners belonging to the United States, and on the morning of the 16th arrived at Percé. I again visited the Island of Bonaventure, where the cod-fishery continued to be productive. In the neighbourhood of this island also some American schooners continued the mackerel fishing, and took as many as fifteen barrels in a day. I am informed that some of our own fishermen intend to engage in this fishery next year, on the same large scale as the Americans. It is really to be regretted that this fishery has been hitherto neglected in Canada, as, if well conducted, it might become a source of great wealth to the country in general, and afford lucrative employment to our fishermen. It would likewise give active occupation to our shipbuilders, through the demand it would create for fast sailing vessels.

I consider myself justified in stating, for the information of fishermen and others who may be disposed to engage in this pursuit, that it will yield great profits. But great perseverance is necessary, and much care in the preparation of a bait similar to that in use with the Americans to attract the shoals of mackerel and to keep them near the vessels.

On the 18th I prepared to visit the fishing establishments on the south shore of the lower part of the St. Lawrence, but was prevented by the continuance of easterly and north-easterly winds, during which that coast is inaccessible.

On the 19th I proceeded overland to L'Anse au Beaufils and to Cape Cove. The road was good, and the country magnificent. On most of the partially cleared farms, great activity prevailed in getting in the harvest. The hay crop had been very abundant everywhere. At Cape Cove I found beautiful farms, among which I must notice that of Mr. Savage. All kinds of grain are grown of the first quality. Roots and green crops, particularly potatoes and turnips, yield abundantly. At Cape Cove, Messrs. Savage, Leger and Pain carry on an extensive trade in fish, sending four or five cargoes of dry codfish to Europe every year.

At this place too, shipbuilding is carried on. Mr. Case, junior, shewed me in his yard a schooner built of excellent timber and on a good model.

On the 20th I went, with Mr. P. LeBoutillier, warden of the Municipality of the County of Gaspé, to visit the fishing establishments and ship-yards, at Coin du Banc at the bottom of Malbaie.

On the blocks in Mr. Mabee's yard was a brig of about 200 tons ready for launching, which, for the quality of the timber, substantial workmanship, and elegance of model, was not inferior to vessels of the same tonnage launched at Quebec. This gentleman has already built twelve vessels, brigs and schooners, nearly all engaged in the fishing trade. Most of them were purchased by Jersey houses, which have fishing establishments on the coast of Gaspé, and sail every season with cargoes of dry cod for the ports of Spain and Italy. The fishery at Malbaie is now less an object of attention than it was formerly. For some years past, the fishermen of this place have habitually frequented the north shore, particularly Sheldrake Island and Magpie Bay, where they find the cod in greater abundance.

There are about thirty fishing boats, including those of Cane de Roche, Barachois and Belle Anse, together with those belonging to Malbaie proper, and the quantity of fish taken may be computed at three thousand three hundred quintals of dry and green cod.

On the 21st a strong south-east wind obliged us to leave Percé, and we made sail for the Bay of Chaleurs. A thick fog prevented us from seeing the land, and did not clear up until we were off Bonaventure. At 10 p.m. we came to an anchor off Carlton.

On the following day, M. Verge came on board with a pilot, and we prepared to ascend the River Ristigouche, with a light, but fair wind.

On the 22nd, in consequence of facts represented to me by Mr. John Meagher, the member for Bonaventure, I proceeded with the pilot, Mr. Mann, to examine the north channel of the River Ristigouche opposite to Dalhousie, where I was informed, vessels coming to load with timber, both at Dalhousie and at Campbellton are in the habit of discharging their ballast before loading. We found the channel very wide, and at present free from dangerous accumulations. Mr. Mann and several other pilots, were nevertheless of opinion, that if the injurious practice is continued, an accumulation of mud must in time be formed round the heaps of ballast, which will be highly detrimental to the navigation, particularly if hereafter the increasing trade in timber on the River Ristigouche and the Metapediatic should require the use of larger vessels.

In conjunction with Mr. Meagher and other persons, I took steps to prevent for the future, the discharging of ballast in the channel on the Canadian part of the River.

The westerly wind, which is a head-wind in ascending the river, obliged us to return; and on the morning of the 24th we arrived at Carlton.

On the 25th the crew were engaged in taking in wood and water, and on the 26th we proceeded to New Carlisle. At that place I saw the collector of Customs and the other public officers, and then visited the fishing establishments at Paspe-

diac. Every thing was orderly and quiet. Very few American schooners were in the bay. They seem to resort chiefly to the neighbourhood of Prince Edward's Island, the Magdalen Islands and Cape Breton.

On the 27th we left New Carlisle, and coasting along fell in with more than a hundred fishing boats engaged in the cod-fishing. They used the squid as bait. The fish were plentiful. Some of the boats had already taken several quintals. About noon I landed at Grande Rivière, and having seen the principal people and fishermen of the place, and settled a difficulty which had arisen about a jetty which obstructed a part of the channel, I visited the fishing establishment of Messrs. Robin & Co., situated about a mile from the river. Mr. Briard, who is the agent, was kind enough to conduct me through the different buildings in which the fish was cured, and I must express my admiration of the order and neatness which prevailed in every department, and which generally characterise the Jersey fishing establishments. The fishermen belonging to this establishment had taken a large quantity of fish,—nearly four thousand quintals,—but they experienced great difficulty in drying it on account of the frequent rains.

I next proceeded to Cape Cove, where I found two vessels from the Bay of Chaleurs, taking in a lading of codfish, and having seen the principal inhabitants of the place, returned on board, and in the evening arrived at Percé.

On the 28th I made sail to visit the fishing establishments in the lower parts of the river, and first called at Point St Pierre. In the evening, I landed at Cape Rosiers. Mr. Packwood, whom I had the pleasure to meet there, informed me that the cod fishery had been very successful in the neighbourhood of the cape, and that a large quantity had been taken. I accepted the invitation of Mr.

and visited the light-house erected by Mr. Baby for the Government, on the most prominent point of Cape Rosiers. This light-house, a substantial and elegant building, is nearly 100 feet in height, and its light must be seen more than sixty miles off. It will be of great use to vessels going up or down the river, and particularly to those engaged in the coasting trade and in the fisheries.

During the 29th I visited the Grand Etang, Fox River, and Griffin's Cove. I found the different fishing establishments at all these places in good order, especially that belonging to Mr. John LeBoutillier, the most considerable at Griffin's Cove, and that of Messrs. L'Espérance, at Grand Etang.

On that part of the south shore of the River St Lawrence on which the fishing establishments I have mentioned are situated, more than a hundred fishing boats are employed, and the produce cannot be less than 15,000 quintals of dry and green codfish.

The former is shipped for Europe, the green cod is sent to the markets of Quebec and Montreal. The bait used here is herring, capelin, mackerel, and sea-trout. During the present year but few foreign vessels have been seen.

In the evening we steered for the north shore, and on the 31st, about noon, landed at Shelldrake River. I visited the fishing stations established two or three years ago, on the sand-bank opposite the river, and I here give a list of them, with the number of boats employed by each establishment.

1.	Fishing station of Messieurs Alfred Maunsell.....	8	boats.
2.	“ “ “ John Lebrun.....	4	“
3.	“ “ “ John Ross.....	5	“
4.	“ “ “ Philip Truzel.....	5	“
5.	“ “ “ J. & El. Collas.....	6	“
6.	“ “ “ René Devouche.....	5	“
7.	“ “ “ Philip LeGreeley.....	4	“

The aggregate produce of all these establishments, is estimated to exceed 5,000 quintals of codfish, without reckoning several hundred barrels of mackerel and cod, caught late in the season, which are sent to Quebec.

I am informed that from the commencement of June to about the middle of August, there is at Shelldrake and in the neighbourhood so great an abundance of cod, that from 15 to 25 quintals may frequently be taken at a single draught, and that the fishermen who frequent these grounds, are, nearly always certain of returning with from four to ten quintals of fish. Unfortunately, the westerly and south-westerly winds which generally prevail here at that season, often prevent them from putting out to sea, so that sometimes in a week they cannot get out more than once, so heavy a sea rolls in the bay, and so difficult and even dangerous it is, to get out with the wind blowing on shore.

In the neighbouring coves to the west, in the River Shallop at River Moisie and the Seven Islands, and to the east in Magpie Bay, the cod fishery had given very profitable returns. Scarcely any foreigners resort to this part of Labrador.

Towards nightfall, I returned on board with much difficulty, and we weighed anchor and made sail for Mingan.

On the following morning, the 1st September, we came to an anchor in the Bay of Mingan, and the carpenter was immediately set to work to fish our bowsprit, which had been partly sprung by a sea on the night of 30-31st August. The agent in charge of the trading-post of Mingan offered us, with great civility, all that we might stand in need of, to execute the necessary repairs.

During the day, Captain Baker's schooner, from Gaspé Basin, fitted out for the whale fishery, came into the Bay of Mingan to take in water. I was informed that the shoals of whales are rarely met with in the Gulf, even on the banks, which are their most usual resort, so that the whale fishery is not expected to be productive this year.

The schooners from the United States, which had been engaged in the cod-fishery on the Mingan shoals, had taken their departure some weeks before with very good cargoes.

On the 2nd, in the afternoon, the mate reported that the repairs of the bowsprit were complete, and I gave orders to make sail.

We made for the offing, where there was a heavy sea, in order to test the strength of the cheeks, which were pinned and firmly lashed on each side of the bowsprit, where it was sprung. After a three hours' run, the carpenter reported that the spar had not given way even in the heaviest pitching, and that he was convinced we might continue our cruise without any danger. Accordingly we directed our course to Natashquan, where I landed on the 3rd in the morning.

I was informed by the Hudson's Bay Company's Agent at the port, that the salmon fishery in the River Natashquan had produced 225 barrels. Of the twelve schooners which were engaged in the cod fishery in Little Natashquan Bay, only two remained, and their crews were busy drying their fish.

Three United States schooners were fishing for mackerel, near the shore west of Natashquan, and had good success. About noon, we continued our voyage towards the eastern part of Labrador, and on the morning of the 5th I landed at

In the afternoon I visited Bradore Bay and in the evening went on to Blancs Sablons Bay, where "La Canadienne" came to anchor. The curing of the herring was going on, on all sides. The fish had been taken in great quantities in both these Bays. At the establishment of Mr. De Guetteville they were preparing to ship to Jersey 1000 barrels of this excellent fish, so well known as the Labrador herring. Messrs. Le Boutilliers and brothers had 500 barrels at Wood Island. About 1,200 barrels had been taken by the inhabitants of the coast, and the fishermen from the Magdalen Islands and the Lower Provinces had carried away more than 5,000 barrels.

More might have been taken had there not been a deficiency of salt and barrels. On the day when we set sail from Blancs Sablons Bay from one haul of the

seine there remained a surplus of herrings sufficient to fill 200 barrels, and many shoals of the fish were still seen near the shores.

It is truly astonishing, that at Quebec, where the value of the Labrador herring is so well understood, no pains are taken to fit out vessels for this fishery, manned by active and enterprising hands, and well provided with salt and barrels. This fishing voyage to Labrador would not last longer than a month or five weeks at furthest, and would, I am well assured, be a more profitable employment for vessels than the coasting trade. The master of such vessels might, moreover, carry on a trade with the inhabitants of the coast, by bartering pork, flour, esculent roots and vegetables, and goods of all kinds for codfish, oil and especially herring.

At present, traders from Nova Scotia and the United States have in their hands the greater part of the trade of the coast of Labrador. I must confess that they enjoy a great advantage over the traders from Canada, that, namely, of purchasing West India and United States produce and other goods, such as tea, coffee, sugar, cottons, wines, liquors, &c., in bond in Nova Scotia and the United States, and of selling them to our fishermen duty free, while such articles shipped from Quebec would have paid duties.

In the present year nine schooners, averaging 70 tons each, mostly from Halifax, received, in barter for produce, sold on the coast of Canada only, furs, codfish, herring, salmon, oil and seal skins, over £25,000 in value.

Mr. Cronan, of Halifax, had taken on board of his two schooners, the Labrador and the Belleisle, one of which made two voyages to Labrador, £8,000 worth of furs, consisting of black and silver fox skins, martin, otter, &c.

In my report of 1852, I thought it my duty, in speaking of the trade of Labrador, to suggest to the Government the establishment of a Custom House on the Canadian coast of Labrador, at which the masters of vessels from the Lower Provinces and the United States trading there might be compelled to pay duties on their goods, before making sales to our fishermen.

I now repeat this suggestion, being persuaded that such a measure is absolutely necessary to place our traders, from the coast of Gaspé, Quebec, and other parts of Canada, on the same footing with foreigners. I can venture to affirm, that the amount of duties collected from traders will more than suffice to defray the expense of a Custom House.

The Government of Newfoundland sent an officer this year to Labrador, to collect, upon all goods and produce imported into that part of the coast which is within their jurisdiction, the same duties which are paid on their admission into the Island of Newfoundland.

I had not the pleasure of meeting that officer, but I know that he applied to several proprietors and agents of establishments situated near our frontier, at Blancs Sablons Bay, and that on their refusal to pay the duties, he delivered to them a copy of the tariff of Newfoundland and other papers relating to his mission, with an intimation that next year the Government of Newfoundland would, in his opinion, send to Labrador, with the officer of customs, an armed force sufficient to enable him to seize all goods on which the duties should be refused to be paid.

In the afternoon of the 7th we left Blancs Sablons Bay, and on the following day I landed at St. Augustin, where the fishing-stations of Messrs. Andrew and Michael Kennedy are situated. Their seal fishery had yielded them 120, and their salmon fishing 70 barrels.

Mr. Andrew Kennedy had been engaged in hunting fur bearing animals, and had killed about £100 worth.

At the posts near St. Augustin, the fishing had been successful. There had been great abundance of cod in the neighbourhood of Chicataca.

Towards noon we continued our voyage to the westward.

On the 9th, a strong contrary wind compelled us to lay to all day, under a foresail. On the 10th we passed the Matchiatiek Islands, and on the 12th, at 6 p.m.,

we saw Byron Island in the south-west, distant six miles. Near the Bird Islands we fell in with the three-masted vessel, *Indus*, on its voyage from Naples to Montreal. On the 13th we bore up for Amherst harbour. About 11 a.m., being off the grand entrance, I perceived, above the sand banks, the masts of a large ship, which appeared to be those of a ship on shore. I immediately caused a boat to be lowered, crossed the lagoon formed by the sand banks which join Grosse Isle and Allwright's Island, and, arriving near to North Cape, found the bark "*Ethelred*," of 440 tons, from Quebec, Patrick Duncan, Master, aground about a cable's length from the beach, having lost her rudder, and having her hold full of water. I offered Captain Duncan all the assistance in my power. He had made the best of two days fine weather, and had succeeded in saving almost all the rigging and other effects belonging to the ship. In a few days, by the help of tackle which I took pleasure in lending him, he stripped the ship of the cordage, sails, and the rest of the effects, which were conveyed to Amherst Harbour, to be sold at public auction for the benefit of the underwriters.

In the evening I proceeded in the boat to Havre aux Maisons, passing the lagoon, and on the 14th I went to Amherst Harbour.

The mackerel was still found in considerable quantities in the Bay of Plaisance. On the 15th one of the officers of *La Canadienne*, with a few sailors, caught more than 300. The boats belonging to the Magdalen Islands still carried on the mackerel fishing with tolerable success. This fish was then in its highest perfection. The white juicy flesh was covered with a layer of fat, and so thick that the greatest care was necessary in curing and salting it, to save it from turning yellow and even spoiling in a few weeks. The American fishermen have acquired great experience in the taking and the sale of this fish. They open it at the back, splitting the spinal column. This enables them, by washing in several waters, to clear away all the blood which lies near the vertebræ. Most of our fishermen have already adopted this method, and now send the fish to market in as fine order as the American fishermen.

I remained in the Bay of Plaisance till the 18th. There were in Amherst Harbor two foreign vessels and seven schooners belonging to the Magdalen Islands which had recently arrived from their fishing voyage on the Labrador coast.

Nearly 300 schooners belonging to the United States had been engaged for two months previously in the mackerel fishery, in the neighborhood of the Magdalen Islands, particularly about Bird Island, Byron Island, and Grosse Isle, south of *L'Isle d'Entrée*, and at Amherst Island. I was informed by Mr. Fox, the Collector of Customs, that he had, one day, counted nearly two hundred at anchor south of Amherst Island, during a gale from the north. The crews of these schooners had had good success in their fishing.

On the 19th we sailed for Gaspé, and on the 21st, in the evening, I landed at Grand River. I had here the pleasure of seeing several of the principal inhabitants who informed me that the gales from the eastward had been so frequent and so violent, for some weeks, that the fishermen had not been able to reach the fishing grounds more than once or twice, and even on those occasions, with great danger. One boat, manned by two young fishermen who were much respected at Grand River, had not returned after several weeks' absence, and was thought to have sunk on the bank of Miscon. Several boats had been lying-to in the offing for some days, not venturing to approach the shore. There had consequently been but little fish taken since the commencement of September.

I was informed that the School Commissioners of Grand River had great difficulty in collecting from the inhabitants the amount of their assessment. Some still refused to pay, and even threatened personal injury to the bailiff employed to serve process on them. I considered it a point of duty to give out that when the suits should be determined, I should be at Grand River, ready to assist the magistrates, and to protect the bailiff is necessary.

On the morning of the 21st we arrived at Percé and found everything quiet. The effects of the bad weather had also been felt here : several fishing boats had been driven as far as Cape Rosiers, and there had been no fishing for several weeks. The wind being fair, we continued our voyage, Mr. George LeBoutillier, collector of customs at Percé, having business at Gaspé Basin, relating to the duties of his office, took his passage on board of *La Canadienne*. In the afternoon I visited the fishing establishments at Point St. Pierre, and in the evening we anchored off the Sandy Beach in Gaspé Bay.

On the morning of the 22nd there was a dead calm. I landed at Sandy Beach in order to proceed by land to Gaspé Basin, giving orders to the master to take *La Canadienne* into the bay as soon as the breeze should spring up. On my way to Sandy Beach, I passed by twenty boats engaged in fishing with the line for mackerel, which are abundant in this part of the Bay of Gaspé. The fishermen who man these boats reside on the neighboring coast, and have nearly all made a fishing voyage to the north shore.

Those whom I conversed with, informed me that the fishery is usually very productive, and that each boat take on an average ten barrels of mackerel in the autumn, worth from £20 to £25. *La Canadienne* came into the Basin about 1 p. m., and the crew immediately set about getting down the main top-mast, and substituting the fore top-mast in its place, for the purpose of lightening the schooner and so easing the bowsprit when she pitched, as it would have been impossible to find timber suitable for making a new one.

We remained in the Basin till the 28th. I employed myself in visiting the vessels which were taking in cargoes of dry cod in the Basin for the markets of Spain and Italy, principally for those of Cadiz, Naples, Cività Vecchia and Leghorn. Some cargoes are also loaded for Brazil. The weather was not very favorable for carrying on such work. For several weeks they had not been able to put a single cod-fish on board, on account of the continual fogs and rains.

It is well known that if the fish is put on board before it is perfectly dry, or even if after being well dried, it should become damp, it is in great danger of heating and being spoiled in the hold, during the voyage which sometimes lasts more than forty days.

The vessels generally employed in the fish trade are top-sail schooners, brigantines, brigs, and a few barks of from 100 to 400 tons. A few are despatched in the months of August and September. The greater number do not sail before the end of October, November, and even December. In the winter, these vessels often find freights for some of the Mediterranean ports or those of the United Kingdom. They then proceed to Cadiz or Liverpool about the middle of April for a cargo of salt, and return to the coast of Gaspé in the month of May. I also visited the steam saw-mill established by Mr. Shaw, on the western shore of Gaspé Basin.

This mill, which is worked with vertical saws and reciprocating motion, gives almost constant employment to forty men, and turns out every year deals enough to load eight or ten ships which sail to Liverpool and other ports of Great Britain. Mr. Shaw procures the logs for his saw mill from South-west River which falls into the Basin, and from the River St. John. The latter supplies the greater number. The timber is not large, but it is of good quality.

This is, I believe, the first attempt made in this part of the District of Gaspé, to manufacture timber for exportation. I am informed that about the head of the River St. John, yellow pine may be found in sufficient quantity to keep the mill at work for twenty years.

On the 28th, I gave orders to set sail. About nine a. m., I landed at Grande Grave, where there are fishing establishments belonging to Messrs. W. Fruing and Company, and to Mr. William Hyman. I there met with Mr. Paré, the proprietor of a fishing station at Côte St. George. These three establishments employ twenty boats and more than sixty men, who catch annually about 3000 quintals of cod-

fish. They also receive nearly 3000 quintals from the fishermen residing on the coast between the Peninsula and Cape Gaspé, who cure their fish themselves, having in the spring received advances of salt, fishing-tackle, provisions, &c. Most of this cod-fish is likewise shipped to foreign countries. I next put into Point St. Pierre, then into Malbaie, where I found seven schooners, two of which were Quebec pilot boats, and about 7½ p. m., arrived at Percé.

I here saw Mr. Philippe LeBoutillier who informed me La Canadienne was not required on that part of coast; and about 9 p. m., I gave orders to set sail for the Bay of Chaleurs.

The following morning about 6 a. m., we fell in with nearly sixty fishing boats off Grand River on their way to the Bank of Miscon with a fine north-westerly breeze. About 9 a. m., I landed at Pabos, where there is a settlement of fishermen, who own sixteen fishing boats. Nearly all of them pursue their craft on their own account, and receive advances from Mr. Raymond of Petit Pabos, to whom they carry their cod in the autumn.

The Gaspé Mining and Fishing Company, holding 183,000 acres of land, of which 50,000 is at Grand Pabos, 50,000 in the township of Cox, and the rest at Bonaventure, erected large and magnificent buildings, for the prosecution of fishing operations on the coast. They had also lumbering establishments and a saw-mill which gave employment to nearly 500 men, and greatly contributed to the encouragement of trade in this part of Canada.

But a few years after their establishment, they experienced considerable losses and broke up their works, in both departments, fishing and lumbering. Since that period, the fine buildings of this magnificent establishment have remained unoccupied, and the people who lived in that part of Pabos have gone elsewhere.—I am informed that the Company refuse to sell their lands, in lots of 50 or 100 acre, or else ask such prices for them as are far beyond the abilities of the fishermen en general to pay. Accordingly the district is inhabited by fishermen who do not meddle with agriculture. The land west of Pabos is, however, good in quality and capable of being converted into fine farms.

I next proceeded to Newport, situated four miles from Grand Pabos. Between these two places, the coast is on some spots low, with a fine sandy beach, in others high and precipitous. Half way is *Anse aux Canards* where fishing-boats find shelter.

At Newport Bay, which is sheltered from all winds except the south, are the fishing establishments of Mr. Charles Kelly, and Mr. Philip Hammond, which employ twenty fishing boats. These bring in about 2500 quintals of codfish. On arriving at Mackerel Point, which is the western boundary of the County of Gaspé, we find on islands near the mainland, several establishments, employing ten fishing-boats.

From Mackerel Point to Port Daniel, the coast is bold and safe. A vessel may keep within two cables' length, in sailing along shore. Port Daniel is a magnificent bay, enclosed by high wooded hills. It is about a mile and a half long, by a mile in width; and vessels of the heaviest burthen may, by keeping near the north shore of the bay, find good anchoring ground in six or eight fathoms, well sheltered from all winds except the south-east, which blows full upon it.

Three considerable streams empty themselves into Port Daniel, these are North and East Rivers, which join before reaching the sea, and West River. Ships cannot get into any of these rivers; but fishing boats go in loaded, and lie in perfect safety.

Mr. McPherson, the officer of customs at Port Daniel, whom I had the pleasure of meeting, informed me that at the commencement of the season, codfish had been abundant near the coast, and that a large quantity had been taken with capelin bait; but that towards midsummer the fishermen had been obliged to go to the bank of Miscon finding no more fish on the coast. The twenty-five fishing boats belonging to Port Daniel had taken from 100 to 120 quintals of codfish each.

Salmon nets are set at Port Daniel, and about 60 barrels of fish are taken.—

On one of the rivers likewise, lumbering is carried on. One saw mill had turned out three cargoes of deals and boards which had been sent to St. John's, Newfoundland.

The land is excellent in the neighbourhood of Port Daniel, and nothing is wanting to render this part of the County of Bonaventure a fine agricultural country, but active and intelligent husbandmen.

At six p. m., I returned on board, and we set sail for the Bay of Chaleurs, with an easterly breeze.

The following day, I landed at Bonaventure. I entered the river in my boat and found three schooners loading with codfish. The River Bonaventure, which has a long course, forms, just before it falls into the sea, a magnificent basin, where 30 schooners may anchor and remain sheltered from any wind. Below this it divides into several channels, of which one only is practicable for vessels drawing more than nine feet. There are now no large codfishing establishments at this place. Since the fish seem to have left the interior of the Bay of Chaleurs, the fishermen have usually gone to pursue their calling on the north shore, in Boule Bay and the Bay of Seven Islands. But if the codfishery is but little followed at this place, the herring fishery is carried on extensively. More than 3000 barrels of this fish are taken every year in the nets, spread along the shore, by the inhabitants between Bonaventure and Maria. However, the population of this section of the District of Gaspé are more devoted to agriculture than to fishing and seem to be in easy circumstances. The land is naturally fertile, and the sea weed cast upon the beach by the autumnal gales, furnishes abundance of manure.

An American house, established two years ago at Bonaventure, carries on a considerable business. Mr. Savage, the agent for this house, informed me that his exportations to the United States, in the present year, will amount to 3000 barrels of herrings, and more than 1000 quintals of codfish.

Towards noon, I returned on board, and at 5½ p. m. landed at Carleton. There I was informed that Mr. Verge, the Crown Lands Agent, was gone to the River Ristigouche, where there would be on the following day at the mission, thirty miles from Carlton, an exhibition of animals and of agricultural productions, which would be attended by the principal proprietors and farmers in that part of the County of Bonaventure, whom it would be desirable that I should meet. I forthwith took steps to attend. Having taken a pilot, I gave orders to sail as soon as possible, and on the 1st October we weighed anchor with a strong breeze from the east.

At 7½ a. m., we passed by Dalhousie, and at 10 a. m. cast anchor opposite to the Mission Church, just where the River Ristigouche ceases to be navigable. The exhibition was held on the Indian Lands near the Church.

It was not very large, as the bad state of the roads had prevented many of the inhabitants from going, but all classes both of animals and productions were represented and that very respectably. The cattle were of the purest English breeds.

The grain and roots were as large and as good in quality as we find them in the best cultivated parts of Canada. Messrs. Fraser and Busted, who are settled on the River Ristigouche, and Messrs. Verge and Mann of Carlton, informed me that the soil is fertile all along the River Ristigouche and Metapedia; and they are quite of opinion that if good roads were opened along their banks, settlements of farmers would be immediately formed who would find in the lumbering establishments on those two rivers a ready market for their produce, and good prices for their salted provisions at Campbellton, Dalhousie, Carlton, and New Carlisle.

The following day at two p. m. we weighed anchor; but were compelled by a calm to pass the night opposite Dalhousie. I was informed that since my last visit no vessels had come to discharge ballast, near the Canadian shore of the River Ristigouche.

On the 3rd I landed at Point Magouacha and proceeded to Carlton by land.—*La Canadienne* was delayed by the calm, and did not reach the roadstead at Carlton before 7, p. m.

In spring and autumn, a considerable herring fishery is carried on between Point Magouacha and Carlton. Nets are universally used, which method of fishing insures the fine quality of the fish. The quantity taken is estimated at nearly 2,000 barrels.

A salmon fishery is also carried on at Point Magouacha, Carlton, New Richmond, and several other places on the coast.

Six hundred barrels of this fish are computed to be taken on the Canadian shore between Bonaventure and the first rapids of the River Ristigouche. Cod formerly appeared in considerable quantities in Carlton Bay, and the inhabitants carried on the fishery on a large scale; but for twenty or thirty years past, it has become so scarce, that the fishermen have been driven to farming for a livelihood. This has been a fortunate circumstance for them, for the land round this part of the bay is very good.

Lumbering is carried on also at Carlton, and in its neighborhood: thirty cargoes of boards, shingles, laths, &c., are exported yearly from this place and Maria to Halifax, the greater part by Mr. John Meagher of Carlton.

On the 4th October we left Carlton and proceeded to New Carlisle. At Paspébiac the people were very busy shipping their codfish for Brazil, Spain and Italy. Eleven vessels were in the roadstead belonging to the houses of Robins & Co., and LeBoutillier & Brothers.

I went on board of a brig recently launched, built by Robins & Co., in their ship-yard here, under the direction of Mr. L. Bruce, ship-builder. The timber principally used in its construction was birch and tamarack, the principal timbers, as the stern, and the stern-posts were of English oak. The masts were mostly of Baltic pine. As this vessel is to be employed in the fish trade, everything has been done to make it staunch and durable, and at the same time, a fast sailer. It was the forty-fifth vessel built by the house at Paspébiac, and was certainly as fine a merchant-brig as ever was built.

On the 7th, in the evening, I arrived at Percé. The autumn fishery had commenced, and promised to be very successful in many places on the coast. We fell in with the largest number of fishing boats off Grand River.

On the 8th I visited the fishing establishment at Malbaie and Point St. Pierre. All were engaged in shipping the dry cod. Two vessels were loading at Malbaie, and one at Point St. Pierre. No foreign fishermen had been seen on the coast for several weeks.

On the 10th we set sail for the Magdalen Islands.

On the 11th, in the morning, we cast anchor in the bay of Plaisance. At Amherst Harbor there were five schooners, belonging to the Magdalen Islands, preparing to set sail for Halifax with cargoes of codfish, and four at Hâvre aux Maisons, taking in fish for the Quebec market. I visited all the fishing establishments, and found quiet and good order everywhere.

The cod fishery had been successful at the different points on the coast. A great many fish were still taken on the south side of Amherst Island, and at L'Étang du Nord. The fishermen whose vessels had been lost at Green Island, had succeeded in getting back to the Magdalen Islands in schooners belonging to Hâvre aux Maisons, but with very little fish. It was thought, however, that they had enough to enable them to procure their provisions for the winter. I had the pleasure of attending a meeting of the Municipal Council of the Magdalen Islands, at which by-laws were passed for the preservation and protection of the important fisheries of the Bay of Plaisance. I annex to this report a copy of those by-laws, given to me by Mr. Delisle, Secretary-Treasurer of the Municipality.

It will be seen that, by a resolution of the Municipal Council, I am requested to represent to the Government that it is highly important that the Government schooner should be at the Magdalen Islands, during the herring fishery, at the beginning of May.

I stated, in my report of last year, my belief that the 10th May was the proper period at which *La Canadienne* should arrive in the Bay of Plaisance; but, since the Municipality of the Islands have passed by-laws to regulate the fisheries, it will be necessary that the magistrate in command of the Government vessel, should arrive at Amherst about the 1st June at latest, in order that he may take measures to enforce the by-laws in question.

On the 15th we left the Bay of Plaisance to proceed to the coast of Gaspé. In rounding Entry Island with a strong north-west breeze, we fell in with fifteen schooners of the United States, at anchor under the lee of the Island. These were engaged in fishing for mackerel off the Magdalen Islands and near the Island of Cape Breton.

During the afternoon of the 16th, the gale obliged us to come to an anchor south of Amherst Island, together with three vessels bound for Quebec. At this part of the Island there are three places at which the cod fishery is carried on with energy: the Basin, the Mill, and Cabin Cove. Fifty boats are engaged in it, each with two hands, and the aggregate take is about 5,500 quintals of codfish.

The dogfish abounds near the coast of this part of Amherst, and is caught for its excellent oil, which sells at the same price as seal oil. I learned that about 6,000 gallons of this oil are made in the Magdalen Islands. Occasionally, in the months of March and April, the field-ice hangs around the west point of Amherst Island, and near the rock called *Corps Mort*, and the inhabitants of the coast take the young seals which are often found on it in great numbers.

On the 17th, in the evening, we weighed anchor, and the next day at 9½ p m. arrived at Percé. I paid my first visit to the fishery establishments at this place, the most considerable being that of Mr. John Le Boutillier at north-east Cove, and that of Robin & Co. at south-west Cove. More than 300 men are employed about these establishments; of whom two-thirds are engaged in the cod fishery off Percé, and on the bank of Miscon, and the others in the buildings, in curing the fish. There is yearly sent from Percé to foreign countries, or to Quebec and Montreal, nearly 25,000 quintals of dried and green codfish. No place on the coast of Gaspé is better situated for the cod fishery than Percé. At the commencement of the season a great abundance of the fish is found either in the strait formed by the main land and the Island of Bonaventure, or round the Island, or on certain banks, lying only 9 or 10 miles from the shore.

Towards the close of the summer, and before the autumn fish make their appearance, it is easy for the fishermen from this place to proceed to the bank of Miscon, where, I am assured, there is always a great abundance of very fine cod. The capelin, herring, mackerel and squid, which are used as bait for cod, may almost always be taken readily in the neighborhood of Percé. It would appear, therefore, that Percé ought to have become the most important fishing station on the shores of the Gulf of St. Lawrence; and, doubtless, it would have been so, had it possessed a harbor capable of receiving and sheltering the vessels bringing salt, fishing tackle, provisions, &c., or coming to load with the fish exported thence to foreign countries or places within the Province. But, unfortunately, the roadstead at Percé, where vessels are forced to anchor in the open sea, is sheltered only from the land winds. Those blowing on shore raise so heavy a sea, that it is almost impossible for any ship to hold in the spring and autumn, even with the strongest cables and the heaviest anchors.

In summer, it is possible to remain at the anchorage, with light winds from seaward; but at such times it is very difficult to lay boats alongside the wharf on account of the surf. Whenever a heavy gale blows from seaward, the fishermen are obliged to haul their boats high and dry on the beach. It is easy to imagine the difficulty which they experience in placing boats of 18 or 22 feet keel and 7 feet beam very substantially, and therefore, very heavily built, beyond the reach of the breakers, and the loss of time occasioned by such exertions.

In the present state of things, therefore, it is improbable that Percé will ever become a very important seaport.

Far different, however, would be the case if the Government should cause to be constructed, in one of the two Coves, a jetty of crescent form, behind which fifty or sixty vessels of all sizes might be moored. I am informed that such a work offers but few difficulties, as all the necessary materials might be found in the neighborhood of Percé. With a harbor, accessible at all times, and by all kinds of vessels, Percé would become the great mart for the fish trade along the Canadian coast of the Gulf of St. Lawrence.

It would become, moreover, a harbour of refuge in the great storms from the east and south-east, for vessels in the Gaspé coasting trade, and for those which, bound from Quebec to the Lower Provinces, are wind-bound off Cape Bonaventure.

This suggestion relative to the erection of a jetty at Percé is, I feel sure, deserving of the attention of the Government, and I venture to hope that it may receive some consideration.

On the 20th, in the morning, I visited Malbaie and Point St. Pierre, and then proceeded to Gaspé Basin. At the latter place the business of loading vessels with dry cod fish for Cadiz, Naples, &c., was proceeding briskly. About half the vessels loading belonged to the island of Jersey, the rest to different points along the coast of Gaspé.

It is now proper to make a few observations on the whale fishery, which is carried on in the Gulf of St. Lawrence by fishermen who are settled in Gaspé Basin and the neighbourhood.

Eight schooners, of which I here give the names, are employed in this undertaking:

NAMES.	TONNAGE.	OWNERS.
Defiance .....	65	W. Annett & Co.
John Stewart.....	76	Charles Stewart.
Breeze .....	45	Harbout and Miller.
Violet.....	39	Henry Suddard.
Elizabeth.....	52	John Le Boutillier.
H. R. S .....	59	William West.
Perseverance .....	69	Coffin and Annett.
Rambler.....	50	Wm. Baker & Co.
	455 tons.	

These vessels, manned by eight or ten hands each, and carrying two boats called whale Boats, are fitted out in Gaspé Harbour, principally at the establishment belonging to Mr. John LeBoutillier. The whale fishery commences in the Gulf about the 1st June.

Whales are met with in almost all the lower parts of the River and the Gulf of St. Lawrence, but more especially on certain banks to which they resort in shoals, doubtless because they find abundant food in those places.

Among the species of whales which frequent the Gulf of St. Lawrence four are most remarkable: the black whale, the humpback, the sulphur-bottom, and the fin-back.

The black whale, which is by far the most valuable, is unfortunately not the most numerous; a few only are met with. In seven or eight years I believe no more than four or five have been killed on our coasts. The humpback, yielding

from ten to eighty barrels of oil, is found in considerable numbers in the Gulf of St. Lawrence, and is easily killed; the capture of this species is the principal object of the vessels fitted out at the port of Gaspé. The sulphur-bottom and the fin-back are very difficult to take, on account of their rapid movements when they feel the harpoon. Accordingly, I am informed that it is always necessary to wound them with the lance before harpooning them; moreover they yield comparatively very little oil.

The most favorable places in the Gulf for the pursuit of the whale, are the Mingan Shoals, situated between North Cape in the island of Anticosti, and the river St. John on the north shore, and St. John's Shoal lying in a channel in the straits of Belleisle, between St. John's Island on the coast of Newfoundland, and Great Mecatina Island on the coast of Labrador. According to Mr. Stuart, one of the most experienced persons engaged in the whale fishery of Gaspé, whales pass the winter on the north-east coast of the United States, and do not resort to the Gulf of St. Lawrence before the end of May. Nearly all the females have at that time a young one, which they guard with great affection, and defend furiously when it is in danger. Accordingly our fishermen do not venture to attack a young whale when its mother is at hand to defend it.

I am told that the number of whales resorting to the Gulf of St. Lawrence has perceptibly diminished within a few years; more especially has this been remarked since the unfortunate adoption of the habit of using the Congreve rocket gun in killing them, by which method a great number are destroyed to no purpose.

Our fishermen, making use only of the harpoon, succeed in killing only a limited number of whales yearly, which they almost always succeed in securing and towing to their vessels, where they cut them up. This is not the case with those persons who use the rocket gun.

The American whalers, who for two years past have come to the whale fishing in the Gulf of St. Lawrence, with two schooners, have, according to the report of our fishermen engaged in the same pursuit, killed, with the guns above mentioned, from thirty to forty whales yearly, and have not succeeded in securing more than six or eight.

This result is easily explained. The rocket being thrown with great force by means of the gun, explodes in the body of the whale, and produces so destructive an effect in the viscera, that the wounded animal expires almost instantaneously and sinks to the bottom. It is only when the whale is loaded with fat, or has been merely wounded, that it can be towed by means of a harpoon to the side of the vessel; in all other cases it is lost.

It is true that the evil carries its own cure; that is to say, in a few years the abortiveness of this method of conducting the fishery will be generally felt, and it will be discontinued; but in the meantime there will be made, almost without any profit, so great a havoc among the whales, that they will ultimately disappear altogether from the Gulf of St. Lawrence, as within about fifty years the walrus or sea-horse has disappeared. This animal, at the time of the discovery of Canada, and even eighty or a hundred years ago, swarmed in immense herds on the coasts of the Magdalen Islands and of the Bay of Chaleurs.

It is, in my opinion, of some importance, if not a violation of treaties existing between Great Britain and the United States, that a law should be passed prohibiting, under heavy penalties, the use of Congreve rocket guns, or of any other instrument in fishing which may cause the destruction of a great number of animals without a profitable result.

On the 21st October I sat, with Mr. John LeBoutillier, on a case of assault and battery. One of the seamen of "La Canadienne" acted as constable. I also took on board, in order to give them a passage to Quebec, twelve sailors of the bark "Queen," of Hull, which was wrecked on the 26th September, on the island of Anticosti; and, having made my acknowledgments to Mr. Belleau, the Collector of Customs at Gaspé, whose zeal in the performance of his duty, is too well known,

for the useful information which he had communicated to me, relative to the fisheries carried on, on the coast of Gaspé, I gave orders to make sail for Quebec.

On the 22nd we were compelled, by a heavy gale from the north-west, to lay to off Cape Rosiers.

On the 23rd, when off Magdalen River, we took on board a pilot from the bark "Elizabeth," which was obliged, by bad weather and the lateness of the season, to put into the harbour of Richibuctoo, and on the morning of the 25th we cast anchor in the harbour of Quebec, after one of the shortest passages ever made, in a sailing vessel between the island of Anticosti and Quebec.

In perusing the preceding report of the cruise of *La Canadienne* in the Gulf of St. Lawrence for the protection of the fisheries and of the public revenue, and for the maintenance of peace and good order on the coast in general, and particularly in the harbours and roadsteads where the fishermen are assembled in great numbers, it will be seen that the Government Schooner was absent from Quebec, during the season of 1856, 165 days, that she arrived at Percé on the 16th May, and left Gaspé Basin on the 21st October, and that, consequently, she was cruising on the coasts of the Gulf of St. Lawrence 158 days.

Of the 165 days, during which the cruise continued, *La Canadienne* was about 108 days in the principal harbours and the most important fishing grounds, of the coast of Gaspé, of the coast of Labrador, and of the Magdalen Islands.

The remaining 57 days were employed in sailing from one place to another, along a coast 700 miles in extent. The several places were visited as follows:

The Magdalen Islands, five times.

North Shore and Labrador, twice.

Bay of Chaleurs, three times.

Bay of Gaspé, three times.

In order to visit all these places, it was necessary to sail a distance exceeding 6000 marine miles, reckoning the courses taken in tacking, or 4857 marine miles in a right line. This makes an average distance exceeding 100 miles per day.

And now, if the Government will deign to take the following facts into consideration:

That the Government Schooner is a sailing vessel.

That, in the summer season, calms are frequent in the Gulf of St. Lawrence.

That the fogs, which generally come up with the south-west wind, often obliged us to lie under a foresail.

That frequently, during the night, we were obliged to make useless tacks, when we were near a dangerous coast, on which there was no light house.

I trust it will be seen that it was impossible to do more for the protection of the fisheries, and of Canadian interests, in the Gulf of St. Lawrence.

On all occasions when I met the public functionaries of the coast of Gaspé and of the Magdalen Islands, I tendered my services and those of the armed force under my orders. I likewise put in as frequently as possible at Percé, (where the mails from the different villages on the coast intersect each other going and coming) in order that those persons who needed my assistance might find an easy means of communicating with me.

It was my constant endeavor to preserve the strictest discipline on board *La Canadienne*, and I aimed at all times to give to the schooner that look of a vessel of war which is absolutely necessary to impress seamen and fishermen, both British and foreign, with respect, no law but that which is enforced by an armed vessel being understood or respected by them.

I required all the sailors attached to *La Canadienne* to appear, when on shore in uniform, and so to conduct themselves that they might inspire the inhabitants of the coast with respect and confidence.

Whenever we happened to be, on Sunday, in ports where there were churches, I attended mass with all the seamen who could be spared from the service, in full dress, under the orders of the gunner of the vessel.

In short, I did everything to give LaCanadienne that respectability of character, if I may be permitted to use the term, without which it would be almost impossible for the magistrate in command to enforce the laws and regulations relating to the fisheries, and to maintain peace and good order on our coasts and in our seaports.

I am happy in being able to say, that within my knowledge, not a single depredation or act of spoliation has occurred on our coasts, as in times past; that our fishermen have no where been molested by foreigners; and that there has been no disturbance in any port or roadstead to which either British or foreign fishermen are wont to resort in numbers.

In concluding, I consider it a point of duty that I should add a few words relative to the necessity of passing a special law for the fisheries of the coast of Labrador, and particularly for the sedentary seal fishery, establishing in a permanent manner, the limits of each fishery, and determining how near to such limits any fishermen, whether British or others, carrying on other kinds of fishing, may of right approach.

The most eligible measure to settle this question would perhaps be the appointment of several Commissioners, selected from among the most experienced fishermen on our coast, or on the coast of Newfoundland, who should, together with the Magistrate, visit all the fishing stations, and assign their limits.

With respect to the fisheries on the coast of Gaspé and the Magdalen Islands, where Municipal Councils are organized, it appears that it would be better to leave to them the business of making by-laws and regulations for the preservation of their fisheries, most of the members being owners either of fishing establishments, or of vessels employed in the fisheries.

A still better plan, would be the passing of a general law to regulate the fisheries throughout the whole Province, and to authorize the Governor-General in Council to make by-laws, on the recommendation and suggestion of the Municipal Councils of Counties where fisheries are carried on, or of the officers charged with the superintendence and protection of the fisheries.

The whole respectfully submitted.

(Signed,)

P. FORTIN.

EXTRACTS from the Log Book kept on board *La Canadienne* during the season of 1856.

## MAY.

- 13. Left Quebec.
- 16. Arrived at Percé.
- 17. Left Percé.
- 21. Arrived in the Bay of Plaisance.

## JUNE.

- 13. Left the Magdalen Islands.
- 15. Arrived at Percé at 11 a.m.
- 16. At Percé, at Point St. Pierre, 9 a.m.
- 17. Arrived at Gaspé Basin.
- 19. Left Gaspé Basin. At Point St. Pierre.
- 20. At Percé. Sailed for the Magdalen Islands.
- 22. Amherst Harbour. Set sail for Gaspé Basin.
- 24. Arrived at Percé at 10½ p.m.
- 25. Arrived at Gaspé Basin.

## JULY.

- 2. Left Gaspé Basin. At Percé at 1 p.m.
- 3. Set sail for the Bay of Chaleurs.
- 5. At Carlton.
- 7. At New Carlisle.
- 8. At Paspébiac.
- 9. At Percé.
- 11. Set sail for Labrador.
- 12. At the East Point of the Island of Anticosti.
- 13. At Natashquan at 10 a.m. Left at 5 p.m.
- 15. At Mingan at 11 a.m.
- 16 & 17. Contrary winds. Engaged in taking in wood and water.
- 18. Left Mingan at 5½ a.m. Anchored at Point Esquimaux at 8 a.m. Fog and contrary winds.
- 19. Contrary winds.
- 20. Weighed anchor.
- 24. Arrived at the *Anse aux Blancs Sablons*.
- 27. Left the *Anse aux Blancs Sablons*.
- 28. At La Tabatière, Mutton Bay and the Whale's Head.

## AUGUST.

- 2. Arrived at Percé.
- 4. Set sail for the Magdalen Islands.
- 7. At *Havre aux Maisons* and Amherst Harbour.
- 10. Set sail for Byron Island.
- 12. At *Havre aux Maisons* and Amherst Harbour.
- 15. At Percé 10 a.m.
- 17. At Island of Bonaventure.
- 19. At Cape Cove.
- 20. At Coin du Cap.

- 21. Sailed for the Bay of Chaleurs.
- 22. At Carleton and Dalhousie.
- 24. At Carleton.
- 26. At New Carlisle and Paspébiac.
- 27. At Paspébiac, Grand River, *L'Anse du Cap* and Percé.
- 28. Percé, Point St. Pierre and Cape Rosiers.
- 29. At Grand Etang, Fox River and Griffin Cove.
- 31. At Shelldrake River, on the North Shore.

## SEPTEMBER.

- 1. At Mingan.
- 3. At Natashquan.
- 5. At *L'Anse des Dunes* in Bradore Bay, and *L'Anse aux Blancs Sablons*.
- 7. Set sail from *L'Anse aux Blancs Sablons*.
- 8. At St. Augustin.
- 12. At Bird Islands.
- 13. At the Magdalen Islands and Cape North, where the bark *Ethelred* was wrecked.
- 14. At *Havre aux Maisons* and Amherst Harbour.
- 18. Left Amherst Harbour.
- 20. Arrived at Grand River 6 p.m.
- 21. At Percé, at Point St. Pierre and *Banc de Sable*.
- 23. At Gaspé Basin.
- 28. At *Grande Grave*, Point St. Pierre, Malbaie and Percé.
- 29. At Pabos, at Newport and Port Daniel.
- 30. At Bonaventure and Carlton.

## OCTOBER.

- 1. At Dalhousie, at *La Mission* and Ristigouche.
- 2. At Dalhousie.
- 3. At Point Magouacha, *Rivière Nouvelle* and Carlton.
- 4. At Carlton and New Carlisle.
- 5. At Paspébiac.
- 6. Left Paspébiac at 11 a.m.
- 7. At Grand River.
- 8. At Percé, Malbaie and Pointe St. Pierre.
- 9. At Malbaie and Percé.
- 10. Set sail for the Magdalen Islands.
- 11. Arrived at the Bay of Plaisance.
- 13. At Amherst Harbour.
- 14. At *Cap aux Meules*.
- 15. Left *Cap aux Meules*.
- 16. Anchored South of Amherst Island.
- 17. At the Mill, Magdalen Islands, set sail at 7 p.m.
- 19. At Percé, Malbaie and Point St. Pierre.
- 20. At Malbaie, Point St. Pierre and Gaspé Basin.
- 21. At Gaspé Basin, set sail for Quebec at 2 p.m.
- 25. Arrived at Quebec at 5 a.m.

DISTANCES run by the Government Schooner *La Canadienne* during the season of 1856, from 13th May to 25th October.

	Marine Miles.		Marine Miles.
From Quebec to Percé.....	377	From Carleton to Dalhousie.....	10
From Percé to the Bay of Plaisance.....	146	From Dalhousie to Carleton.....	10
From Amherst Harbour to Hâvre aux Maisons three times.....	72	From Carleton to New Carlisle.....	33
From the Bay of Plaisance to Percé.....	146	From New Carlisle to Paspebiac.....	4
From Percé to Gaspé Basin.....	28	From Paspebiac to Grand River.....	44
From Gaspé Basin to Percé.....	28	From Grand River to Cape Cove.....	6
From Percé to the Bay of Plaisance.....	146	From Cape Cove to Percé.....	8
From the Bay of Plaisance to Percé.....	146	From Percé to Cape Rosiers.....	24
From Percé to Gaspé Basin.....	28	From Cape Rosiers to Grand Etang.....	30
From Gaspé Basin to Percé.....	28	From Grand Etang to Fox River.....	18
From Percé to Paspebiac.....	55	From Fox River to Griffin Cove.....	5
From Paspebiac to Carleton.....	37	From Griffin Cove to Shelldrake River...	84
From Carleton to New Carlisle.....	33	From Shelldrake to Mingan.....	36
From New Carlisle to Paspebiac.....	4	From Mingan to Natashquan.....	85
From Paspebiac to Percé.....	55	From Natashquan to <i>L'Anse aux Blancs Sablons</i> .....	206
From Percé to East Point of the Island of Anticosti.....	128	From <i>L'Anse aux Blancs Sablons</i> to St. Augustin.....	56
From East Point of Island of Anticosti to Natashquan.....	65	From St. Augustin to Grand Mecatinna...	24
From Natashquan to Mingan.....	85	From Grand Mecatinna to East Point of Anticosti.....	150
From Mingan to Natashquan.....	85	From East Point of Anticosti to the Bay of Plaisance.....	128
From Natashquan to <i>L'Anse aux Blancs Sablons</i> .....	206	From the Bay of Plaisance to Grand River	150
From <i>L'Anse aux Blancs Sablons</i> to Grand Mecatinna.....	77	From Grand River to Percé.....	12
From Grand Mecatinna to Cape Whittle	58	From Percé to Gaspé Basin.....	24
From Cape Whittle to East Point of the Island of Anticosti.....	92	From Gaspé Basin to Percé.....	24
From East Point of the Island of Anticosti to Percé.....	128	From Percé to the Mission.....	120
From Percé to the Bay of Plaisance.....	146	From the Mission to Percé.....	120
From the Bay of Plaisance to Byron Island and back.....	96	From Percé to Point St. Pierre and back	24
From the Bay of Plaisance to Percé.....	146	From Percé to the Bay of Plaisance.....	146
From Percé to Carleton.....	92	From the Bay of Plaisance to Percé.....	146
		From Percé to Gaspé Basin.....	24
		From Gaspé Basin to Cape Gaspé.....	16
		From Cape Gaspé to Quebec.....	357
			4857

## DISTANCES between various places in the River and the Gulf of St. Lawrence.

	Marine Miles.		Marine Miles
<b>NORTH SHORE.</b>			
From Quebec to Bic.....	140	From Gaspé Basin to Point St. Pierre...	18
From Bic to Pointe des Monts.....	80	From Point St. Pierre to Percé.....	8
From Pointe des Monts to the Seven Islands.....	64	From Percé to Paspébiac.....	55
From the Seven Islands to Mingan.....	91	From Paspébiac to Carlton.....	87
From Mingan to Natashquan.....	85	From Carlton to Dalhousie.....	10
From Natashquan to Cape Whittle.....	71	From Dalhousie to the Mission.....	18
From Cape Whittle to Grand Mecatinna.....	58	From Percé to the Mission.....	120
From Grand Mecatinna to <i>L'Anse aux Blancs Sablons</i> .....	77	<b>MAGDALEN ISLANDS.</b>	
From Quebec to <i>L'Anse aux Blancs Sablons</i> .....	668	From Percé to the Bay of Plaisance....	146
		From Amherst Harbor to Havre aux Maisons.....	12
<b>SOUTH SHORE.</b>			
From Quebec to Bic.....	140	From Amherst Harbor to Bird Islands.....	48
From Bic to Cape Chat.....	95	From Amherst Harbor to East Point of the Island of Anticosti.....	128
From Cape Chat to Cape Gaspé.....	122	From Amherst Harbor to Cape Whittle.....	198
From Cape Gaspé to Percé.....	20	From Amherst Harbor to <i>L'Anse aux Blancs Sablons</i> .....	338
From Quebec to Percé.....	377	<b>ISLAND OF ANTICOSTI.</b>	
From Cape Gaspé to Gaspé Basin.....	15	Length of the Island of Anticosti.....	
		From East Point of the Island of Anticosti to Percé.....	

GASPÉ BASIN, 11th June, 1856.

P. FORTIN, Esquire, J. P.  
&c. &c. &c.

SIR,—I have to ask your assistance to enable me to have executed a writ of seizure and attachment issued out of the Superior Court of the District of Gaspé, in a case wherein J. & J. Mitchell of Montreal, (acting through me as their duly constituted Attorney) are Plaintiffs, and Mr. Eden, Lloyd's agent and others are Defendants. I have a bailiff here with me, but they oppose force and numbers to law, in fact I find them a most lawless set, and blame Lloyd's Agent for all the trouble and annoyance I have had. Mr. Winter, to whom I have written by this mail, the Prothonotary of the Court, will, I have no doubt, give you any information you may require in this matter, and if necessary, invest you with full power to act on his behalf.

If you can make it convenient to come so far as the Basin, you will render an essential service to the underwriters and owners of the Brigantine "Piscator" and cargo, wrecked last fall at Anticosti, confer a great boon on the whole coast and district of Gaspé, and by your presence and assistance, cause the majesty of the law to be respected. In the hope that you will avail yourself of an opportunity of again proving that the schooner LaCanadienne and her commander are of great and essential service to the country, as well in the protection of wrecked property, as of the coasts and fisheries, believe me with kind regards,

My dear Sir,

Yours, &amp;c. &amp;c. &amp;c.,

C. W. JONES,

Acting for shippers and underwriters,  
of Cargo of "Piscator" and vessel.

ST. ANNE'S, 20th June, 1856.

P. FORTIN, Esquire, J. P.  
&c. &c. &c.

H. M. S. La Canadienne.

SIR,—I set off to day at 4½ A. M., for New Carlisle, in order to take out a writ of *saisie en revendication* and of *saisie arret*. As I expect resistance from certain parties of Gaspé Basin with whom I have already had dealings, I should be very glad of your presence here on my return.

I shall be at Percé on Monday evening at the latest.

I am Sir,

Your humble servant,

(Signed,) C. W. JONES.

GASPÉ BASIN, 28th June, 1856.

P. FORTIN, Esquire, J. P.  
&c. &c. &c.

DEAR SIR,—Having closed my business here and being about to leave, I cannot do so without thanking you in the name of the underwriters of the Brigantine "Piscator" and of the shippers of the cargo by that vessel, for the prompt and efficient services you have rendered me, while acting as their agent here. Although I have not succeeded in recovering the whole of the property which I came to look after, there being no competent authority here, to enforce the writ of seizure which I held at the time when the sale of the goods took place, if I except Mr John Eden, Lloyd's agent, at whose instance the wrecked goods were sold, and Mr. Penhard, who had a claim on them for storage, both of them magistrates, and present when the Bailliff attempted to seize; yet, Sir, I am quite satisfied, had the parties unlawfully detaining the goods, suspected you were so near at hand, that I should have had no difficulty whatever, and I am fully persuaded, that at the time I made the second seizure and recovered the balance of the goods and ship's materials, these parties were convinced you were not far off, and having been here already at my request, unfortunately too late, they no doubt surmised you might possibly be back again, to enforce the law, and if necessary deal with them in a summary manner.

I have no hesitation in affirming that the proximity of "La Canadienne" has been of essential service to me, and that her presence on this coast has a most salutary effect in repressing acts of piracy and lawlessness, such as the present.

In conclusion, Sir, I shall be very happy at any time to bear testimony to the efficiency of the vessel under your command, and with many thanks for your kindness and intentions in my behalf, believe me,

My dear Sir,

Yours, very respectfully,

C. W. JONES.

Acting for underwriters,  
and shippers "Piscator."

PERCÉ, 2nd July, 1856.

P. Fortin, Esq.,

Schooner "Canadienne."

SIR,—Since I had the pleasure of speaking to you this morning, I have been informed that two or three of our men, who are engaged to us for the season, had plotted together and meant to give us the slip during the night, on board an American schooner now lying at anchor in this road.

I have reason to believe that said information may prove too true, because the master of said schooner was observed with our men during the forenoon stating that he was short of men on board the schooner, offering high wages for those who would join him, which is an inducement for some to run away from us.

Therefore the protection you may be able to render us in preventing such occurrence, I respectfully claim of you.

I remain, Sir,

Your humble and obedient servant,

EDWARD DELAPERELLE,

Agent for Chas. Robin & Co.

MUNICIPALITY, MAGDALEN ISLANDS, October 15th, 1856.

SIR,—By order of the Municipal Council, I beg to hand you copy of By-laws for the regulating the fisheries, which they hope you will be kind enough to lay before the Government of Canada on your return to Quebec, and also hope you will use your best endeavours, that they may have the advantage of your valuable services in carrying them into effect next year.

I am, Sir,

Your most obedient servant,

CHARLES DELISLE.

Sec. Treas.

Capt. Fortin,  
Schooner "La Canadienne."

COPY of By-laws passed at a Special Meeting of the Municipal Council of the Magdalen Islands, October 15th, 1856.

Resolved, that the following By-laws be passed for the regulating of the fisheries.

Carried unanimously,

That it shall not be lawful for any persons or persons to set any net or nets, for the taking of mackerel or herring, to the eastward of a line drawn from the north-west end of the cape, forming the entrance to Amherst Harbour, to Grindstone Cape, on Grindstone Island, in order to allow the fish a free passage into the Bay, and leave a free entrance for vessels into the Harbour.

Provided also, that it shall be lawful to set nets from the north point to the east point of Entry Island at a distance not exceeding one mile from the shore, also from opposite the Chapel at House Harbour to the East Cape of the Magdalen Islands at a distance not exceeding one mile from the shore.

That nets shall not be set nearer to each other than to allow not less than fifty clear feet from the tail of the net or nets (or end furthest from the mooring buoy,) so that the net or nets may be enabled to swing with the tide or wind perfectly clear of each other.

That all ballast brought in vessels to Amherst Harbour shall only be thrown out at a place or places appointed by the Municipal Council.

That no vessel or vessels shall be allowed to anchor to the north-east of a mark, buoy or buoys, placed off the entrance of the inner harbour, so as not to prevent free passage into the said inner harbour.

That all infractions of the aforesaid By-laws shall be under a penalty not exceeding five pounds currency.

That to enable the Municipal Council to enforce the said By-laws, Captain Fortin be requested to lay before the Government the necessity of the early appear-

ance of the Cutter *La Canadienne* in the Spring, say in time for the commencement of the herring fishing at the opening of the navigation, and to remain until the termination of the mackerel fishing, as without assistance they, the said Council, would not be able to put said By-laws in operation.

That *La Canadienne* was here during the mackerel fishing, but not early enough for the catch of herring, being the time when most vessels come to these Islands, and assistance is most required.

I certify that the above is a true copy from the minutes of the Board.

CHARLES DELISLE,  
Sec. Treas.

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MAGDALEN ISLANDS, 15th October, 1856.

SIR,—On your departure to lay up the Government schooner *La Canadienne*, in her winter quarters, we, the undersigned magistrates and notables of the Islands, beg to state that your vessel here, during the summer months, has been of great service in the maintaining of order, and enabled us, the magistrates especially, to carry out the administration of the laws as from time to time called upon so to do, which we should not have been able, had we not had some efficient force to support us. And we beg also to hope that the Canadian Government will continue the protection afforded by your schooner in future years.

We remain, sir,

Your most obedient servants,

CHARLES DE LISLE, J. P.

JOHN J. FOX, J. P.

Mayor Municipality,

J. B. F. PAINCHAUD, N. P.

JOHN FONTANA, J. P.

CHARLES SUTHERLAND,

ED BORNE,

CHARLES BOURGUE, J. P.

ALEXANDER FLOCKHART,

FELIX BOYLE, Clerk,

W. JOHNSTON.

To Capt. Fortin,

Gov. Sch'r "*La Canadienne*."

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A STATEMENT by John Le Boutillier, Esquire, of Gaspé Basin, Member of Parliament for the County of Gaspé, showing the average catch of fisheries carried on on the coast of the District of Gaspé and at the Magdalen Islands, for each of the three last years; also, the number of vessels, boats and men employed in the said Fisheries, irrespective of some fifty sail of coasters and forty sail of sea-going vessels employed in transporting the produce of our Fisheries to the various markets:

40 schooners,	400 men,	catch	17,000 quintals	codfish.....	} 140,000 qts., value £84,000	0	0	
1200 boats,	3600 " "	"	123,000	" ".....			0	0
7 whalers,	100 " "	yield,	45,000	gallons oil.....	"	5,625	0	0
		cod oil,	112,000	" ".....	"	14,000	0	0
25 sealers,		seal oil,	48,000	" ".....	"	6,000	0	0
				seal skins.....	"	1,000	0	0
			50,000	barrels herrings.....	"	30,000	0	0
			1,200	" salmon.....	"	3,600	0	0
			3,000	" mackerel.....	"	3,000	0	0
			100	" salmon trout.....	"	250	0	0
			100	" shad.....	"	200	0	0
			300	" halibut.....	"	300	0	0
			150	" cod sounds and tongues.....	"	300	0	0
						<u>£148,275</u>	<u>0</u>	<u>0</u>

B. N.—Lobsters may be taken in any quantity, but the demand for export is comparatively *nil*.

(Signed,)

JOHN LE BOUTILLIER.

A TABLE, shewing the number of vessels which arrived from Sea, in the ports of Gaspé, New Carlisle and Amherst.

IN THE YEAR 1854.

PORTS.	VESSELS.	TONNAGE.	MEN.
Gaspé,.....	41	4663	247
New Carlisle,.....	54	5225	310
Amherst,.....	104	4223	519
	199	14111	1076

IN THE YEAR 1855.

PORTS.	VESSELS.	TONNAGE.	MEN.
Gaspé,.....	55	5133	301
New Carlisle,.....	69	6737	370
Amherst,.....	106	6087	548
	230	17957	1219

## IN THE YEAR 1856.

PORTS.	VESSELS.	TONNAGE.	MEN.
Gaspé,.....	62	7294	380
New Carlisle,.....	94	8941	460
Amherst,.....	131	6784	629
	287	23019	1469

A TABLE, shewing the number of vessels which sailed from the ports of Gaspé, New Carlisle and Amherst, in the year 1854.

## IN THE YEAR 1854.

PORTS.	VESSELS.	TONNAGE.	MEN.
Gaspé,.....	38	4781	248
New Carlisle,.....	45	4662	298
Amherst,.....	112	9510	592
	195	18953	1138

## IN THE YEAR 1855.

PORTS.	VESSELS.	TONNAGE.	MEN.
Gaspé,.....	40	4388	251
New Carlisle,.....	61	6286	382
Amherst,.....	106	4080	561
	207	14754	1191

## IN THE YEAR 1856.

PORTS.	VESSELS.	TONNAGE.	MEN.
Gaspé,.....	50	6561	344
New Carlisle,.....	77	8787	484
Amherst,.....	153	6025	824
	280	21373	1652

Tables, shewing the value of Articles exported and imported, and the amount of the Revenue in the three Canadian Ports of the Gulf of St. Lawrence :

## PORT OF GASPÉ.

YEAR.	EXPORTS.	IMPORTS.	REVENUE.
	£	£	£
1851	35434	13337	1708
1852	32858	9180	1036
1853	32667	10336	1676
1854	30058	15413	1488
1855	38273	14902	1135
1856	44178	15959	1126

## PORT OF NEW CARLISLE.

YEAR.	EXPORTS.	IMPORTS.	REVENUE.
	£	£	£
1851	20025	13419	1274
1852	26216	16912	1554
1853	29942	16960	1600
1854	26857	20098	1706
1855	34758	28580	2176
1856	36466	29558	2528

## PORT OF AMHERST.

YEAR.	EXPORTS.	IMPORTS.	REVENUE.
	£	£	£
1851	4891	1421	111
1852	11096	3246	303
1853	14597	3176	334
1854	19205	4576	424
1855	15322	7400	373
1856	20738	8553	342

A Table, shewing the value of Fish exported from the three ports of Gaspé, New Carlisle, and Amherst, in the years 1855 and 1856 :

1855.	1856.
£ s. d.	£ s. d.
78819 10 3	81922 13 7

A Table, shewing the value of Produce exported from the Canadian coast of Labrador :

	BARRELS.	QUINTALS.	GALLONS.	VALUE.
Salmon .....	500	.....	.....	£1750
Cod-fish .....		8000	.....	6000
Herring .....	2000	.....	.....	3000
Cod Oil .....	180	.....	.....	1000
Seal Oil.....	.....	.....	30000	5250
Seal Skins.....	.....	.....	.....	900
Furs.....	.....	.....	.....	12500
				£30400

YEAR 1855.

A Table, shewing the quantity of Fish exported from the ports of Gaspé, New Carlisle, and Amherst (Magdalen Islands) :

DRIED FISH.

Ports.	Quintals.	Value.	Exported to Great Britain.	Exported to British North America.	Exported to the United States.	Exported to Foreign Countries.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Gaspé.....	57816	36138 19 3	7701 13 6	1371 13 8	0 0 0	27063 2 1
New Carlisle.....	43993	26063 7 0	4611 10 0	115 2 0	2801 15 0	18538 0 0
Amherst.....	10323	5213 12 6	0 0 0	5127 12 6	86 0 0	0 0 0
	112133	67418 18 9	12315 3 6	6613 8 2	2887 15 0	47601 2 1

SALT FISH IN BARRELS.

Ports.	Barrels.	Value.	Exported to Great Britain.	Exported to British Colonies.	Exported to the United States.	Exported to Foreign Countries.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Gaspé.....	111	77 16 6	33 9 2	0 0 0	0 0 0	41 7 4
New Carlisle.....	2959	2334 14 0	68 0 0	198 15 0	2067 19 0	0 0 0
herst.....	14295	8068 15 0	0 0 0	5758 15 0	2310 0 0	0 0 0
	17365	10480 15 6	101 9 2	5967 10 0	4377 19 0	41 7 4

## FRESH FISH.

Ports.	Value.	Exported to British North America.
	£ s. d.	£ s. d.
	0 0 0	0 0 0
New Carlisle.....	852 15 0	852 15 0
Amherst.....	67 0 0	67 0 0
	919 15 0	919 15 0

QUEBEC, 30th October, 1856.

The Hon. T. L. Terrill,  
Provincial Secretary, Toronto.

Sir,—I have the honor to report for the information of His Excellency the Governor General, that, acting under the instructions of Mr. Solicitor General Ross, I proceeded on Saturday, the 25 inst. to this city, where, having arrived about eleven o'clock at night, I embarked, with a police force, soon after midnight, on board of the Provincial Government's vessel "La Canadienne" and proceeded to La Baie de St. Paul to preserve order during the election of a Legislative Councillor, which came off on Monday 27th and Tuesday 28th of October instant.

I have felt it my duty to trouble you with this report, for the more especial purpose of recording the energetic zeal with which the duties entrusted to Captain Fortin, the Officer in command of "La Canadienne," are performed.

On our way down the river, between two and three o'clock in the morning, a vessel was seen which had taken fire. On nearing her a little, another ship (just sailed from Quebec) was seen by the glare of the burning vessel, to pass her by, quite near, but without offering the slightest assistance. Captain Fortin crowded all sail, and, arriving as near as the safety of his own vessel would admit, he proceeded in his boat, at the head of his crew, to board the burning vessel, which proved to be the "Princess," of Newry.

The captain and the pilot were both away in Quebec; the mate and carpenter were on board, but the men, who were new hands, obtained from crimps just before sailing, *refused to work*, so that by the fire which their own carelessness had occasioned, the ship must have been utterly destroyed.

Captain Fortin was conspicuous by the light of the flames, for a full hour and a half, placing himself in personal danger, and not only commanding his men, but actually working with them, and by these means unquestionably saved the "Princess" from total loss, as the mate and the carpenter both admitted.

Being arrived at Baie St. Paul, and the returning officer stating that he had reason to apprehend an organized interruption of the election, Captain Fortin (without solicitation) immediately brought on shore a part of his crew, whom he

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placed under my orders, and to this demonstration of force, I have every reason to believe, the tranquillity of the election is due.

I shall resume my duties at St. Sylvester.

I have the honor to be, sir,

Your most obedient humble servant,

(Signed,)

R. B. JOHNSON,

Special Magistrate.

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PROVINCIAL SECRETARY'S OFFICE,  
Toronto, 3rd November, 1856.

SIR,—Major Johnson having represented to His Excellency the Governor General in the report of his mission to the Bay of St. Paul's, the zealous efforts made by you and your men on board the "Princess," which were, according to his report the means of saving that vessel from becoming a total loss.

I have His Excellency's commands to inform you that he fully appreciates your conduct on that occasion, and that he considers it as another proof of your zeal, and of the efficiency of the men under your command.

I have the honor to be, sir,

Your obedient servant,

(Signed,)

T. LEE TERRILL,

Secretary.

Pierre Fortin, Esquire,  
O'Neill's Hotel, Quebec.

# R E T U R N

To AN ADDRESS from the LEGISLATIVE ASSEMBLY, to His Excellency the Governor General, dated the 5th instant, praying His Excellency to cause to be laid before the House, a "Return  
" showing all lands sold or agreed to be sold as mining locations  
" upon the Coasts of Lakes Huron, Nipissing and Superior, or  
" along any of the Streams flowing into any of the said Lakes,  
" specifying the names of individuals or Companies to whom  
" sold, and the quantity of land so sold or agreed to be sold to  
" each; the date of the original sale, the conditions thereof, and  
" howfar the said conditions have been fulfilled; showing also  
" whether any and what alterations have been made in such  
" conditions, and the date of such alterations, distinguishing the  
" locations held by Companies, from those held by individuals,  
" and showing what difference, if any, in the price paid by any  
" Company from that paid by any private purchaser:—Also, a  
" Return showing the quantity of land upon the Island of St.  
" Joseph, sold at auction in the City of Toronto, and the amount  
" of such sale;—also, the quantity of lands sold by auction at  
" Sault Ste. Marie, at the last public sale there, to whom sold,  
" and the amount of such sales."

By Command,

T. LEE TERRILL,  
Secretary.

Secretary's Office,  
Toronto, 30th March, 1857.



RETURN relative to Mining Locations on Lakes Huron and Superior, &c.—(Continued.)

Companies.	Individuals.	No. of acres.	Date of location or assignment.	Original price.	Price paid.	Payments received.
	Francis Bellanger	6400	31st August, 1847.	4s. per acre.	£150 0 0,	forming part of the 1st instalment.
	William H. Boulton	6400	do do	do	do	do
	Charles Thompson	6400	do do	do	do	do
	John F. Elliott	6400	9th December, do.	do	do	do
	F. C. Clarke	6400	27th November, do.	do	do	balance of 1st instal. with interest.
	Alexander McLeah	6400	do do	do	do	forming part of the 1st instalment.
	George K. Smith	6400	do do	do	do	do
	John B. Forsyth	6400	do do	do	do	do
	Alexander McDonell	6400	do do	do	do	do
	Wharton Metcalfe	6400	do do	do	do	do
	Angus MacDonell	6400	22nd July, do.	do	do	do
	James B. Ewart	6400	9th July, do.	do	do	do
	Sir Allan McNab	6400	— August, do.	do	do	do
	Thomas B. Ewart	6400	22nd Sept., do.	do	do	do
	C. J. MacDonald	6400	27th August, do.	do	do	do
	Peter Patterson	6400	do do	do	do	do
	Henry Le Mesurier	6400	do do	do	do	do
	Asa Fowls	400	do do	do	do	do
	Joseph V. Brown	400	10th March, 1855.	7s. 6d.	do	do
	Thomas Daly	400	do do	do	do	do
	R. R. Nelson	400	29th February, 1856.	do	do	do
	Charles Kimball	400	30th January, do.	do	do	do
	Isaac Van Ekten	400	10th December, do.	do	do	do
	Louis M. Oliver	400	30th January, do.	do	do	do
	Edward McEachen	400	do do	do	do	do
	John Dewe	400	13th do do	do	do	do
	William J. Fitzgerald	400	17th March, do.	do	do	do
	John Mackenzie	400	6th April, do.	do	do	do
		400	14th January, 1857.	do	do	do

Crown Land Department,  
 Toronto, 19th March, 1857.

JOSEPH CAUCHON,  
 Commissioner.

RETURN of the quantity of land in the Island St. Joseph sold at auction at Toronto, and of the quantity of land sold at auction at the Sault Ste. Marie, to whom sold, and the amount of such sales, in conformity with a resolution of the Legislative Assembly, dated 5th March, 1857.

Date.	Name.	Part.	Lot.	Concession.	Acres.	Price per acre.	Amount of sale.	Amount paid.	St. Joseph's Island.
						s. d.	£ s. d.	£ s. d.	
1856.									
15th September.	Florence O'Donohue	.....	1	A	74	8 0	29 12 0	5 18 3	
do	Denis Hurley	.....	3	A	119	10 0	69 10 0	11 18 0	
do	do	.....	5	A	180	10 6	78 15 0	15 15 0	
do	Thomas Farrell	.....	7	A	121	10 6	63 10 6	12 14 2	
do	Adam Wilson.	.....	13	A	94	16 3	76 7 6	15 5 6	
do	do	.....	17	A	100	21 6	107 10 0	21 10 0	
do	do	.....	19	A	100	25 3	126 5 0	25 5 0	
do	do	.....	19	Huron.	100	30 6	162 10 0	30 10 0	
do	do	.....	1	C	100	19 3	96 5 0	19 5 0	
do	do	.....	1	D	100	38 0	190 0 0	38 0 0	
do	do	.....	1	D	100	22 0	110 0 0	22 0 0	
do	do	.....	5	D	100	30 6	152 10 0	30 10 0	
do	do	.....	1	E	100	16 3	81 5 0	16 5 0	
do	do	.....	3	E	100	21 6	104 10 0	21 10 0	
do	do	.....	5	E	100	22 0	110 0 0	22 0 0	
do	do	.....	5	F	100	14 0	70 0 0	14 0 0	
do	do	.....	5	F	100	10 3	96 6 6	19 1 4	
do	Michael Kelly	.....	56	A	186	10 3	105 0 0	20 0 0	
do	Henry Breen	.....	58	A	210	12 0	120 0 0	15 0 0	
do	Thomas Moore	.....	60	A	200	9 3	80 0 0	16 0 0	
do	Daniel Breen	.....	62	A	178	8 0	77 12 0	15 12 1	
do	Richard Mitchell	.....	64	A	194	10 3	85 11 9	17 2 4	
do	James Penny	.....	66	A	167	10 6	157 10 0	31 10 0	
do	David Breen	.....	70	A	300	36 0	181 8 0	26 5 7	
do	Rossin Brothers	.....	19	Neebish.	73	12 9	80 19 3	16 3 10	
do	Angus Currie	.....	7	B	127	10 3	51 5 0	10 5 0	
do	Charles Smith.	.....	7	Middle.	100	8 9	42 8 9	8 9 9	
do	do	.....	5	18	97	11 6	57 10 0	11 10 0	
do	Charles Carroll.	.....	9	Middle.	100	14 0	70 0 0	14 0 0	
do	do	.....	7	D	100	12 6	62 10 0	12 10 0	
do	do	.....	3	F	100	14 9	106 18 9	21 7 9	
do	do	.....	1	V	145	8 3	41 5 0	8 5 0	
do	do	.....	1	8	100				

RETURN of the quantity of land in the Island St. Joseph sold at auction at Toronto, &c.—(Continued.)

Date.	Name.	Part.	Lot.	Concession.	Acres.	Price per acre.		Amount of sale.		Amount paid.		St. Joseph's Island.	
						s.	d.	£	s.	£	s.		d.
15th September.	Charles Carroll		5	8	100	11	6	57	10	0	11	10	0
do	do		1	9	100	10	3	51	5	0	10	5	0
do	do		3	9	100	10	9	53	15	0	10	15	0
do	James Tate		3	10	100	10	3	51	5	0	10	15	0
do	Thomas Coleman		3	C	100	10	6	52	10	0	10	10	0
do	John Pattinson		5	C	100	12	0	60	0	0	12	0	0
do	Michael Murphy		7	C	100	12	9	63	15	0	12	15	0
do	Denis Shea		17	D	123	11	0	70	8	0	12	1	8
do	John Starke		19	D	146	12	3	89	8	6	17	17	9
do	do		9	E	100	13	6	67	10	0	13	10	0
do	Peter Crolley		3	G	100	11	0	55	0	0	11	0	0
do	do		13	E	100	16	0	80	0	0	16	0	0
do	Robert McDonald		11	F	100	11	6	57	0	0	11	10	0
do	do		15	E	100	13	0	65	0	0	13	0	0
do	do		15	F	100	11	6	57	10	0	11	10	0
do	Azariah Sims		20	7	194	9	0	87	6	0	17	9	2
do	John Scott		17	E	100	13	3	66	5	0	13	5	0
do	Abraham McKenny		7	F	100	12	6	70	0	0	12	0	0
do	Charles Chipman		9	F	100	14	0	70	0	0	14	0	0
do	do		19	G	100	9	9	48	15	0	9	15	0
do	do		13	F	100	10	3	51	5	0	10	5	0
do	do		19	F	100	10	9	53	15	0	10	15	0
do	James Patterson		5	G	100	11	3	56	5	0	11	5	0
do	Robert Barber		9	G	100	10	3	51	5	0	10	5	0
do	Thomas N. Gibbs		7	G	100	11	0	55	0	0	11	0	0
do	do		21	G	100	11	6	57	10	0	11	10	0
do	John McLeod		25	G	77	12	6	48	2	6	9	12	6
do	John Brady		1	I	100	10	0	50	0	0	10	0	0
do	Alexander Trautner		3	V	151	15	0	113	5	0	22	13	0
do	Michael Hart		7	I	100	8	6	42	10	0	8	10	0
do	Charles Whinnall		7	I	100	9	0	45	0	0	9	0	0
do	William Sweetin		9	I	100	8	9	43	15	0	8	15	0
do	John Leeming		5	2	100	9	0	45	0	0	9	0	0
do	do		7	2	100	9	3	46	5	0	9	5	0

do	James McGee		1	3	100	9	6	47	10	0	9	10	0
do	Joseph Partridge		3	3	100	8	15	43	15	0	8	15	0
do	Denis Hurley		5	3	100	9	5	46	5	0	9	5	0
do	George Pollard		2	4	100	8	6	42	10	0	8	10	0
do	do		7	4	100	8	6	42	10	0	8	10	0
do	John Folmsbee		5	4	100	8	9	43	15	0	8	15	0
do	do		3	6	190	7	6	71	5	0	14	5	0
do	Thomas Wetherald		9	4	97	9	3	44	17	3	8	19	6
do	William Kinline		1	5	100	7	9	38	15	0	7	15	0
do	James Forster		5	5	97	8	0	38	16	0	7	15	2
do	Patrick O'Neil		4	7	118	8	0	47	4	0	9	8	10
do	William Perival		2	7	120	8	0	48	0	0	9	12	0
do	John Hannah		6	7	109	8	0	43	12	0	8	14	5
do	Hugh Matheson		8	7	175	9	3	80	18	9	16	3	9
do	Alexander Milne		A	7	183	6	9	61	15	3	12	7	0
do	Richard Mitchell		14	7	80	9	9	39	0	0	7	16	0
do	Mathew Wetherald		16	7	109	9	6	51	15	6	10	7	1
do	Thomas N. Molesworth		18	7	81	7	6	20	7	6	6	1	6
do	Henry Softley		5	9	100	15	0	75	0	0	15	0	0
do	Alfred R. Roche		5	10	100	15	6	77	10	0	15	10	0
do	George Cotter		3	8	100	8	6	43	10	0	8	10	0
do	Thomas H. Ince		3	12	100	6	9	33	15	0	6	15	0
do	do		3	12	100	6	9	33	15	0	6	15	0
do	do		5	12	100	6	6	42	10	0	6	10	0
do	do		7	12	105	11	6	60	7	6	12	1	6
do	Robert Mont and John M. Stewart		1	18	81	11	0	44	11	0	8	18	3
do	John Lynch		1	11	100	8	3	41	5	0	8	5	0
23rd October,	Charles Chapman		13	M	100	9	3	46	5	0	9	5	0
do	do		15	M	100	9	6	47	10	0	9	10	0
do	do		17	M	98	8	9	42	17	6	8	11	6
do	do		13	N	100	9	3	46	5	0	9	5	0
do	do		13	O	100	8	9	43	15	0	8	15	0
do	Abraham Peachey		19	H	100	6	6	32	10	0	6	10	0
do	do		19	I	100	6	9	33	15	0	6	15	0
do	Thomas Early		3	R	100	5	9	28	15	0	5	17	0
do	Cornelius Regan		3	S	100	6	0	30	0	0	6	0	0
do	Patrick Holler		7	R	100	6	0	32	10	0	6	10	0
do	Donald Bowen		21	R	105	4	9	24	18	9	4	19	9
do	James Cattaneh		47	A	100	6	9	33	15	0	6	15	0
do	William Marr		13	H	100	7	9	38	15	0	7	15	0
do	Michael Walters		3	H	99	7	6	37	2	6	7	8	6
do	James Wilson		5	H	100	7	0	35	0	0	7	0	0
do	Donald Bowen		5	I	100	6	9	33	15	0	6	15	0



RETURN of the quantity of land in the Island St. Joseph sold at auction at Toronto, &c.—(Continued.)

Date	Name.	Part.	Lot.	Concession.	Acres.	Price per acre.	Amount of sale.		Amount paid.		St. Joseph's Island.
							£	s. d.	£	s. d.	
1856.	Sir Richard Bethell		15	L	100	9 3	46	5 0	9	5 0	
23rd October,	do		17	L	100	7 9	38	15 0	7	15 0	
do	do		19	L	96	7 6	36	0 0	7	4 0	
do	do		5	M	100	8 3	41	5 0	8	5 0	
do	do		7	M	100	8 0	40	0 0	8	0 0	
do	do		7	N	84	7 3	30	9 0	6	1 9	
do	do		7	O	100	7 6	37	10 0	7	10 0	
do	do		19	O	100	7 6	37	10 0	7	10 0	
do	do		3	P	100	7 0	35	0 0	7	0 0	
do	do		17	P	100	8 3	41	5 0	8	5 0	
do	do		19	P	100	8 3	41	5 0	8	5 0	
do	do		3	Q	100	7 9	38	15 0	7	15 0	
do	do		7	Q	100	7 9	38	15 0	7	15 0	
do	do		19	Q	100	7 9	38	15 0	7	15 0	
do	do		23	Q	100	6 9	38	15 0	6	15 0	
do	do		13	R	100	7 9	38	15 0	7	15 0	
do	do		1	R	100	6 0	30	0 0	6	0 0	
do	do		3	S	100	7 0	35	0 0	7	0 0	
do	do		9	S	100	7 0	35	0 0	7	0 0	
do	do		15	S	100	6 6	32	10 0	6	10 0	
do	do		19	S	100	6 6	32	10 0	6	10 0	
do	do		7	T	100	5 6	27	10 0	5	15 0	
do	do		7	T	100	5 9	28	15 0	5	15 0	
do	do		5	U	100	6 3	31	5 0	6	5 0	
do	do		7	U	100	5 9	28	15 0	5	15 0	
do	do		9	U	100	5 9	28	15 0	5	15 0	
do	do		11	U	100	6 0	30	0 0	6	0 0	
do	do		13	U	100	6 0	30	0 0	6	0 0	
do	do		15	U	100	6 3	31	5 0	6	5 0	
do	do		17	U	100	6 6	32	10 0	6	10 0	
do	do		19	U	100	6 6	32	10 0	6	10 0	
do	Hugh Matheson		21	A	100	6 0	30	0 0	6	0 0	
do	do		21	A	100	6 0	30	0 0	6	0 0	
do	W. B. Butler		33	Neebish.	138	4 0	27	13 0	5	10 4	
do	Sir Richard Bethell		33	Neebish.	138	4 0	27	13 0	5	10 4	

Date	Name.	Part.	Lot.	Concession.	Acres.	Price per acre.	Amount of sale.		Amount paid.		St. Joseph's Island.
							£	s. d.	£	s. d.	
do	John Mackay		21	T	100	5 9	28	15 0	5	15 0	
do	do		21	U	100	6 0	30	0 0	6	0 0	
do	Joseph Marshall Ham		16	Z	103	5 0	25	15 0	5	2 0	
do	do		14	Grand Point.	47	5 0	11	15 0	2	7 0	
do	Margaret Driscoll		15	X	100	5 3	26	5 0	5	5 0	
do	Joseph Connell		11	S	100	7 0	35	0 0	7	0 0	
do	do		19	T	100	6 0	30	0 0	6	0 0	
do	H. J. McDonnell		11	R	100	11 0	55	0 0	11	0 0	
do	do		9	R	100	7 9	38	15 0	7	15 0	
do	do		9	T	100	6 0	30	0 0	6	0 0	
24th	Angus Currie		11	Neebish.	39	6 3	12	3 9	2	8 8	
do	do		31	Huron.	100	4 2	20	16 8	4	3 2	
do	do		33	Huron.	100	4 0	40	0 0	8	0 0	
3rd November	George Cotter		9	Q	100	7 3	36	5 0	7	3 0	
do	do		5	R	100	5 6	27	10 0	5	10 0	
do	do		1	U	100	5 9	28	15 0	5	15 0	
do	do		5	T	100	7 6	37	10 0	7	10 0	
do	George Carr		19	K	100	6 3	31	5 0	6	5 0	
do	do		1	S	100	6 0	30	0 0	6	0 0	
18th	John McNab		23	S	100	5 9	28	15 0	5	15 0	
do	do		1	T	100	5 6	27	10 0	5	10 0	
do	do		3	T	100	5 9	28	15 0	5	15 0	
do	do		15	W	100	5 9	28	15 0	5	15 0	
do	do		33	A	100	5 0	25	0 0	5	0 0	
do	do		27	Neebish.	124	5 3	22	11 0	6	6 2	
do	do		7	I	1	.....	.....	.....	37	1 7	
5th February, 1857	Michael Hart		.....	.....	.....	.....	.....	.....	.....	.....	
			25860				11432	19 5	2332	5 9	

JOSEPH CAUCHON,  
Commissioner.

Crown Land Department,  
Toronto, 27th March, 1857.



# R E P O R T

OF THE

## COMMISSIONER OF CROWN LANDS

OF

CANADA,

FOR THE YEAR 1856.

---

PRESENTED TO BOTH HOUSES OF PARLIAMENT BY COMMAND OF HIS EXCELLENCY.

JOSEPH CAUCHON, Comr. Crown Lands.

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TORONTO:

PRINTED BY STEWART DERBISHIRE AND GEORGE DESBARATS

PRINTER TO THE QUEEN'S MOST EXCELLENT MAJESTY.

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1857.

# REPORT

OF THE

## COMMISSIONER OF CROWN LANDS OF CANADA.

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TO HIS EXCELLENCY SIR EDMUND WALKER HEAD, BARONET,  
*GOVERNOR GENERAL OF BRITISH NORTH AMERICA, &c., &c., &c.*

MAY IT PLEASE YOUR EXCELLENCY,

In conformity with a Resolution of the Legislative Assembly, passed during the last Session of the Provincial Parliament, I have the honor of submitting the following Report on the Public Lands of the Province, and the Department under my direction for the management of them :—

The Public Lands, and other subjects connected therewith, under the management of the Crown Land Department, are classed under the following heads of accounts, viz :—

### IN LOWER CANADA.

JESUITS' ESTATES,  
CROWN LANDS,  
CLERGY LANDS,  
CROWN DOMAIN,  
SEIGNIORY OF LAUZON.

### IN UPPER CANADA.

CROWN LANDS,  
CLERGY LANDS,  
SCHOOL LANDS.

### GENERAL ACCOUNTS.

WOODS AND FORESTS.  
MINING LOCATIONS.

And, though not yet forming a subject of account,  
PROVINCIAL FISHERIES.

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 LOWER CANADA.

## CROWN LANDS.

In Lower Canada at the commencement of the year 1856, there were 4,563,468 acres of surveyed Crown Lands undisposed of; in addition to which there were 280,200 acres surveyed during the past year; making a total of 4,843,668 acres, of which there were sold 46,118½ acres; leaving undisposed of, on the 31st December last, 4,797,550 acres of surveyed Crown Lands—part of which, however, are occupied by about fifteen thousand squatters, whom it will be the duty of Government to bring into the condition of regular purchasers.

The total price of the lands sold was £5,145 15 3. There was received, during the past year, on account of lands sold, including instalments due on sales of former years, the gross sum of £3,019 14 1, and as Crown Quit Rents £228 11 4, making a total in gross of £3,248 5 5, the net amount of which, after deducting charges against it, was £3,230 15 5.

Besides the 4,797,550 acres of surveyed lands, undisposed of, there remains within the limits of Lower Canada an extent of 112,075,039 of acres of unsurveyed Waste Lands of the Crown, of which, however, 100,000 acres are in progress of being surveyed.

The vacant surveyed Crown Lands lie chiefly on the North side of the St. Lawrence in the valley of the River Saguenay, in the rear of the Seigniories, and on the Ottawa and its tributaries; and between the Seigniories on the South side of the St. Lawrence and the Province line—a comparatively small portion, only, remaining in that part of the Province known as the Eastern Townships. Their general character, as well as that of the unsurveyed lands, will be further described in another part of this report.

## CLERGY LANDS.

Of the lands set apart as Clergy Reserves in Lower Canada, in virtue of the Imperial Statute of 31st Geo. III. cap. 31—finally secularized and the disposition thereof regulated by the Provincial Act of 18th Vic. cap. 2d—there were sold, during the year 1856, 12,473½ acres for £2,678 13 5. The gross receipts on account of Sales, Rents, &c., of Clergy Lands, amounted to £1,948 8 3—of which the net amount after deducting charges was £1,810 1 7.

The total number of acres of Clergy Lands, remaining unsold, in Lower Canada, on 31st December, 1856, was 487,683½.

These lands consisted originally of the seventh part of the townships surveyed prior to 12th May 1842, generally uniformly distributed over each township. They are therefore limited to the older townships, differing in that respect, from the vacant surveyed Crown Lands.

## JESUITS' ESTATES.

Consisting of six large Seigniories and one large Fief, besides several small Fiefs and Rotures, and other property in the City of Quebec, being the estates held by the order of Jesuits in this Province, prior to the cession of it to Great Britain; amounting in extent to 795,262 arpents, of which 362,048 have been conceded, subject to the usual seigniorial dues.

During the year 1856, the gross amount of receipts on account of the above estates, was £4,829 17 7, leaving after deducting charges for management, surveys, &c., a net amount of £4,019 13 9.

The whole of the funds that have accrued, or that may in future accrue, from these Estates are appropriated to educational purposes, in Lower Canada, by Act of the Provincial Legislature of last year.

#### CROWN DOMAIN.

Consisting of certain Fiefs in the City of Quebec and Town of Three Rivers, whereof the censitaires hold immediately under the Crown; certain wharves in Quebec; all the beaches and water lots upon all navigable rivers; and in general all Seigniorial Estates and rights held by the King of France prior to the cession of the Province to Great Britain.

The gross amount of receipts during the year 1856 on account of the Crown Domain was £2,149 18 7,—leaving after deducting charges of management a net amount of £1,330 17 5.

The cost of management of the Crown Domain last year was considerably increased by expenses incurred in preparing the schedules required for the Seigniorial Commission.

#### SEIGNIORY OF LAUZON.

This Seigniori was acquired from the late Sir John Caldwell on account of his indebtedness to the Province. It is situated immediately opposite the City of Quebec, and contains an area of 218,880 acres; the chief part of which was long ago conceded under seigniorial tenure.

The gross receipts during the year 1856 on account of the seigniori of Lauzon amounted to £4,661 14 8—leaving after deducting charges for management, &c., a net amount of £3,113 1 10. A great part of the expense of management last year was for a re-survey of the seigniori now being made.

It was found advantageous to dispose of the Etchemin Saw Mills, in the Seigniori of Lauzon, and the Charlesbourg Flour Mills, in the Seigniori of Notre Dame des Auges, belonging to the Jesuits' Estates—the former for the sum of £9,000, and the latter for £750. The Charlesbourg Mills were sold in 1855. In that year the St. Henri Flour Mill, in the Seigniori of Lauzon, was sold for £935, the price in each case being greater than the principal sum represented by the rent annually obtained, while the Public has been, by these transactions, relieved from the expense of repairing the Etchemin Mills and of rebuilding the Mill at Charlesbourg. An attempt was made in 1856 to sell the Grist Mill of Laprairie, also belonging to the Jesuit Estates, but a sufficient price could not be obtained to render the sale advantageous.

With reference to Seigniories held by the Crown, there is an abuse which should be remedied. In some cases the censitaires on obtaining the "title de-concession," that is granted on conceding the lands, cut and dispose of the timber of value upon them, and abandon the lands without fulfilling any of the obligations under which they obtained possession. It is desirable that they should, by law, be made subject to the conditions under which Crown Lands are sold, requiring actual settlement and forbidding the cutting of timber for sale, before the condition of actual settlement and all other obligations are fulfilled.

## GENERAL TERRITORIAL SUMMARY OF LOWER CANADA.

Vacant Crown Lands, surveyed.....	4,797,550	Acres.
Do. Clergy Lands, do. ....	467,683½	“
Total of disposable Public Lands, Seigniories excepted, do.,	5,265,233½	“
Township lands hitherto alienated. ....	6,373,597	“
Total hitherto surveyed in townships.....	11,658,830	“
Extent of Seigniories.....	10,678,931	“
Total organized.....	22,337,761	“
Unsurveyed Crown Lands.....	112,075,039	“
Total area of Lower Canada.....	134,412,800	Acres.

The area of Lower Canada here used is only an approximation of its smallest probable extent, its northern boundary being but imperfectly known and undetermined.

## UPPER CANADA.

## CROWN LANDS.

At the commencement of the year 1856, there were in Upper Canada 538,745 acres of surveyed Crown Lands undisposed of, in addition to which there were 456,123½ surveyed during the year; making a total of 994,868½ acres, of which there were sold 140,520 acres, and located as Free Grants 23,950 acres—leaving, on the 31st December, 1856, 830,398 acres of surveyed Crown Lands undisposed of.

The total price of the Crown Lands sold was £52,319 9 4. The Gross amount received during the year on account of sales of Crown Lands was £41,329 13 8. The net amount after deducting refunds was £40,906 17 11, making, with £90 received as Crown Rent, a net total of receipts on account of Crown Lands of £40,996 17 11.

The 830,398 acres of surveyed Crown Lands remaining undisposed of are almost altogether included in the Counties of Lanark and Renfrew, Frontenac, Lennox and Addington, Hastings, Victoria and Peterborough; that is to say, in the valley of the Ottawa, and in the rear of the settled country on the North side of Lake Ontario; there being but a very few vacant Crown Lots now left in the western part of Upper Canada.

The important fact, therefore, now strongly presents itself, that, in the great western Peninsula of Upper Canada, which has hitherto been the chief receptacle of immigration to this Province, the supply of Crown Lands for settlement is now exhausted, and as the number of vacant Clergy lots interspersed through it is comparatively insignificant, fields for the extension of settlement must be sought in other parts of Canada.

Besides the 830,398 acres of surveyed Crown Lands undisposed of there is in Upper Canada, within the watershed or valley of the St. Lawrence and its Lakes, an area of 56,770,416 acres of Waste Lands of the Crown, consisting of the Ottawa and Huron Territory, and the Territory lying north of the Lakes Huron and Superior. Of the above there are 625,850 acres now in progress of being surveyed, besides which it is proposed, after the opening of spring, to continue the surveys to a much larger extent.

These territories will be more fully described, as far as they are known, in a general Geographical View of the Public Lands of the Province in another part of this report.

#### CLERGY LANDS.

Of Clergy Lands in Upper Canada, there were sold, during the year 1856, 81,086 $\frac{1}{2}$  acres for £66,150 0 7.

The gross receipts of every kind on account of Clergy Lands, amounted to £99,021 6 11, of which the net amount after deducting charges was £92,899 14.

The total number of acres of Clergy Lands remaining undisposed of in Upper Canada on the 31st December, 1856, was 422,944 $\frac{1}{2}$  acres, of which by far the greater part are situated in the counties east of Toronto.

#### SCHOOL LANDS.

The school Lands in Upper Canada are classed under two heads of account, viz:—Grammar School, and Common School lands.

Of the 546,861 $\frac{1}{2}$  acres originally set apart for the support of Grammar Schools, 225,944 acres were applied to the maintenance of King's College, and 66,000 acres to that of Upper Canada College.

On the 31st December, 1855, there remained of Grammar School lands 156,845 $\frac{1}{2}$  acres, of which 2,340 acres were sold during 1856 for £1,906 15 3,—leaving at the close of the year a remainder of 154,505 $\frac{1}{2}$  acres.

Of the million of acres of land in Upper Canada appropriated by the Act of 12th Vic., Cap. 200, as a Common Fund for the maintenance of Public Schools, there remained unsold, at the commencement of the year 1856, 86,862 $\frac{3}{4}$  acres, of which there were sold during the year 47,725 acres for £31,835 19—leaving 39,137 $\frac{3}{4}$  acres unsold.

The gross amount received on account of Grammar School Lands during 1856 was £3,833 13 11, the net amount £3,332 10 2.

The gross amount received on account of Common School Lands was £25,036 9 6, the net amount, after deducting charges of management, (consisting of commission, costs of inspection and surveys,) and refunds being £22,324 14 8.

#### GENERAL TERRITORIAL SUMMARY OF UPPER CANADA.

Vacant surveyed Crown Lands .....	830,398 $\frac{1}{2}$	Acres.
Do. do. Clergy Lands .....	422,944 $\frac{1}{2}$	“
Do. do. School Lands .....	193,643 $\frac{1}{4}$	“
<b>Total of disposable Public surveyed lands</b> .....	<b>1,446,986<math>\frac{1}{2}</math></b>	<b>“</b>
Private Lands .....	19,388,997 $\frac{1}{4}$	“
<b>Total of surveyed Lands</b> .....	<b>20,835,984</b>	<b>“</b>
Unsurveyed Waste Lands of the Crown .....	56,770,416	“
<b>Total Area of Upper Canada within the water-shed of the St. Lawrence and Lakes</b> .....	<b>77,606,400</b>	<b>Acres.</b>

It is to be observed that the area of Upper Canada, as used above, is only an approximation, the northern boundary of the valley of the St. Lawrence being but imperfectly known.

### GENERAL SUBJECTS.

#### WOODS AND FORESTS.

This branch of Revenue includes Ground Rents of the berths for which licenses to cut timber are granted; Duties on Timber and Saw Logs cut on Public Lands.

The amount of revenue that accrued from these sources during the year 1856 was £57,109 18 10. The amount collected was £53,503 4 6—leaving, after deducting charges of management, a net of £45,244 6 0.

This being a general account, it includes both sections of the Province.

The Government Slides are classed, in management, under the head of Woods and Forests—the Duties accruing from them, coming under the same system of collection, though forming a separate subject of account.

The gross amount of Dues collected in 1856 for timber passing through the Government Slides was £8,197 4 6—leaving a net amount after deducting charges of £7,723 5 1. The total accrued was £8,628 3 4.

The Supervisor of Cullers Office may also be classed under the head of Woods and Forests. In a subsequent part of this Report I shall suggest the improvements necessary for the more perfect execution of the duties of that office and of the service connected therewith.

#### MINING LOCATIONS.

Mining Locations were first granted in the year 1846. Up to 31st December last the total number of location tickets issued for mining tracts on Lakes Huron and Superior was 78, of which eight were issued during 1856;—sixty-eight of these are for tracts of 6,400 acres;—the remainder are for tracts of 400 acres each.

The gross amount of revenue received in 1856 from this source, consisting of payments for licenses of explorations and of instalments on locations purchased was £6,452 8 0—leaving, after deducting charges, a net amount of £5,377 8.

#### RECAPITULATION.

From the foregoing brief enumeration it will be seen that the number of acres of Public Lands of all descriptions, sold by the Crown Land Department during the year 1856, was 330,263 yielding a total price of £160,036 12 10; besides 23,950 disposed of in Free Grants, making a total of 354,213 acres. That the gross amount collected by the Department from Public Lands and Forests and subjects connected therewith, was £252,828 15 4, and the net amount £230,929 15 8.

In addition to the above the sum of £383 13 9 was collected of casual and location fees, &c., making the total net amount collected £231,313 9 5, of which the sum £102,469 12 9 is to be taken as disposable revenue, the remainder £128,843 16 8 being the proceeds of Clergy and School Lands.

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The total number of acres of surveyed Public Land remaining undisposed in Canada is..... 6,732,219 $\frac{1}{2}$   
 And of unsurveyed Public Lands ..... 168,845,455

Making the total undisposed of ..... 175,577,674 $\frac{1}{2}$

And of Private Lands ..... 36,441,525 $\frac{1}{2}$

In the total area of that part of Canada drained by the St. Lawrence and its tributaries which, at least, may be estimated as containing ..... 212,019,200 acres.

#### GENERAL VIEW OF THE PUBLIC LANDS.

Before entering into further detail as to the arrangements for the management of the Public Lands of the Province, it would seem desirable to take a general view of them, in the natural sections in which they present themselves in geographical succession, briefly observing their physical character—and their soil, natural products and position as affecting their value in an agricultural or commercial point of view, and their fitness and capacity for the reception of settlers either immediately or in future.

It is more necessary to do so now than it has hitherto been; not only because public attention has been much directed of late to the waste lands of Canada as a field for the settlement, alike of immigrants from abroad and for the youth of our increasing population—but also because, as already noted in this report, Government has now no more land to offer to settlers in that part of the Province considered the most favorable for settlement, and where by far the greater part of the sale and settlement of Public Lands has hitherto taken place. What remains therefore is now more than ever an important question, and one that practically presses itself upon us.

The question is one that of itself merits attention on account of the imperfect and erroneous ideas prevalent with regard to the distant, and especially the unoccupied parts of the Province, precluding that just appreciation of their value occasionally essential to an intelligent co-operation in measures affecting the general improvement and welfare of our country; and if in submitting a condensed view of the information that has accumulated in the Department under my charge, together with the result of my own personal observation, I should seem to enter too warmly into the description of the vast regions of the Province as yet not generally known to the public, I trust my doing so may be attributed to the important and interesting nature of the subject, and not to an immoderate desire to eulogize my native land.

#### THE PENINSULA OF GASPE.

Following the track of first discovery and present navigation, the first section of Canada that presents itself is Gaspe.

The Peninsula of Gaspe, which lies between the St. Lawrence to the north and the Baie des Chaleurs and River Ristigouche to the south, is 175 miles in length between Cape Gaspe, its eastern extremity, and the head of Lake Petapedia, a tributary of the Ristigouche, its natural limit to the west. Its extreme breadth is 90 miles. Its area, after deducting a small portion covered by New Brunswick, is about 11,800 superficial miles,—being equal to that of the European peninsula of Denmark, which it also resembles in form.

This natural geographical division includes within it on the south the County of Bonaventure, along the north bank of the Ristigouche and the shore of the Baie des Chaleurs—on the east the County of Gaspé, which extends from Point Maquereau, at the mouth of that Bay, round the shore of the Gulf and up the St. Lawrence to Cape Chats, and on the north-west a portion of the county of Rimouski, presenting a line of coast of nearly 400 miles in circuit.

Much of the northern part of the Peninsula is rendered unfit for cultivation by the Notre Dame Mountains, which traverse it longitudinally. This range is of a varied character as to continuity and length. Its centre line or axis of elevation is generally from twelve to twenty-five miles from the St. Lawrence. Behind Metis, where it may be said to enter the peninsula, its summits seldom rise over 1,600 feet, presenting rather an elevated country with detached hills, than a continuous range, a considerable portion of the land being arable, though of inferior soil, and on the successive steps in which its base falls to the St. Lawrence a richer loamy soil generally prevails. Thirty miles eastward, where the River Matanne breaks through the range, it becomes more distinct and elevated; at a further distance of thirty miles, on the head waters of the River Chatte, it attains its greatest elevation and breadth, several of its peaks rising to upwards of 3,500 feet, with a lower but still lofty range in front of it, leaving a strip of good land, occasionally of considerable width, along its base. These with the flats near the shore and at the mouths of the rivers are very favorable for cultivation, and are settled as far down as St. Anne, where the road ends. At the River St. Anne the range divides, sending a branch to the south, then advancing to the shore at Mont Louis continues eastward with lower elevation to its termination at Cape Gaspé,—leaving for twenty miles above Cap Rosiere a broad belt of good land between it and the shore.

This range therefore, and the base on which it stands, covers, and with little exception renders unfit for cultivation, a belt of country along the northern coast, two hundred miles in length, and from ten to twenty miles in breadth.

South of this range a great elevated valley occupies the interior. Its surface is often broken by high hills, and its form is irregular, dividing into branches, and its breadth varying from ten to thirty miles, presenting occasionally the form of an elevated plateau.

The soil of this region is in some places poor and light, and occasionally stony, but generally it is more or less fertile and arable, excepting where the surface is too uneven. On the upper waters of the River Matanne it is described by the Assistant Provincial Geologist as fit for cultivation. Where intersected by the Kempt Road it is about thirty miles wide, and presents much arable land of a fair quality. Mr. Hamel also found good land in the interior valley in his exploration eastward.

Its elevation will in parts be unfavorable to the cultivation of wheat in particular, especially where it rises to the height of 1500 feet. Much of it, however, is under the height of successful cultivation in other parts of the Province, and even in the immediate neighborhood, where wheat is grown at an elevation of 1000 feet. The altitude of the streams far in the interior, varying from 433 to 651 feet, while on the upper part of the River Mata-pedia, where a farm has been cultivated for many years, the effect of the

elevation is not such as to attract attention. It is probable that the shelter from the north winds, which the Notre Dame or Shickshock Mountains afford, may slightly benefit the climate of the interior.

Between this interior region and the Baie des Chaleurs there occurs generally, though not uniformly, a tract, from twenty to thirty miles in width, of hilly country or high table land, intersected by deep narrow valleys, through which the rivers rising in the interior region find their way.

Along the Baie des Chaleurs a rich and comparatively even tract of country, of about ten miles in breadth, extends between the mountains and the shore, from the River Cascapedia to Port Daniel, a distance of fifty miles, which is continuously settled in front and occasionally for some distance back, being the chief settlement of Bonaventure.

Westward, at the head of the bay and along the Ristigouche, the mountains advance nearly to the shore, varying from 600 to 1600 feet in height, presenting every variety of aspect, from precipitous cliffs to gentle slopes, with rich valleys of considerable breadth extending far up the streams. In the valleys and on the steep slopes of the hills, everywhere the soil is rich and free from stones. Towards the interior the hills rise to a general height of about 1000 feet, and their summits present tracts of rich table land occasionally several miles in extent, varying from half a mile to a mile and a half in width, covered with a heavy growth of hardwood; till at a distance of fifteen miles inland the soil, though still free from stones, becomes poorer and the country more elevated—generally retaining that character back to the interior high valley already described. The same diversity and fertility prevails for eighty miles westward to the boundary of New Brunswick, and (excepting the western extremity on the Ristigouche) is generally well settled in front, and for a few miles up the rivers and the Kempt road.

The tract last described would be exceedingly favorable for settlement were it not for the great inequalities of its surface. The faces of the hills, which are frequently unarable from steepness, occupy a good deal of the surface of the country, besides that covered by occasional lofty mountains, and with them obstruct the opening up of the country for settlement. Nevertheless the front of the County of Bonaventure is as favorable for settlement as any part of Lower Canada where land can now be had, and would have been filled up long ago were it not that it is not only far from the other settled parts of the Province having a surplus population, but also far out of the way of the stream of immigration.

With equal cultivation the yield of all kinds of crop is about twenty per cent. greater in the tract last described than in other parts of Lower Canada, and good crops are raised at an elevation of a thousand feet above the sea. The quality of the grain is good. It is worthy of remark that in the practice of distillation, barley from Bonaventure has been found to contain about one-quarter more saccharine matter than that raised west of Montreal, besides being heavier—and it may be here remarked that the wheat from Gaspé exhibited at the Paris Exposition in 1855, which classed so high and obtained honorable mention, was from the County of Bonaventure.

Were the mountains near Quebec, like those of Bonaventure and Ristigouche, they would have been long ago covered with a dense and thriving population.

In strict justice to the subject, there are circumstances in favor of the country bordering the Baie des Chaleurs and Ristigouche that are not to be overlooked; besides having a climate as favorable on the whole for agriculture as that of Quebec, with a milder winter, it has considerable advantages in its geographical position and resources. Besides its salmon fisheries, which have always been of some commercial importance, apart from the general domestic advantage to the inhabitants as an article of diet easily obtained, there is and always will be a considerable lumber trade in the upper part of the county, and shipbuilding is carried on to some extent. The codfishing of the coast is of known importance. The profit of it has been increased to the resident fishermen by the reciprocity treaty, which has caused competition and higher prices than formerly. The prosecution of these various branches of industry is advantageous even to the agricultural settler, by increasing the circulation of money and demand for farm produce.

The distance being shorter, the rate of freight to European ports is lower than from Quebec, which would admit of the coarser descriptions of grain being exported with profit when it could not be done from more remote parts of the Province. The coarser grains can generally be exported to Great Britain with profit from Prince Edwards Island, which has a slight advantage in position over Bonaventure, but is inferior in soil.

The rivers of Gaspé, including the Ristigouche and its tributaries, are remarkable for their great volume of water. There is a distinction between them which is worthy of remark as affecting their utility. Those that flow into the St. Lawrence have, like all its tributaries from Quebec downwards, falls on their lower courses, while those that fall into the Baie des Chaleurs, having their head waters in the interior valley, are, though generally of swift current, remarkable for being invariably free from falls, and (unless obstructed by jams) can generally be navigated almost to their sources by canoes, and as far as their size permits by large scows drawn by horses (which walk in the bed of the stream), and carrying from thirty to sixty barrels. The Cascapedia, the Matapedia and the Bonaventure, might be navigated in this manner for upwards of sixty miles, and will be useful in the future settlement of the interior.

The line explored by Major Robinson for the Quebec and Halifax Railroad passes along the valley of the River Matapedia. With little exceptions the land on both sides of this river is of a good quality, and although presenting on its lower course steep hills to the stream, is generally suited for cultivation, especially the rich table land on the west bank.

The remaining part of the Peninsula—the County of Gaspé—is more rugged than the County of Bonaventure, and inferior in climate, being, from its position, more exposed to the cold winds and fogs of the Gulf, and the mountains in the northern part of it are more elevated and their soil less fertile, and for nearly twenty miles of the south coast, east of Point Mauquereau, a stony and barren tract comes from the interior.

The tract between the latter and the Bay of Gaspé, however, contains much good land, even where the mountains rise to upwards of a thousand feet in height, the soil is rich and free from stones and generally covered with a good growth of hard and mixed wood—the brown birch and cedar sometimes attaining a size but seldom seen in other parts of Canada.

The diversity of geological formation presents considerable variety in degrees of fertility, the soil of sandstone tracts being lighter than where trap and limestone prevail.

On the lower slopes and tables of the precipitous mountain group of Point Perce, and westward of it for fifteen miles, where the hardwood land falls gently to the shore, and thence northward for thirty miles to the head of the Bay of Gaspé (though broken in parts by mountains) and up the valleys of the rivers that fall into it—the land is generally good, and here in front are the principal settlements of the County of Gaspé. This, with the tract along the north coast above Cape Rozier already mentioned, and between Cape Chatte and St. Denis, with what may be found in the interior valley, includes all the land suitable for settlement in the County of Gaspé.

The inferiority of this part of the Peninsula for agricultural purposes is compensated by the superior value of its fisheries, which are richer than those of any other part of the coast. It is worthy of remark that owing to the more suitable character of the weather for drying the codfish, those prepared in Gaspé command a higher price in foreign markets than the American fish and those of Newfoundland and Nova Scotia.

The annual value of the fish caught on the coast of Gaspé and Bonaventure, including what is exported to foreign countries and to other parts of the Province, together with what is used by the inhabitants, may be estimated at £150,000.

To show the condition of the Peninsula of Gaspé as to roads and settlements, it may be observed that the south shore road of the St. Lawrence extends into it from Metis to St. Anne, a distance of ninety miles, where the continuous line of settlement along the coast terminates. Then for a hundred and ten miles there is no road, and but a few straggling settlers. In the township of Fox settlement again commences, and continues for twenty miles to Cape Rozier, and is connected by a road with Gaspé Basin.

From Gaspé Basin along the whole southern coast of the Peninsula and up the Ristigouche to the Matapédia, there is a continuous line of road and settlement. Then from the head of navigation on the Ristigouche the Kempt Road passes across the interior to Metis, a distance of ninety-eight miles; forming the only land route between Canada and the eastern part of New Brunswick and the Baie des Chaleurs—it is wholly unsettled, excepting a few miles at each end and two or three posts in the interior for the accommodation of the mail courier and travellers.

Besides about fifteen miles on the Ristigouche, there are about one hundred and ten miles of the coast unsurveyed public lands,—thirty miles of which are occupied by settlers, and should be surveyed; and, as the settled and alienated lands are limited to the front, the whole of the interior is vacant unsurveyed Crown Lands.

As this section of the Province is out of the way of immigration, it has not been thought necessary hitherto to survey more of the Public Lands than were supposed to be required to meet the wants of the people of the locality.

With this view the front of the township of Cape Chatte, on the Gulf, was surveyed last year, and part of the township of Nouvelle, at the

head of the Baie des Chaleurs. The survey of the remainders of Maria and New Richmond, which has been ordered, remains to be performed. In addition, it is desirable that the survey of the township of Mann, on the Ristigouche, should be continued, as it is being occupied by squatters, and the township of Matapedia. In both the land is excellent. At the eastern extremity of Gaspé the survey of the remainder of Perceé and part of a township adjoining it on the south side of Malbay River. There are good lands also in the southwest River, commencing five miles only above the inner harbor of Gaspé, extending up the river and over to, and up the River St. John, which would render a further survey of lands for settlement on the rivers falling into Gaspé Bay advisable. These, with that of the fronts of three townships between St. Denis and Cape Chatte, already occupied by settlers, are the surveys that are requisite in this section of the Province to meet the progress of settlement for some time.

Of the roads before briefly mentioned, the continuation of the coast road from Matanne to Cape Chatte, and that across the neck of land between the Bay of Gaspé and the settlements above Cape Rozier, were opened under the direction of Dr. Boutillier, the Inspector of Agencies, from funds placed at his disposal for Colonization Roads.

A work of greater magnitude, however, and one requiring a special Parliamentary Grant, is necessary to afford suitable means of communication alike to the Baie des Chaleurs settlements and to the eastern part of New Brunswick, that is, the opening of a new line instead of the present Kempt Road for the greater part of its length.

From its unfavorable position, a great part of the land on it is unsuitable for settlement, uninhabited, and likely to continue so; it is therefore not kept open in winter, and is useless except to those who can perform a journey of ninety miles on snow shoes. Were its position changed to the bank of the River Matapedia, where the land is generally good and settlement making progress, it would become inhabited throughout and be kept open in winter, which would be a great convenience for the conveyance of the mails and to the public generally. Between the head of Lake Matapedia also and the St. Lawrence it is believed that a much better route could be found by following the line explored by Major Robinson for the Quebec and Halifax Railroad. The line as proposed to be altered would open up a great deal of good land.

In conclusion, it may be observed of the Peninsula of Gaspé, that though its inducements may not be such as to attract immigrants from abroad, the greater part of the surface, though broken by hills, is more or less fit for cultivation, and some of it highly favorable in soil and position, and though the settlement of it may advance slowly, it is capable of sustaining a numerous population in vigorous health, independence, and abundance of the necessaries of life.

The population of the counties of Gaspé and Bonaventure, exclusive of the Magdalen Islands, was 19,546 by the census of 1951-2. At its former rate of increase it should now be over 21,000, adding 2,000 for the part of Rimouski included in the peninsula, gives a probable total of upwards of 23,000.

The exports of Gaspé and Bonaventure, consisting chiefly of fish, including shipments to Quebec, may be estimated in value at nearly

£130,000; of this upwards of £80,000 is the value of the fish and other products of the sea and rivers exported to foreign countries.

This shows that a great part of the population is engaged in the fisheries, by which they earn their living less laboriously than by cultivating the ground; and though the fishing settlements have often an aspect of poverty, it is chiefly the unnecessary consequence of the improvidence and carelessness of the lower class of fishermen, who, notwithstanding, live on the best quality of imported provisions, and are more expensive in their habits than the agricultural population of Lower Canada. Many of the inhabitants, however, live in great comfort and independence by the fisheries and the trade they create, and some of the resident merchants have acquired considerable wealth.

And if the profits of the great Jersey fishing firms, instead of being withdrawn, remained in the country, the coast of Gaspé would be one of the wealthiest parts of the province from its fisheries alone.

I have been led to state briefly these facts with regard to the fisheries of the coast of Gaspé now, because they may be useful in forming an opinion of the value of the section of the Province next to be noticed, where the coast for fisheries is twice as extensive as that of Gaspé.

It is to be observed that the shore fishing only, with a little whale fishing, is included in the Gaspé fisheries. The mackerel fishing and the deep sea fishing of the gulf, which afford so much wealth to our neighbors the Americans, are not prosecuted by the people of Gaspé.

### THE COUNTY OF TADOUSAC.

The next extensive unoccupied section of the Province that presents itself is the County of Tadousac, on the north shore; though entering by the Straits of Belle Isle, it is the first to be seen.

This large county has a coast of about six hundred miles in length upon the Gulf and River St. Lawrence. Its greatest known breadth is a hundred and sixty miles, and its area is probably above sixty-five thousand square miles, or more than twice that of Scotland. In several respects—its ruggedness, its great rivers, its forests and its fisheries—and even its Polar men; (the Esquimaux, of the same race as the Laplanders,) at its northeastern extremity, it resembles more the kingdom of Norway, though possibly containing a greater extent of land fit for cultivation, which in that kingdom is estimated at about twelve hundred superficial miles.

This section of the Province cannot, however, be viewed as of any importance at present, except in connection with its timber trade and its fisheries. It is nevertheless worthy of notice, that wherever Pine or other timber of commercial value is to be found, the climate is necessarily such as to admit of the successful cultivation of grain. The valuable saw mills that have been erected on the rivers for nearly a hundred miles down the coast of this county indicate the presence of timber of value.

On the character of the interior country little light has as yet been thrown. In some parts where it has been traversed a great extent of flat barren country, bare of timber, has been found behind the mountain range towards its eastern extremity, as well as wooded regions up the streams. The western part of it is known to be generally wooded, and hunters speak of a large hardwood region adjoining the Saguenay country. Like other

countries on the mouth of the St. Lawrence and Gulf, it presents an abundant supply of timber fit for the construction of vessels suited for the fishing and coasting trade of the eastern shores of this continent.

Under proper regulation the fisheries of this and other parts of the coast may become an important source of wealth to the Province, and will be the subject of further observations in this report.

The extent of Public Lands which it has been found necessary to survey for settlement in this county, has been limited to two or three ranges in the front of four townships, below the mouth of the Saguenay.

The resident population of this section of the Province is very small, consisting of a few inhabitants in the front of these townships, and the people employed in connection with the saw-mills on the rivers, together with the resident fishing population on the eastern part of the coast of about 700 souls.

The exports abroad from this coast in 1856, apart from those of sawn lumber and of those of the Hudson Bay Company and of shipments to Quebec, amounted to above £34,000 in value, of fish and furs. The total shipments to Quebec may be estimated at nearly £8,000.

It is not surprising that the settlement of the coast of this territory made little progress while the Hudson's Bay Company had, by their lease, the exclusive right of trading and fishing within it. Since the termination of their monopoly several additional fishery establishments have been commenced.

### THE SAGUENAY COUNTRY.

The next section of the Province that presents itself for consideration is the Saguenay country.

The valley drained by the River Saguenay is of a triangular form. It is bounded to the north, for two hundred and seventy miles, by the height of land dividing the waters of the St. Lawrence from those of Hudson's Bay, the eastern extremity of it being at a hundred and eighty miles, and the western at three hundred and thirty miles from the mouth of the river. It includes an area of twenty-seven thousand square miles, being equal in extent to the European countries of Tyrol and Switzerland taken together.

As far as yet known it is not estimated to contain more than three millions of acres of land fit for cultivation, lying chiefly in the interior basin, known as the Upper Saguenay.

This great circular basin of comparatively low country, of which Lake St. John occupies the centre, is nearly a hundred miles in length by sixty in extreme width. It is a very isolated country.

On the north and east the mountains of St. Marguerite and other high lands protect it from the cold winds of the Gulf; and to the south a very lofty and exceedingly rugged and barren tract of mountainous country, from fifty to eighty miles in breadth, render it almost inaccessible by land. All attempts have hitherto failed to find a practicable road with good land enough on it for the establishment of the posts necessary for the shelter and accommodation of travellers over this region of desolation.

The Saguenay, which flows in a deep chasm through this mountainous region, is navigable for seventy-five miles for large ships, giving access for nearly twenty miles into the interior inhabitable country.

As the flats and table lands of the interior have an elevation of from two hundred to five hundred feet, while the mountains and high lands that almost encircle it rise from seventeen hundred to four thousand feet in height, giving a high average level to the country around, it is not surprising that it should have a climate milder, as it unquestionably is, than that of the settlements on the St. Lawrence from one to two degrees farther south.

Notwithstanding the rugged and unpromising aspect of much of the country as seen from the river and Lake Kenogami, the richness of the soil of the interior basin of the Saguenay, even where the rocks occasionally protrude, is generally remarkable. On the high plateaus, as well as in the valleys between the rocky ranges of hills, and the low lands by the streams and lakes, is generally a rich clay loam, with a retentive subsoil at a suitable depth, which will ensure its durability; and though in parts much of the surface is covered by rocky hills, the fertile tracts are so large as to give space for forming contiguous settlements. The soil of these tracts being generally entirely free from stones, can be cultivated at much less cost and with more advantage than stony land.

Even the summits of the high bluffs behind Grand Bay are covered with deep beds of alluvial soil, which prevails on both sides of the river to a distance of ten miles above Chicoutimi; then, after passing the rough township of Kenogami and the wild lake to the left of it, which is skirted to the west by the highlands, good arable land again occurs and continues to Lake St. John and along its shore.

The good land is narrowed at the southwest part of the lake by the high lands as far as the River Ouatchouan, but increases in width towards the head of the lake, extending far up the valley of the Chomouchouan or main Saguenay. Squatter settlement is already extending along this part of the shore. On the north and east the low country extends for twenty miles or upwards from the lake. From the limited exploration that has been made of part of it the soil seems generally good, but much of it is unknown, and the large River Mistasini is unexplored.

As it has been definitely ascertained that the climate of the shores of Lake St. John is somewhat superior to that of Quebec, it is difficult to say how far up the Saguenay waters settlement may extend before reaching the limits of successful cultivation.

The enterprise of the Colonization Society at Kamouraska and L'Islet has done much to forward the settlement of the interior of the Saguenay country. The village which it established at Chute des Aulnais, above the head of Lake Kenogami, has been the cause of settlements already extending to Lake St. John. Its arrangements obviated the difficulties that would have otherwise been insurmountable to individual settlers of limited means, giving facilities to others besides the members of their association. The benefit to the country has been greater than to those engaged in the enterprise, and much credit is due to the gentlemen under whose direction the operations of the association have been conducted.

With a view to the development of the interior, a sum from the monies granted for colonization roads was appropriated to the opening a part of the projected Kenogami road, from the River Chicoutimi to Lake St. John; when it is completed it will be the main road leading to the settlements on the southwest side of the lake.

Since the opening of the territory for settlement in 1841, twelve townships have been laid out, some of which have been wholly and others only partly subdivided, the rugged portions of them being left unsurveyed. At that time there was no agricultural population,—it now amounts to fifteen thousand souls, and several thousand tons of sawed lumber are now annually exported, employing a number of square-rigged vessels.

To meet the wants of the settlers, and to prevent confusion, it is desirable that the large tract of good land between the township of Charlevoix and the mouth of the Chomouchouan should be surveyed and sub-divided.

As regards soil and climate the Saguenay country is no doubt as advantageous for cultivation as the townships south of the St. Lawrence in the District of Quebec, and having as yet but a few thousand inhabitants there is evidently great scope for further settlement.

But it must be admitted, that its remoteness, and its inaccessibility by land (and consequently during winter) render it much less eligible as a field for the location of immigrants, or our increasing population, than territories possessing equal advantages in other respects, and situated nearer the centre of the Province.

#### SOUTH SHORE BELOW QUEBEC.

The country on the south side of the St. Lawrence, from the River Chaudiere and Kenebec Road to Mitis, is the next that may be separately noticed; not as an extensive unoccupied territory, but as a part of the Province containing a considerable quantity of vacant Public Lands.

Within it, between the rear of the Seigniories on the St. Lawrence and the southern boundary of the Province, there is a tract of country two hundred miles in length, varying from twelve to forty miles in width, nearly all surveyed into townships and subdivided, of which a small part has been disposed of.

There are 1,048,400 acres of surveyed lands undisposed of, besides 1,187,000 acres unsurveyed.

As the mountains of Notre Dame extend through the entire length of this tract, much of the central part of it is rugged, poor land, and occasionally very elevated. This range is not generally continuous, but presents itself rather in detached groups, the summits of which sometimes exceed two thousand feet in height, with wide depressions and lower portions of the range between. Here the best soil is found generally on the hills, where covered with a growth of hardwood. A belt of amorphous masses of rocks of the Laurentian system, varying from one to three miles in width, here flanks the mountains to the north; and between it and the good lands on the bank of the St. Lawrence there lies a tract of poor sandy soil. The centre of this strip is the water shed dividing the streams falling into the St. Lawrence from the tributaries of the River St. John, of New Brunswick; and it is chiefly on the latter, along the boundary line between this Province and the United States, that the lands fit for settlement are to be found.

All the land suitable for cultivation within this tract will be required for the expansion of settlement from the thickly inhabited parishes on the St. Lawrence in front of it. Six roads leading from them back into it have been opened in whole or in part by the expenditure of monies from the Colonization Fund.

The operations of the American lumberers on the River St. John offer a market for the farm produce of settlers on this tract, and, as might be expected, settlement is advancing, and saw and grist mills and chapels are being erected in several parts of it.

In the upper or western part of this tract no further surveys are required to meet the demand for land. The only township now being surveyed in the tract is Pohenegamook, on the St. Francis, a tributary of the St. John, near Lake Temiscouata. It is desirable that the township of Demers, on the Temiscouata Road, should be surveyed, as it is being occupied by squatters, and also a block between the River St. Francis and the Seignioriy of Lake Temiscouata, adjoining the frontier, which would form four townships.

### THE EASTERN TOWNSHIPS.

The next section that presents itself is that lying between the River Chaudiere and the Richelieu, in the rear of the Seigniories on the south side of the St. Lawrence, commonly called the Eastern Townships.

This section of the Province being generally known, a particular description of it is unnecessary.

The Notre Dame Mountains here present themselves in the form of detached tracts of elevated hilly country, divided by the valleys of the Rivers Chaudiere and St. Francis.

In this section the hilly country commences generally about twenty-five miles from the St. Lawrence. The same sterile, sandy and swampy flat continues with increased breadth along its base, the good land commencing where the rising country begins, but the hills occupy a wider base, and ascend in gentler slopes than before, presenting a great extent of rich arable land.

The hilly country is about thirty miles in width; some distant parts of it presenting occasional summits of two thousand feet in height. To the north of it lies the great valley of Lower Canada, three hundred miles in length, the greater part of it from thirty to sixty miles in width, containing the chief part of its population and its seigniories.

To the south of the hilly country extends another parallel valley, about thirty miles in width, drained by the head waters of the St. Francis and the Chaudiere, which contains the greater part of the Public Lands in this section.

Being sheltered and farther south, the climate of this valley is better than that of the St. Lawrence or the hills between.

There are about 981,951 acres of surveyed Crown and Clergy lands in this section undisposed of, being about one-sixth part of the surveyed townships within it, and there are 250,000 acres of unsurveyed land included in nine townships; in all 1,231,951 acres.

Of the surveyed lands undisposed of, much is occupied by squatters, and of the remainder, which is scattered through many townships, a considerable part is residuary land of an inferior quality, remaining unpurchased on that account. Thus a portion only of this large quantity of public land is really available for settlement.

The St. Lawrence and Atlantic and the Quebec and Richmond Railroads have much enhanced the value of part of the remaining portion for

settlement, by giving an outlet to market, which the earlier settlers in the Eastern Townships did not enjoy.

On account of its advantages in soil and climate, the settlement of the tract south of the hilly country has advanced rapidly for some years past, and what remains of it will in a few years be occupied.

Its general features are gently sloping hills, lying between the different tributaries of the St. Francis and the Chaudiere, timbered with hardwood of a good quality, on a rich loam, though on the banks of many of the streams there are extensive flats of inferior sandy and stony soil. The soil of the cedar swamps is superior, and the timber on them valuable. There are some lofty peaks of granite in this otherwise comparatively flat country.

There have been several important roads opened wholly or in part by the expenditure of colonization funds, and prior appropriations, to facilitate the settlement of this valley and of the public lands in the adjacent townships.

The most important of these are—the Lambton Road and its continuation, the St. Francis Road, connecting the settlements on the upper part of the Chaudiere with those of the British American Land Company, on the St. Francis Territory and the older settlements near Sherbrooke—and the interior with the St. Lawrence and Atlantic Railroad;—also the Megantic Road, nearly at right angles to the former, extending from the Quebec and Richmond Railroad, in the Township of Arthabaska, to the River Chaudiere, at Lake Megantic, near the frontier.

#### REAR TOWNSHIPS NORTH OF THE ST. LAWRENCE.

Before proceeding to the larger territories, it may be as well to notice the townships immediately in rear of the Seigniories on the north side of the St. Lawrence.

From the Saguenay up to Three Rivers there are only eight surveyed townships in rear of the Seigniories on the north side of the St. Lawrence.

The Laurentide Mountains, which, bounding the great valley of Lower Canada to the north, approach the St. Lawrence at Quebec, do not contain many extensive tracts of good arable land. Where the soil is good and covered with a valuable growth of wood for fuel and ship building, it is often steep and rocky. The townships near Quebec lie on this range, and the good land consists chiefly of high hard wood slopes, there being but little alluvial on the streams, which flow in general through deep valleys. Towards Three Rivers where the range recedes to a distance of twenty-five miles from the St. Lawrence, the townships lie on the skirts of it, and the land is of a similar description.

Westward of the St. Maurice and towards Montreal, where the mountains are upwards of thirty miles from the St. Lawrence, the soil of the hardwood land on their slopes becomes lighter, and in the townships below their base sandy and clay land prevail, with broader alluvial flats on the streams.

Between Three Rivers and Petite Nation on the Ottawa, there are thirty surveyed townships, lying, with the exception of two of them, in the rear of the seigniories.

Of these townships, fifteen of those situated above Three Rivers and five of those below it, have been surveyed since 1851. The character of

the land contained in them, as well as that remaining undisposed of in the older townships, is very diversified,—the good arable land frequently occurring in veins and small tracts, little calculated to attract general immigration, but suited to meet, in a considerable degree, the wants of the people of the thickly settled parishes in front, to whom their proximity gives these lands an additional value, as presenting favorable positions where their children may establish themselves without being removed from the society and assistance of their parents and relatives.

With the view of facilitating this desirable expansion of the local population, (the chief object for which the system of opening colonization roads in Lower Canada was adopted,) lines of road have been projected from the parishes in front leading back into the townships, in such places and directions as presented tracts of good land of such extent as to render them desirable for settlement. Of these roads which have been wholly or partly opened by expenditure from the Colonization Fund, there are seven that lead to the rear townships between Three Rivers and St. Fereol, below Quebec, and eleven that intersect the rear townships between Three Rivers and Petite Nation on the Ottawa.

For further details as to these and other Colonization Roads, I beg to refer to the accompanying Report of T. Boutillier, Esq., the Inspector of Crown Land Agencies. (Appendix M).

#### THE ST. MAURICE TERRITORY.

As nearly as can be at present estimated, the River St. Maurice drains an area of twenty-one thousand superficial miles, an extent about one-tenth greater than the main land of Scotland, with which the comparison again becomes convenient as its valley probably contains about as much arable land of all kinds as that kingdom.

Limiting the estimate, however, to land not merely arable, but also of such a quality as is at present, in this country, considered good land for settlement, as far as at present known, it probably contains about three and a-half millions of acres.

Till within a few years past the value of this great territory was utterly unknown to the public. It was commonly considered as destined for ever to be the abode of the Indian and the muskrat; for even the lumberers in any degree acquainted with it were of opinion that its lumber could never be taken to market.

Recently, however, the demand for saw-logs to supply the exportation of sawn lumber to the United States and Great Britain, turned the attention of those engaged in that branch of trade to the pine forests of the St. Maurice. At their instance an immense slide was built to overcome the obstruction presented by the great Shawenegan Falls of the St. Maurice, and booms and other works were constructed on it to facilitate the descent of saw logs. The river was surveyed to the distance of three hundred and eighty miles from its mouth, and its tributaries explored and surveyed for lumbering purposes over an extent of upwards of fourteen thousand superficial miles.

These surveys and explorations speedily made it apparent that the valley of the St. Maurice not only contained an interminable supply of valuable timber, but also an unexpectedly great extent of valuable land for settlement.

Thus, as it were, presenting to the people of Canada a territory not in any remote part of the Province, but in its very centre, adjoining its densest settlements, situated half way between the sea ports of Quebec and Montreal, with its good lands coming within a few miles of the St. Lawrence, offering a wide and easily accessible field for the extension of settlement; with an unlimited supply of an important staple of trade, calculated to benefit alike the commerce of the Province and the settlement of the territory, by creating a demand and a local market for the produce of the settlers.

As it is but recently that the character of this territory has been ascertained to any considerable extent, and what has been learned respecting it is not generally known, it may not be out of place for me to enter more amply into the description of it than of other parts of the Province longer and more extensively known.

On a late visit to the interior of the territory, I had the opportunity of obtaining much information respecting it, from personal observation and from the returns of surveys and explorations made by experienced persons employed in the department under my charge.

To commence our view of this territory at the mouth of the River St. Maurice. At Three Rivers we find a deep deposit of loose sand which reaches about twelve miles to the north, terminating in the vicinity of the "Grais Mills." The width of this barren land varies from two to three miles on each side of the River St. Maurice; the physical character of the country then changes at once, and high ridges covered with heavy timber prevail. Commencing in rear of the Seigniory of Ste. Anne, a wide tract of good land reaches to the River Bastonais, bordering the valley of the St. Maurice, usually at a distance of about five miles: the land is in every respect suitable for settlement.

As we ascend still on the easterly side of the St. Maurice, the valley of the River Croche is next passed. This river winds through interval land of from three-fourths to two miles in width, and fifty miles in length, being as far as yet explored; and more fertile or productive land can scarcely be had in the Lower Province. This has been well ascertained by the produce of the farms opened here by lumbermen, where wheat and every other description of grains produced in the valley of the St. Lawrence bring an abundant harvest. There is also in the same region a great extent of sterile land that may never support settlement, though valuable on account of its timber. A glance at the accompanying sketch will show the relative extent of the poor land, and that which has been ascertained to be suitable for settlement.

The valleys of the Mekinak, Bastonais, and Croche Rivers, are all skirted by high and continuous ranges of hills, the summits of which usually spread out into table lands similar to those of the newly formed settlement of Shawenegan, and in the rear parts of Cap de la Madelaine and Batiscan.

Above the River Croche the country has not been minutely examined, with a view to colonization, as an ample field is found before reaching it.

The westerly part of the territory has been likewise thoroughly explored and the rivers surveyed. Continuing to the north from the township of Shawenegan, the district drained by the river of that name, and the Rivière du Loup, is broken and divided by high ridges of good hard wood land;

and this characteristic prevails to the height of land separating the waters just mentioned from those which flow into the Matawin.

Sufficient evidence of the suitability of this land for settling purposes is had in the fact, that an extent of fourteen miles of new road opened here by the Department, two years ago, through the wilderness, is now continuously occupied on both sides by thrifty settlers, whilst the new road to the "Piles," constructed also by the Department during the last season, is already occupied throughout its entire length. This settlement sprung up as fast as the road was opened. The lumbermen have cleared up farms at various points upon the St. Maurice between the "Piles" and the mouth of the Matawin, and along this latter river as high as the Pine Lake, where there is a large establishment belonging to the Messrs. Gilmour & Co., of Quebec.

The avidity with which lands on the St. Maurice are sought so soon as opened to the public, proves that they are now known to be of a good quality.

A range of high rocky lands, forming a continuous chain about sixty miles in length, divides the waters flowing into the Matawin and Vermillion Rivers; and along the numerous feeders of these rivers good land is to be found. A large tract in this district has unfortunately been laid waste by extensive fires, which have consumed even the soil upon the drier tracts—the bare and whitened rocks testifying to the havoc that has been made.

The Matawin, Vermillion, Rat River, Flamand, Riviere du Milieu, and Riviere au Lac Clair, all flow through a region affording more or less of arable land.

The settlements that have been formed in the St. Maurice Territory during the last five or six years are in Brandon, Peterborough, Caxton, Shawenagan, rear of Cape de la Madelaine, Riviere des Envies (in Batis-can), Montauban, Colbert and Rocmont. All of these are flourishing and steadily increasing, the general quality of the land not differing essentially from the Eastern Townships south of the St. Lawrence.

The marked features in the physical geography of the Territory consist in the numerous large rivers and lakes by which it is watered, the extensive interval or alluvial lands existing on these rivers and lakes, the wide belts of pine (chiefly white pine) timber everywhere found, the extensive beds of bog or swamp ore of superior quality, and the absence of any elevations which might properly be termed mountains, after passing the Laurentide range—the high lands being so called only from their peculiar form and character, as their elevations would merely entitle them to be termed high ranges or cliffs.

The Rat River farms are situated sixty-two and a half miles in a straight line nearly due north from Three Rivers, in latitude  $47^{\circ} 13' N.$ , and longitude  $72^{\circ} 56' W.$ , at an elevation of about 320 feet above the sea. The post of Weymontachinque, the most northerly point to which the explorations have yet been carried, is in latitude  $47^{\circ} 50'$  and longitude  $73^{\circ} 50'$ , and sixty-three miles in a straight line northwest from Rat River. Its altitude above the latter is nearly two hundred and twenty feet, or about five hundred and fifty feet above the sea.

Observations have shown that the mean annual heat at Rat River does not differ essentially from that of Three Rivers. The temperature falls lower in the winter,—in some instances as low as  $-40^{\circ}$ , but rises higher

in the summer; and as the summer heats regulate the culture of grains and the growth of plants generally, the severe winters do not cause a scanty vegetation. Thus every grain that ripens on the St. Lawrence between Quebec and Three Rivers comes to an abundant maturity at Rat River. The deepest snows (which usually occur in the month of March) rarely exceed three and a half feet, and until the middle of January the common depth is not over two feet. With some slight modification, caused by peculiar formation, difference of altitude, and nature of the soil on long slopes, the foregoing remarks will apply equally to the whole Territory.

The soil of the St. Maurice is exceedingly varied in its qualities, being derived from the crumbling and decomposition of rocks, with a mixture of vegetable and animal remains. Soils generally bear a resemblance to the rocks over which they lie, so that a knowledge of the one is said to afford a key to the character of the other: thus, in a country of sandstone and sandbeds, we shall find the soil sandy; in one of limestone, more or less calcareous; in one of slaterocks, more or less clayey. But this connection is modified by so many circumstances that it is impossible, by the mere study of the Geology of one or several parts of a large district, to form an accurate judgment of its agricultural character, especially if this study be confined to only one or two of its principal rivers; for, even in tracts of the same Geological formation there exist great differences in the upperstratum, arising from the prevalence of one or other members of the series, or from the greater or less inclination of the strata. The action of the water also in denuding the surface at one part and carrying the debris or earthy particles to another, exercises every where an important influence on the character of soils. The absence of a just attention to these practical facts caused the government expedition of 1830, under Messrs. Ingall and Nixon, to arrive at erroneous conclusions. They decided that the whole territory was sterile, unfit for settlement, and bore no good timber; a statement which has been thoroughly disproved by experience.

Alluvial tracts of the finest quality are found on the banks of the rivers and lakes, and in the swamps and low grounds; and these constitute the richest and most valuable soil for the agriculturist. The Rivers Bastonais, Mekinak, Croche, Flamand, Rat River, Wessoneau, Vermillion and tributaries, and the Shawenegan, afford instances of such tracts.

As the Geological Survey of the Province has not yet been extended up the river, our knowledge of its mineral resources is very limited; the principal ores known to exist are the following:—Iron, the bog or swamp ore, the magnetic ore, sulphurets of iron and copper, lead, nickel and cobalt, and graphite, or black lead.

Iron is one of the great staples of this region, and the ores are every where found. The magnetic iron ore of the Laurentian system occurs at different points upon the River St. Maurice, and in the interior country; its color is a deep black, with some metallic lustre.

The bog ore, a species of the granular brown oxide of iron, exists both in beds and veins; it occurs in grains nearly round, of various sizes, generally compact but occasionally quite loose, and when smelted yields a good tenacious iron. The beds of this species have been traced from the Cap de la Madelaine to the River Croche, their usual length being from ten chains to half a mile, and width from 50 to 200 feet; the depth in those localities which have been worked varies from three to six feet. The swamp

ore likewise occurs in extensive beds in the calcareous formations of the Batiscan River. It is to be regretted that the smelting of iron ores has not yet received that attention here which the value and abundance of the material would warrant, there being at present iron works of any note in only two localities—the ancient well known “St. Maurice Forges,” and the new “Radnor Forges”; the latter so peculiarly favored by nature. There are found associated, wood for charcoal, the iron ore, the sand and limestone for flux and moulding, and the refractory clay for constructing the interior brick work of the furnaces. The river upon which the works are situated makes its passage through cliffs of limestone.

As we go to the north from the Matawin River, the syenitic rock of quartz, feldspar and hornblende prevails. This formation occasionally passes into gneiss, hardly distinguishable from granite, saving by an experienced geologist. Plumbago occurs in the gneiss formations of the Con-cou-cache, and about the head lakes of the Rat River; it is found in soft disseminated pieces of a grey color, and is believed to be of a suitable quality for making pencils.

A deposit of lead exists on the Trenché River, where a vein of about two feet in width penetrates a ledge of rocks some 50 or 60 feet high, and extends to an unknown depth. The ore has a metallic aspect, is black in the mass and also when pulverized, and is believed to be galena, or sulphuret of lead. The presence of the calcareous spar and mica slate alternating with the granite formation between the Trenché River and Radnor forges, would seem to indicate the existence of this ore in masses that may become the object of mining.

Copper pyrites also occur in the same district, and sulphuret of iron. The specimens found have a metallic appearance, and a bronze yellow color; the rock in which the vein lies appears as of the gneiss or granite formation.

Nickel, associated with the ore of cobalt, occurs in the rear part of the Cap de la Madelaine,—the specimens found are of a grey color, hard, fine-grained and malleable; occurring in syenitic and gneiss formations. The ore is believed to be rich in nickel.

The mineral springs of the St. Maurice, at St. Leon, Caxton, Cap de la Madelaine, and the Forges, are well known. Strong chalybeate springs are also met with in different parts of the territory.

No reflecting person can be otherwise than convinced that the St. Maurice must, sooner or later, assume an important rank in the commerce and revenue of the country. As the project of the Quebec and Huron Railway is one of material interest to the northern section of the Province, it may not be amiss to remark, that we have here rational grounds for maintaining that between Quebec and Montreal the road will traverse a country capable of affording a rich way-trade, and of supplying abundant feeders.

The timber now being made, and which will descend the coming spring, will amount to about 1,000,000 square feet of white and red pine, and 255,000 pine logs. The saw-mills at present in operation, cutting timber for exportation, are the Hunterstown, St. Maurice, Grais, and Batiscan mills.

It must be remembered that it is now only four years since the St. Maurice was thrown open to the trade (in 1852), and that, here as else-

where, the early lumberman has many difficulties to overcome before his business can be placed upon a profitable footing. The first operations upon the Ottawa afford an example in point. It likewise happened that the disastrous seasons of commercial embarrassment throughout the country, in 1854 and '55, followed close upon the date of the opening trade of the St. Maurice, in 1852 and '53, and were severely felt. But these have now chiefly passed away; and the business going on at present is more than double what it has been any preceding year. The wise administration of the Government in the construction of public works, roads, and other improvements, has drawn the public attention hither, and there is every prospect that the expenditure will be a profitable one, both to the Government and to the people,—and that the sanguine but just expectations held in respect to the prosperity of this great region will not be disappointed.

### PUBLIC WORKS ON THE ST. MAURICE.

About four years ago the Public Works were fairly commenced on the St. Maurice, and as soon as these were so far completed as to admit of timber being brought down in safety limits were readily taken up, and divers enterprising firms and individuals at once established themselves in the territory; and notwithstanding the depressing influence of low markets, and the difficulties incidental to a new region, they have continued to carry on their operations more or less extensively ever since. Large quantities of timber are now being manufactured, and it is supposed that the exports of that article in its various shapes during the ensuing season will be considerably in excess of what they have ever been before.

Thus the outlay made by the Government has occasioned a respectable trade to spring up in a few years, and a revenue to be derived from a territory which was before that outlay totally unproductive. But it is not in the light of *direct* revenue alone that the question of developing the resources of the territory must be considered; but rather in the far more important bearing which it will have in opening up a new field for settlement. It is now proved beyond doubt that timber abounds on the St. Maurice and its tributaries, east, west and north—it has been found in every direction. It is equally well ascertained that the climate is not unfavorable to the growth of agricultural produce, and that throughout the territory large tracts of good land are to be met with. There could not possibly exist a state of things more favorable to colonization. The lumberman is the best pioneer of the settler: the supplies which the requirements of the one demand are the most potent agency in drawing the other after him. This fact is already observable on the St. Maurice. Previous to the commencement of the lumber trade, settlement, if not positively at a stand-still, advanced but slowly, because (to go into the simple reasons which will occur to any one) the farther back the settler went the less valuable became the produce of his labor, on account of the greater distance he had to transport it to market. Now the order of things is completely reversed, and the farther he can establish himself in the interior the greater will be the price he can obtain for what he has to dispose of. That the people are not slow to observe this, the most pleasing evidence is afforded by the new settlements at Shawenegan, at Radnor, and in the rear of Berthier,—from which latter place an enterprising firm has opened a winter road to the Matawin, and on the Des Envies River, and at other places. The movement of the surplus population on the St. Lawrence is evidently towards the St.

Maurice; but in order that settlement may have free scope to advance it is necessary to have roads, and these without the aid of government, at least to the leading lines, are things of slow growth. Such aid has not been withheld on the St. Maurice. Four years ago a road was made from Côte à Turcotte to Shawenegan Bay, from a fund raised directly for that purpose by establishing a bonus of ten pounds on every limit that was disposed of at the sales. The Piles Road, a continuation of the former, leading to the navigable waters of the St. Maurice, was made last summer from means advanced by the Government in anticipation of a fund to be realized by an imposition of a *yearly rent* of £10 on every limit subsequently to be sold. Besides this, a little has been done through the Colonization Fund, from which the means were taken for the road between Caxton, St. Barnabee, and St. Etienne. By far the greater portion of the roads, however, have been made from funds actually raised for the purpose from limits, in the manner stated, or advanced in anticipation of what will be realized from the same source. But although the roads were made chiefly with the view of facilitating the operations of the lumberman, so intimately are the timber trade and settlement connected together, that it is impossible to aid the one without advancing the other; and the roads made for the benefit of the timber trade have proved the best possible that could have been laid out with the view of promoting settlement. Within two years after the Shawenegan Road was made it was settled from one end to the other, and not only that, but the settlers themselves, seeing the good quality of the land, made roads for some eight or ten miles further, and occupied and settled a considerable part of the newly laid off township of Shawenegan.

The Piles Road, made only during last summer, is now having a similar effect. A township has just been laid off on the line, and although the returns have not yet been sent in so as to admit of the lots being advertised for sale, applications are constantly being made, and many lots have actually been occupied, while one squatter has gone so far as to erect a mill at a considerable outlay. Regarded as mere local improvements, the Shawenegan and Piles Roads are of importance; but as connecting links in the great highway leading up the St. Maurice they are paramountly so. The Piles Road has rendered the navigable reach extending from the Grand Piles to La Tuque accessible to wheeled vehicles in summer, thus throwing open the country along the St. Maurice for one hundred and twenty miles. It is therefore a matter of some moment that the whole line should be kept in thorough repair. The old road between Three Rivers and Côte à Turcotte, at the commencement of the new roads, is much in want of improvement.

With a view to colonization it has been represented, that, as La Tuque is at the head of the navigable water,—that as some of the principal tributaries have their confluence with the main stream near it; and that, as it is likely soon to become a place of considerable importance, it would be well to have the lands surveyed and laid off in lots. It has also been suggested that townships should be laid off at the mouths of some of the principal tributaries, as for instance, at Rat River, at the Matawin, and at the Mekinak; and that at least two or three ranges of lots should be marked out between the Grand Piles and the Matawin.

Thus, the St. Maurice Territory, in its general aspect, appears to be in every way adapted for settlement. In a region of such extent it would be

unreasonable to suppose that there are not places where the lands are so sterile as to preclude the possibility of their being settled. But these are the exception, not the rule. Admirably watered, and intersected by magnificent rivers, with forests of pine alternating with rich tracts of hardwood land, and with that most valuable of all minerals, iron ore, in unlimited quantities, the country wants but the hand of man and the course of a few years to make it equal to the most flourishing parts of Canada. The dense settlements on the St. Lawrence throw off their yearly emigration. It is therefore a matter of policy as well as of patriotism to prevent its taking a foreign direction, and this can only be done by opening a field for it nearer home—and no more inviting field presents itself than the St. Maurice. With abundance of timber, unlimited water power, and minerals to attract commercial enterprise and create a demand for agricultural produce in the very heart of the territory; with an overflowing population not far distant, bound to their native country by ties which they would not willingly sever,—the colonization of such a territory cannot be difficult. If it possesses such advantages, the question may be asked, Why was it so long neglected and not sooner occupied? But that question is easy of solution. Settlement in such a region only follows commercial enterprise,—in other words, only treads in the footsteps of the lumberman. With the falls of Shawenegan opposed as a barrier, how could commercial enterprise have penetrated the wilds of the St. Maurice. No individuals or firms could on their own account have undertaken so stupendous a task as to slide, boom, and render such a river navigable for timber. Government aid was needed, and that has only been extended within the last few years; and that it has been so with the best results, is fully evident from the trade which has begun, and the impulse given thereby to the colonization of the territory. To attain still more gratifying results it is but necessary to continue in the same course; to open leading lines of road to the best lands, and at the same time to facilitate as far as possible, the operations of the lumberman.

Before concluding a little more may be said about the river from which this territory derives its importance and its name.

I have mentioned that the area of its valley is estimated at twenty-one thousand superficial miles; but it is difficult to reconcile the great volume of water it delivers to so limited an area. At three hundred and eighty miles from its mouth, where the survey of it terminated, it is still a large river.

Besides its value as a means of sending down timber from a great distance, its navigable reaches are so considerable as to be of much importance alike to the lumber trade and the settlement of the country.

From the mouth of the river to the Grand Piles, a distance of thirty-three miles, the navigation is interrupted by the great Falls of Shawenegan, one hundred and sixty feet in height, and other rapids and falls below and above them. Above the Grand Piles the navigation is good for seventy miles, to La Tuque. A steamboat already plies on this part.

From La Tuque it is again interrupted for thirty-four miles, to Grand Detour, thence to Weymontachinque, forty-six miles; it is again navigable for steamers. Then, for thirty miles, the navigation is interrupted in places by rapids, above which it is uninterruptedly navigable for eighty miles. Thus presenting a hundred and ninety-six miles, in the distance of two hundred

and sixty above the termination of the Piles Road, navigable for steamboats in reaches of such extent as to render their employment profitable.

There is at present in progress of survey the township of Mekinak, near the mouth of the River of that name. It commences twelve miles from the village of Riviere des Envies, and contains much good land.

To forward the extension of settlement in the St. Maurice territory the same inducements should be offered to settlers as are afforded in Upper Canada.

With this view it is desirable that a road should be opened on each side of the St. Maurice, leading back into the interior, and surveyed into lots of one hundred acres, to be given in Free Grants to actual settlers.

The road on the east side should commence at the village of Riviere des Envies, and passing through the township of Mekinak, already mentioned, be continued to the River Bastonais, a distance of sixty miles. By keeping about five miles back from the St. Maurice, this line would pass continuously over a broad belt of good land for settlement, and be of great use to the trade of the country. This road and the settlement on it might be continued on the same course for a distance of a hundred miles upon good land.

On the west side a road should be opened from the township of Shawenegan to the River Matawin, near the mouth of the River Castor, a distance of twenty-seven miles. It would pass through a good country and give access to tracts of excellent land on the Matawin.

Upon these roads, especially on the former, a series of townships might with advantage be afterwards surveyed as settlement advanced, with concession lines run to the right and left from the road.

Surveys of the lands at the mouth of Rat River, and some other tributaries of the St. Maurice which offer peculiar inducements to settlers, are also desirable.

### THE OTTAWA COUNTRY.

I shall now proceed to notice the Ottawa Country, including with it the territory between the Ottawa waters and the Georgian Bay, of Lake Huron.

The valley or basin drained by the River Ottawa is about seventy-seven thousand superficial miles in area.

Omitting the portion of it below the City of Ottawa and the River Du Lievre, in which there is but little public land of value left, the part remaining to be noticed may be estimated as containing seventy-one thousand square miles—adding to this, seven thousand miles, the area of the country lying between the western waters of the Ottawa and the Georgian Bay, and four thousand miles for the space in continuation of it north of French River, gives an area of eighty-two thousand miles for the Upper Ottawa and adjoining tracts naturally connected with it; being one-fourth greater than that of the New England States.

The utmost probable length of the River Ottawa within this territory may be six hundred and eighty miles, besides the hundred miles of its course below it. The western part of it is drained by the French River, and by the Rivers Maganétawan and Muskoka.

There are no settlements on the three last mentioned rivers, nor on the hundred miles of exceedingly barren coast of Lake Huron into which they fall.

On the Ottawa there are but a few dwellings in the five hundred miles above Deux Joachim.

The population of this great section of the Province is all embraced within a distance of eighty miles north and west of the City of Ottawa, and scarcely exceeds a hundred thousand souls, of which two-thirds are on the south side of the river.

Of the total area mentioned, less than one-tenth part is embraced within townships surveyed in whole or in part; of which there are fifty-three on the south side of the Ottawa, and thirty-seven on the north side.

#### NORTH-EAST SIDE OF THE OTTAWA.

On the north-east side of the Ottawa, a tract of comparatively low and even ground extends between it and the hills to the distance of a hundred and twenty miles above the City of Ottawa, occasionally from four to six miles in width of good arable land. This, together with the Islands of Calumet and Allumette, which resemble it in soil, is already nearly all sold, and much of it occupied by a population of upwards of twenty thousand souls.

The country on the north side of the Ottawa, behind and above it, is generally rugged and hilly, and in parts mountainous. Excepting on the Rivers Du Lievre and Gatineau it is quite unknown beyond seventy miles in direct distance, much being but imperfectly known so far. Much of it is steep, rocky, and stony. Not more than one quarter of it can be estimated as fit for cultivation of any kind; such occurring in tracts varying from a few hundred acres to half a township in extent, of contiguous good land;—valuable for the expansion of settlement, in connection with the lumber trade, but presenting nowhere any important or extensive field for colonization.

In the valley of the Gatineau, at about a hundred and forty miles from its mouth, the character of the country changes: pine of a good quality becomes scarce, and then almost entirely disappears in the upper part of its valley, much of it being covered with poplar and birch, on a soil generally poor and sandy and often rocky, apparently burnt to barrenness at some former period. Some parts are destitute of wood of any kind—rocky, stern and desolate, with lofty and precipitous hills occasionally ranging along the river and its tributaries. But this character is not unvaried; tracts with good timber are to be found in the region of poplar and birch, which seems to prevail over the head waters of the northern tributaries of the Ottawa.

Notwithstanding this unfavorable character of the land on the Upper Gatineau, its lower valley and the valleys of the River du Lievre and of the streams to the eastward of it, contain the best land for settlement on the north side of the Ottawa. The flats on the streams are often of a very rich soil. A few of the townships will make good settlements, and the immediate banks of the Gatineau will soon be settled for more than a hundred miles.

#### SOUTH-WEST SIDE OF THE OTTAWA.

That country lying between the Ottawa and Lake Huron is the most valuable part of this section of the Province, and it is to it that public attention is at present chiefly directed.

It extends along the south-west side of the Ottawa for two hundred miles above the city. It is two hundred miles broad at its base, and about one hundred at its upper end.

It differs from the country on the north-east side of the Ottawa in being much less elevated and containing large tracts of fertile land, and is superior in climate.

The different descriptions of timber which are more or less mingled on the north-east side, prevail separately in particular tracts on the south-west side, and afford a convenient territorial division of the country, indicating a difference of character in the separate parts.

The first of these natural divisions is what has been called the White Pine Country, from the prevalence of that kind of timber, of which it contains the finest forests interspersed with tracts of hardwood land. It is a hundred miles in length from north to south, with an extreme width of forty-five miles, diminishing to twenty at the north end, and terminating at a point on the Ottawa a little above Pembroke. It includes the Counties of Carleton, Lanark and Renfrew, with a population of about eighty thousand souls. Though traversed by a poor tract it is generally arable and of a good quality throughout, much of it being equal to the best lands in the western peninsula in every respect. Three quarters of the land in these counties are disposed of, and much of the remaining quarter consists of inferior residuary lots.

Westward of this lies the Red Pine Country, so called from the prevalence of that kind of wood. It is about a hundred and thirty miles in length from north to south, with a greatest breadth of fifty miles, tapering to less than twenty at its northern extremity on the River Matawin.

The soil of this division is generally a poor sand, more or less gravelly or stony, and in parts the surface is extremely rugged and rocky.

But there are on portions of it veins and tracts of hardwood land, in some cases containing many thousands of acres. These lie between the Rivers Bonnechere and Madawaska, and on the south side of the latter river where the character of this division becomes less definite and the veins or tracts of good land extend to the great hardwood region to the westward.

The soil of these tracts is generally a rich deep loam, and the timber chiefly maple, basswood, and elm of an exceedingly tall and heavy growth, with cedar swamps valuable for the richness of their soil and the superior fencing timber they afford. The surface of these tracts is in some places low and undulating, in others it rises in high hills. Excepting where such tracts occur, the Red Pine Country is unfit for settlement. North of the Bonnechere it presents its greatest unbroken width, which is about fifty miles; south of that river, where it is narrow and broken, fifteen or twenty miles of rough or poor sandy land have to be crossed in passing over it to the interior hardwood country.

The third natural division of the country west of the Ottawa is the Hardwood Country, so called from the prevalence of that description of timber, associated with belts of white pine—red pine being wholly absent.

This tract is about seventy-five miles in its greatest width westward, and a hundred and thirty miles in extreme length, from south-east to north-west, and exclusive of tracts of good land on the Mississippi and Madawaska connected with it comprises an area of upwards of seven thousand super-

cial miles, and contains the head waters of the rivers Madawaska, Petawawe, Amable Du Font's, that flow into the Ottawa; and of the Muskoka and Maganetawan, of Lake Huron, and the whole of the South River of Lake Nipissing.

It is a singularly isolated region. Between it and Lake Huron lies a tract, from twenty to thirty miles in breadth, of barren country terminating in bare flat rock towards the shore of the Lake. It is girded to the southward, along or near the division of the waters of the Ottawa and St. Lawrence, by belts of poor rugged stony land, unfit for settlement, generally about twenty miles in breadth.

To the east it is separated from the inhabited country on the Ottawa by the timber country, but though breaking the continuity of settlement excepting through the tracts of good land, the timber country admits of the projection of good roads through it, while its business creates communication.

Until lately very little was definitely known respecting the territory behind the Ottawa lumbering country.

Of late more information has accumulated respecting it. On the Muskoka Road line run by Mr. Bell, Provincial Surveyor, after entering the hardwood country at three miles west of Bark Lake, on the Madawaska, there appears on adding the details together to be forty-five miles of good arable land, sixteen miles of rough land suited for pasture, and ten miles of worthless unarable ground.

The field notes of the Addington Road line shew twenty miles at least of good land for settlement on the south side of the Madawaska.

Those of the Hastings Road line leading from Madoc to the Opeongo Branch of the Madawaska, after the twenty miles of inferior rough ground on the division of the waters before mentioned, shew forty five miles of good land fit for settlement.

The line surveyed from Burleigh Rapids on the Otonabee, after passing over the twenty miles of poor land on the division of the waters, ends in the commencement of the good lands of the interior.

The part of the Bobcaygeon Road extending from Somerville to Mr. Bell's Muskoka Road line, shews only six and a half miles of bad stony land, and the remaining nineteen generally good.

The survey of the head waters of the River Madawaska, performed under direction of the Crown Timber Office, Ottawa in an area equal to fourteen townships, shews two thirds of it to be fit for cultivation.

These determine the southern boundary and breadth of the good interior tract.

Surveys and explorations in the northern part of it shew that south of Lake Nipissing, and of the barren ground near French River, the country suitable for settlement, commences on the head waters of the Matawan, a tributary of the Ottawa, and extends nearly sixty miles westward.

Where it has been traversed in a south-east direction from Lake Nipissing to Lake Opeongo,—a distance of sixty miles,—for the first twenty miles it was found to be nearly all good arable land, and the remainder to Lake Opeongo rougher, but about two-thirds of it arable, and the timber throughout chiefly hardwood.

On the recent exploration from Lake Huron to the Ottawa, under the direction of Mr. Shanly, Civil Engineer in charge of the Ottawa Canal and Railway surveys, behind the barren country already described on Lake Huron, the interior good ground was found to have a width of forty miles, with fifteen miles of rough poor ground near Lake Opeongo; thence eastward the land was found rough and bad, (as might have been expected in crossing the red pine country already described,) to the low alluvial country which extends up the River Bonnechere, to the distance of fifty miles in a direct line from its mouth.

Ascending the south river of Lake Nipissing land of excellent quality is found to extend far in the interior.

This interior country contains many valuable water powers, and some important sites for towns and villages. It is exceedingly well watered. The groves of white pine timber that are interspersed through it are of the best description to be found in the Province, amply compensating for the land it grows on being in parts unarable.

This is unquestionably the best country for the growth of wheat still remaining unoccupied to the eastward of Lake Huron. Though the timber trade will present a ready market for part of the produce of this country when settled, yet it, from its isolated position, much requires a Railroad for its development, and from its extent and fertility is well calculated to sustain one.

It is the opinion of men of the greatest experience in the trade in sawn lumber in the United States, now engaged in it on the Ottawa, that the construction of a railroad through the interior would lead to the profitable working of saw mills on the numerous water-falls on the upper courses of the streams, giving a greater value to the timber that cannot now be brought out with profit; whilst the transmission of the sawn lumber to Lake Huron for shipment to the western markets would add considerably to the way trade of the road.

In carrying the proposed railroad to the Georgian Bay of Lake Huron through the interior, it will be of greater benefit in opening up the extensive fertile country, the more it is deflected to the southward by the head waters of the Madawaska to avoid the greater width of the Red Pine country on the direct line.

The part of this section north of the Matawan and French Rivers being more remote, less is known of it, excepting the vicinity of these streams and of the Ottawa.

The land to the north and west of Lake Nipissing is known to be good. On the French River it is barren, rocky and unfavorable for settlement.

The west side of the Ottawa above the Matawan has been found, as far as seen, to present more fertile arable land than the country on the banks of the Ottawa below it.

High hills prevail on both sides of the river to the distance of half way up Lake Temiscaming, where, from being mountainous, the country falls in a sudden step to a lower level of undulating hills with wide valleys generally of a clayey soil.

This lower country is well adapted for settlement. It extends up to the head of the lake, and to a yet undetermined distance beyond it. The

River Blanche and other tributaries falling into the head of the lake, flow far through rich alluvial valleys.

From the accounts of those who have traversed the country between Lake Temiscaming and Lake Abbitibbi (a distance of eighty miles on a direct line) there is no intervening mountain range, the division of the waters being scarcely perceptible. The nature of the soil is for the most part favorable to cultivation, being generally a level alluvial over a limestone formation. The timber is a heavy growth of beech, maple, elm and pine, to the immediate vicinity of Abbitibbi, where the hardwood disappears and pine, cedar, birch and poplar abound.

It is to be observed, that where the kinds of wood first mentioned prevail the country must be suitable for the growth of wheat. It is entirely within the latitude to which wheat is successfully cultivated in more easterly, and therefore less favorable parts of the Province.

Though distant, this region cannot be considered as isolated or inaccessible. Lumbering will, ere long, extend into it, and the magnificent water system of the Ottawa, with a few miles of Portage road at the interruptions, will render it accessible by steamboat navigation.

Besides a lower reach of eighteen miles, Lake Temiscaming and the River Blanche present an uninterrupted extent of nearly a hundred miles of navigable water, which will evidently be of importance to the future settlement of this apparently extensive and valuable tract of country.

It is useless to attempt to describe the valley of the Ottawa eastward above Lake Temiscaming; its course, which is probably three hundred and fifty miles, is unexplored and unknown, except by the servants of the Hudson's Bay Company.

In this section of the Province there are remaining undisposed of on the Lower Canada side of the Ottawa about 909,600 acres of Crown Lands, chiefly on the River Gatineau, and 44,200 acres of Clergy Lands.

On the Upper Canada side there are about 561,901 acres of vacant Crown Lands, chiefly in the County of Renfrew, where the survey of new townships continues in progress in the tracts suitable for settlement on the Madawaska, Bonnechere and Mississippi; and about 70,000 acres of Clergy Lands in the older townships.

To give access to the good lands in the valley of the Ottawa, the following roads have been made or are in progress, under the direction of the Bureau of Agriculture.

The Frontenac Road, from Hinchinbrooke in the rear of Kingston, north-westerly about fifty-nine miles to the River Madawaska.

The Addington Road, which is nearly completed, extends from Sheffield back to the River Madawaska a distance of fifty-six miles.

The Hastings Road, from Madoc to the Opeongo Branch of the River Madawaska, seventy-five miles in length, of which forty miles are practicable for wheeled carriages and twenty miles more are being opened as a winter road.

The Bobcaygeon Road, from the rapids of that name in Verulam northerly to the Muskoka Road is about forty-five miles long. The works on it are now in progress.

The winter road from Pembroke up the Ottawa to the mouth of the Matawan, a distance of ninety eight miles, is opened.

The Road from the Ottawa to Lake Opeongo is a hundred miles in length, passing through the new townships of good land between the Rivers Bonnechere and Madawaska—about forty miles have been made a good waggon road. This part is to be connected with the Muskoka Road. The remainder of the line has been opened for winter travel.

On the Opeongo Road and also on the Hastings and Addington Roads, free grants of one hundred acres are made to actual settlers, who are located by the Resident Agents of this Department, and settlement is advancing rapidly.

In this section, besides two townships on the north side, there are on the south side surveys in progress to the extent of 600,350 acres, on the waters of the Ottawa, on or near the roads above mentioned, and in the County of Renfrew.

It is desirable to continue the subdivisions, and extend the survey of the townships on these roads and on the line of the Muskoka Road, which has not yet been opened.

To form a just estimate of the value of the lands fit for cultivation in the Ottawa country, it is necessary to consider the advantages of climate and natural resources.

The country on both sides of the Ottawa, and especially south of it, has a summer for agricultural labor upwards of a month longer than that of the District of Quebec; and fall wheat, which is better in quality and yields about twenty per cent more than spring wheat, is successfully cultivated as far as settlement has yet extended. The climate two hundred miles above the City of Ottawa seems to continue equally favorable. When it is considered also, that for many years past the lumber trade has given the settlers high prices for their produce, and with a market on the spot, it will be at once apparent that the Ottawa country is the most advantageous part of the Province where Government has still any considerable extent of land to dispose of, and also that inferior lands or such as require considerable outlay of labor in the removal of stones, can be cultivated with more profit on the Ottawa than in other parts of the Province, not enjoying the same advantages in climate and local demand.

It will be seen that the occurrence of large tracts of rough land, if covered with valuable pine timber, much increases the value of a country for settlement, by giving the settlers on the adjoining good lands a higher price for their produce than if these pine lands did not occur. This should be borne in mind, and also the profitable nature of pine lands for their timber, in judging of what may be realized from the lands in the Ottawa country appropriated in aid of a railway through it.

The most important staple product of the Ottawa country has been its timber.

During the nine years, from 1848 to 1856 inclusively, the square timber sent to Quebec market from the Upper Ottawa included in this section amounted to 94,509,565 cubic feet of white pine; 25,591,805 cubic feet of red pine; 2,286,690 cubic feet of other timber; and taking the number of

saw Logs cut on Crown Lands alone as an approximation of the export of Sawn timber, the total would be 10,892,182 deals or 299,535,005 feet board measure of sawn lumber.

On principles of calculation admitted by persons of experience to be correct, after making deduction for barren ground and destruction by fire, it is estimated that there must be still standing on the Ottawa and its tributaries, about forty-three millions of tons of timber of the kinds and dimensions now taken to market, and about a hundred and eighty millions of tons of a smaller size, that might be made use of; from which it would appear that, apart from the future growth, there is a sufficient supply for a trade as large as the present, for upwards of a century.

#### LANDS ON THE ONTARIO WATERS.

On the northern waters of Lake Ontario there are about 244,000 acres of Crown Lands undisposed of, chiefly in the rear townships; and about 175,000 acres of Clergy Reserves.

These rear townships are generally in a rather rough country, and are comparatively more valuable for the pine timber they contain and its proximity to the American market, than for their soil. They and the Free Grant Roads passing through them, have been described in the preceding article.

There are, however, many valuable lots of Crown and Clergy Lands scattered through these townships.

#### WESTERN PENINSULA.

The Public Lands remaining undisposed of in the Western Peninsula of Upper Canada require but little notice, as they do not occur in quantities of any importance, nor in localities not already well known; there being only about 115,000 acres of Clergy Lands, and 24,497 acres of Crown Lands undisposed of. To which may be added 42,760 acres of land, in the Counties of Kent, Essex, and Middlesex, formerly at the disposal of Colonel Talbot for locations, and now advertised for sale.

There are now no unsurveyed Public Lands remaining in this section of the Province, the survey of it having been completed in the year 1856.

#### HURON AND SUPERIOR TERRITORY.

The last section of the Province within the valley of the St. Lawrence and its Lakes, is that on the north side of Lakes Huron and Superior, extending from the mouth of French River to the east, to the source of Pigeon River to the west. Its length from east to west is 410 miles, its extreme breadth northward to the sources of the tributaries of the lakes, is uncertain, probably 160 miles; and its area about 48,000 superficial miles, being more than one-half greater than that of the State of Maine.

It has a coast of 180 miles in length on Lake Huron and the River St. Mary, and 420 on Lake Superior—in all, 600 miles.

The Canadian shores of Lake Superior have been well described by the Provincial Geologist, Sir William Logan, as presenting a bold and rocky coast, diversified in the character of its scenery in accordance with the distribution of the different geological formations; cliffs and eminences rising up to heights varying from 300 to 1,300 feet, close upon its margin, and this deeply indented in some parts with extensive bays, and in others presenting clusters of islands, is in multitudes of places carried out in well

sheltered coves affording innumerable harbours of a safe and commodious character, destined greatly to facilitate whatever commerce may hereafter be established on the lake, whether in the produce of its mines or its fisheries. The timber of the district does not seem to promise much encouragement to traffic; it is not of the size nor of the kind most esteemed in commerce, though there is much useful wood capable of being rendered available for mining and house building purposes, as well as for fuel. Hardwood is scarce, red pine is not often seen, and white pine not abundant. The trees most common are spruce, balsam fir, white birch and poplar, with cedar in moist places. On the immediate coast many of the hills are nearly denuded of trees, particularly where granite and gneiss prevail. The hills composed of trap are better clothed, but it is in the trappean valleys and on the surfaces underlaid by sandstone, which are generally flat, that the largest growth of wood is met with. It is chiefly in these localities and at the mouths of the streams, that is to be found whatever land is fit for cultivation, of which sufficient would probably be found to supply many of the wants of a mining population.

He speaks more favorably of the north shore of Lake Huron, describing it as presenting an undulating country, rising in hills which sometimes attain the elevation of 400 and 700 feet above the lake. These, he says, occasionally exhibit rugged escarpments and naked rocky surfaces; but in general their surfaces are rounded, and their flanks, with the valleys separating one range from another, are frequently well clothed with hard and soft woods, often of large growth and much of such species as are valuable in commerce; in many places giving promise of a good arable soil. Many of the slopes are gentle, and many of the valleys are wide.

As it appeared from the reports of the Provincial Geologist and other sources that extensive valleys of fertile lands lie behind the rocky hills which skirt the northerly shore of Lake Huron, Provincial Land Surveyor Salter was instructed in 1855 to ascertain their position and extent; which he effected by an exploration from Sault St. Mary to Lake Nipissing. See his report and plan in Appendix (No. 37,) to the Journals of the Legislative Assembly for 1856.

Mr. Salter having reported the discovery of a large extent of country well adapted for settlement, he was directed to draw a base line from Lake Nipissing to Lake Superior on which to project townships. In the beginning of last summer he proceeded on the service and produced the line as far west as Spanish River, a distance of ninety miles.

Mr. Salter's survey (see Appendix R and Plan herewith) gives the same favorable result as to the character of the country as his exploration of the previous year. He found the valleys to be good land, varying in width and crossed by ridges of rock, their soil being a fine sandy loam, or a deep deposit of decomposed vegetable matter, with a subsoil of white or blue clay—the timber on them a mixture of black and white birch, cedar, tamarac, hemlock, balsam, spruce, black ash, soft maple and elm, with here and there groves of red and white pine,—the ridges, varying in height from 40 to 150 feet, being in some places clothed with a similar growth of wood, in others with a stunted growth of pine, cypress and red oak, or entirely destitute of vegetation.

On the opening of navigation, he will proceed to continue the base line westward to Lake Superior, and surveyors will be sent to draw meridian

lines from his base line, at distances of eighteen miles apart, extending southerly to Lake Huron, and northerly eighteen miles. By these lines the agricultural and lumbering capabilities of the country will be ascertained, and they will also form the lateral boundaries of townships which it is proposed to have surveyed on the American system.

The valley of Spanish River, an important northern tributary of Lake Huron, presents peculiar facilities for colonization. The land is generally of a good quality, and where it is otherwise it abounds with pine timber.

The river has an excellent harbor at its mouth. It is navigable for upwards of thirty miles, and with very little improvement navigation could be extended. Its tributaries afford valuable mill sites for the manufacture of the timber abounding in the interior, for which the great and increasing demand in the United States will afford a ready and easily accessible market.

Notwithstanding the forbidding character of much of the immediate coast of Lake Superior, favorable localities on it for settlement are not wanting. From a private exploration from Goulais Bay, near the lower end of the Lake, (see Letter of Mr. W. H. Palmer, Appendix U,) it appears that the river falling into the bay is navigable for nearly twenty miles—and that far in the interior, in a northeast direction, the country is undulating, with sloping hills and extensive valleys running far back into the mountains, with a rich soil, and wooded chiefly with maple of the largest size. Even at the northern extremity of the territory the banks of the Kamanistiquia are described by Sir George Simpson as presenting strong inducements to future settlement.

I cannot here refrain from expressing my regret that the improvident extent to which reserves of land have been made for the use of the Indians, together with their position on the coast of the best parts of this territory, is likely to interfere with its development.

From their being generally at the mouths of rivers, although the land in rear is much better, there is reason to apprehend that they will obstruct the settlement of the country, as it will be difficult to induce settlers to penetrate to the lands behind them.

These reserves amount to 590,086 acres; while the Indians of the territory back to the height of land number only 2,521 souls, and the statistics of the race, carefully noted for many years past, show a steady decrease, notwithstanding the liberal expenditure for their benefit.

Besides its land and timber, the characteristic resources of this territory are its mineral treasures and its fisheries.

Public attention has but lately been directed to the mineral resources of this territory. Since 1846, as before stated, seventy-eight location tickets have been issued for mining tracts in it.

Though the mining operations here are as yet but very limited, the metalliferous lodes that characterize the rocks of the country are such as to justify the expectation that mining will become a permanent branch of industry in this country, and form a considerable source of wealth to its future inhabitants.

Under the head of Mining Locations, I shall submit suggestions for the better development of the mineral resources of this territory.

The Fisheries as yet afford the chief commercial staple of this country, many hundreds of barrels of whitefish and trout being yearly exported from its coast.

In order justly to appreciate the value of this territory, and particularly of positions favorable for settlement in and near its coast, it must be borne in mind that, in addition to its natural resources, it has almost all the advantages of a maritime country.

Possessing so extensive a coast on the great waters where American commerce has so rapidly advanced to great magnitude, the inhabitants will have every money-making enterprise of land and water open to them, with an unlimited market for the produce of their industry.

The improvement of the navigation of the St. Lawrence, which now admits of large steamers ascending from the seaports to any part of the coast of this territory, has greatly enhanced the value of it as a field for settlement.

I have now described briefly in succession the several sections of the Province containing any considerable extent of vacant Public Lands included within the valley of the St. Lawrence and its Lakes.

Taken together they contain a great extent of land fit for settlement; some of the sections present many important advantages in quality of soil, position, and natural resources, while Public Works and improved means of communication by land and water have much increased the value of most of them to the settler.

This, together with the general progress of the country and the increase in the prices of farm produce, caused partly by the demand for it in the United States, admits of their yielding to the industrious settler as good, or even a better livelihood than that obtained by settlers formerly in the most favorable parts of the Province.

But it must be admitted that they are not equal in climate nor in general fitness for cultivation, to the western peninsula of Upper Canada, where the stock of Public Lands is now exhausted.

Also, that of the Ottawa country which is the most favorable in climate, the lesser portion only is well suited for settlement, the remainder being of a broken and diversified character. Much of it, as well as of the Huron and Superior Territory, can only gradually become occupied through commercial enterprise, or as the progressive demands of trade present a stimulus.

Judging, therefore, from the rapidity with which the Public Lands in the western peninsula have been taken up, there is reason to apprehend that the desirable lands in the sections described will be insufficient to meet the evident demand for farming land for any considerable length of time.

To those who are content to make farms by the toil of clearing off wood-lands, no doubt they offer at present unlimited scope; but it is well known that not only very many European immigrants, but also a great and increasing number of the young men of the Province, and even the older settlers, prefer the easier livelihood that is to be earned by cultivating the prairies of the west, where the plough can be immediately used, and great crops be obtained with comparatively little labor. Many are led by this inducement to carry their capital and industry to the United States.

While we have no such lands to offer them they will continue to do so, much to the loss and injury of this Province.

Our territories on the St. Lawrence and its tributaries, therefore, do not now present the same inducements nor the same unbroken field for settlement as formerly, when much of the western peninsula was still vacant Crown Lands; nor do they offer to European immigrants, or the youth of our country, the easily cultivated prairie lands which they now seek elsewhere.

It is in the valleys of the Red River, the Assiniboine, and the Saskatchewan, that such lands are to be found.

#### RED RIVER AND SASKATCHAWAN COUNTRY.

As public attention has of late been much directed to the Red River and Saskatchewan Country, and we may have ere long to take action for its development, and as apparently offering a favorable field for settlement, with that easily cultivated prairie land so desirable to many, it seems appropriate here briefly to notice it.

Including in this territory the valleys of the Beaver River, the Peace River and the River Arthabaska, as having a common character with it, the whole presents an area of nearly five hundred thousand superficial miles. Its extreme length from the Lake of the Woods westward to the Rocky Mountains is about nine hundred miles, and its breadth from the northern boundary of the United States to the mouth of Peace River about seven hundred miles.

This territory, though forming but one-fifth part of that heretofore rendered available for the purpose of hunting only, a little exceeds the Empires of France and Austria added together. The isothermal position of the greater part of it resembles that of Poland.

A territory so extensive naturally presents a considerable variety in surface, soil and climate.

It has some strikingly different characteristics from the valley of the St. Lawrence and the eastern part of the continent generally.

The most prominent of these is its prairie character, which presents the greatest facilities for extensive farming without the labor of clearing off woods, and for the expansion of settlement; the great expense of grubbing out the timber in opening roads (which is the chief hindrance to it in wooded countries) being there unnecessary. Not that it is entirely destitute of wood, there being clumps and groves of timber chiefly along the streams, where the best lands are to be found and where settlement will first prevail, besides wooded tracts of considerable extent on the upper waters of the Saskatchewan.

The next characteristic of importance is the immense coal fields which extend across the territory near the base of the Rocky Mountains. The large rivers whose head waters intersect this deposit of coal apparently present the readiest means of transporting it for the use of the settlements along their banks.

The celebrated Liebig in explaining the impossibility of certain interior countries of the old world competing successfully with England in manufactures, attributes it solely to the want of coal, notwithstanding the

low cost in them of manual labor and provisions. This territory will be under no such disadvantage; its coal beds and its other mineral resources will, no doubt, at some future time give rise to manufacturing towns of an importance commensurate with the vast regions they will have to supply.

I would strongly note these two great facts—the former as calculated to forward the first settlement of the country, and the latter its future prosperity; while both require to be carefully taken into account as far as they may balance the disadvantage of its remote position.

There is another peculiarity to be observed of this territory which is of considerable importance to its agricultural value,—that is the comparative mildness and shortness of the winters in the western part of it. According to the highest scientific authorities the line of equal winter temperature with Kingston in Upper Canada, and the vicinity of Sheboygan on Lake Michigan, crosses the Saskatchewan half way between its forks and its sources and continues northerly even beyond this territory, giving all the country between it and the Rocky Mountains a winter like that of Chicago. That this peculiarity exists to such a degree as to be of some practical value is evident from the fact stated by Sir Alexander McKenzie, of the Indians of the Saskatchewan having great numbers of horses throughout these plains which found their living out of doors all winter. Should this mildness of the winter prevail in such a degree only as to shorten the period during which it is necessary to feed cattle within doors in winter, and give additional time for ploughing in fall and spring, as it evidently must, its advantages will be readily appreciated by every practical farmer, particularly in a remote country where cattle and wool may be the most valuable staples.

Though isolated it has a connected internal water system that may become of much value. The Red River, which falls into Lake Winipeg, is by the best American authorities stated to be navigable upwards for good sized steamboats far into Minnesota.

From the boundary of the United States, northward, it is navigable to Lake Winipeg, which, at about two hundred and fifty miles, receives on the west side the Saskatchewan, a river thirteen hundred miles in length. Excepting for twenty miles from its mouth upwards, where it is obstructed by rapids, this great river is navigated by batteaux without interruption for about a thousand miles, to Fort Edmonton, near the base of the Rocky Mountains. At three hundred miles from Lake Winipeg the Saskatchewan divides into two branches each about a thousand miles in length and both navigable.

The Red River, Lake Winipeg, and the Saskatchewan therefore present an inland navigation of at least thirteen hundred miles, commencing only three hundred and fifty miles from Lake Superior and terminating at but little over five hundred miles from the Pacific, and very near the head waters of the River Columbia.

As some difference of opinion exists as to the value of this country for settlement, it may not be amiss here briefly to notice some of the facts respecting it, established by good authority.

In describing a portion of it to the westward of Lake Winipeg as large as Great Britain, Sir Alexander McKenzie says, "All this country to the south branch of the Saskatchewan, abounds in beaver, moose deer, fallow deer, elks, bears, buffaloes, &c. The soil is good and wherever

any attempts have been made to raise the esculent plants, &c., it has been found productive."

Speaking of the northern extremity of the territory we are describing, after mentioning that vegetables had been cultivated with success in latitude  $58^{\circ}$ , he says: "There is no doubt the soil would be very productive if a proper attention were given to its preparation. In the fall of the year 1787, when I first arrived at Arthabaska, Mr. Pond was settled on the banks of Elk River, where he remained for three years, and had formed as fine a kitchen garden as I ever saw in Canada."

At New Establishment, Lat.  $56^{\circ}9'$ , he says: "Snow fell on the 11th December, animals having been grazing in the meadows previously. On the 5th of April the snow was all gone, and flowers were in bloom, and the trees were budding on the 20th of that month, and on the 25th the ice had disappeared from Peace River." Ascending it he found, in latitude  $55^{\circ}58'$ , on the 10th of May, exuberant verdure, buffaloes grazing with their young, and elks in vast herds, groves of trees in full bloom, open lawns and magnificent scenery.

From observation Sir John Richardson gives latitude  $60^{\circ}$  on the River of the Mountains, a tributary of the McKenzie River far to the north of this territory, as the limit of economical wheat cultivation; oats and barley, he says, yield good crops, and the latter can be profitably cultivated five degrees farther north.

The plains in many parts of this great territory have a sandy and gravelly soil, elsewhere they present extensive tracts of very fertile alluvial land.

In regard to the fertility of the soil, and its adaptation to the purposes of agriculture, we have the following valuable testimony of Sir John Franklin:—

"The land is fertile, and produces, with little trouble, ample returns of wheat, barley, oats, and potatoes. The ground is prepared for the reception of these vegetables about the middle of April; and when Dr. Richardson visited this place on the 10th May, the blade of wheat looked strong and healthy. There were only five acres in cultivation at the period of my visit. The prospect from the fort must be pretty in summer, owing to the luxuriant verdure of this fertile soil; but in the uniform and cheerless garb of winter, it has little to gratify the eye. Beyond the steep bank, behind Carlton House, commences the vast plain, whose boundaries are but imperfectly known; it extends along the south branch of the Saskatchewan, and towards the sources of the Missouri and Assiniboine River, being scarcely interrupted through the whole of this great space, by hills, or even rising grounds. The excellent pasturage furnishes food in abundance to a variety of grazing animals."—*Franklin's Narrative*, vol. i., p. 217, small edition.

Sir George Simpson gives the following description of the country between Lake Superior and Red River:—"The river which empties Lac la Pluie into the Lake of the Woods, is in more than one respect decidedly the finest stream on the whole route. From Fort Francis (on Lac la Pluie) downward, a stretch of nearly 100 miles, it is not interrupted by a single impediment, while yet the current is not strong enough materially to retard an ascending traveller. Nor are the banks less favourable to agriculture than the waters themselves to navigation, resembling in some measure those of the Thames near Richmond. From the very brink of the river rises a

gentle slope of green sward, crowned in many places with a plentiful growth of birch, poplar, beech, elm, and oak. Is it too much for the eye of philanthropy to discern through the vista of futurity this noble stream, connecting as it does the fertile shores of two spacious lakes, with crowded steamboats on its bosom, and populous towns on its borders?"

Speaking of the Kaministiquoia he says:—"The river, during the day's march passed through forests of elm, oak, pine, birch, &c., being studded with isles not less lovely than its banks; and many a spot reminded us of the rich and quiet scenery of England. The paths of the numerous portages were spangled with violets, roses, and many other wild flowers; while the currant, the gooseberry, the raspberry, the cherry, and even the vine, were abundant. All this bounty of nature was imbued, as it were, with life, by the cheerful notes of a variety of birds, and by the restless flutter of butterflies of the brightest hue. Compared with the adamantine deserts of Lake Superior, the Kaministiquoia presented a perfect paradise. One cannot pass through this fair valley without feeling that it is destined, sooner or later, to become the happy home of civilized men, with their bleating flocks and their lowing herds; with their schools and their churches, their full garner and their social hearths. At the time of our visit, the great obstacle in the way of so blessed a consummation was the hopeless wilderness to the eastward, which seemed to bar for ever the march of settlement and cultivation. But that very wilderness, now that it is to yield up its long hidden stores, bids fair to remove the very impediments which hitherto it has itself presented. The mines of Lake Superior, besides establishing a continuity of route between the east and the west, will find their nearest and cheapest supply of agricultural produce in the valley of the Kaministiquoia."—*Journey*, vol. i., p. 36.

Though Sir George Simpson has on a recent occasion retracted the opinion formerly given by him in favor of the agricultural capabilities of this country, the facts he states are sufficient of themselves to shew conclusively that it contains much good land. His statements, when he speaks of riding all day over rich alluvial plains, and of wheat yielding forty fold in the Red River settlement,—even with a reasonable deduction, for travellers' exaggeration, (being in their general character substantiated by other testimony)—will remain as sufficient proof of the character of the country, whatever opinion he may now express.

In his evidence lately given before a Committee of the Imperial Parliament, he states, that persons desirous of settling in the territory can get land at five shillings an acre, payable to the Company. As he asserts that the Company have done all they could to promote agriculture and settlement, we must suppose the price charged for their lands to be reasonable; if so, they must be exceedingly valuable for settlement in comparison with lands in Canada to justify the exaction of such a price for them, considering all the drawbacks of remoteness and other disadvantages that he and the other witnesses in behalf of the Company enumerate.

Colonel Lefroy is a man of high character and scientific attainments, yet, like other gentlemen of his profession, an opinion of value on agricultural subjects is not to be expected from him. The facts he states are important.

Though his opinion of the fitness of the land for farming is unfavorable, (being apparently based upon observations made chiefly on the north-easterly

part of the country), he mentions the fact that capital crops of barley are raised at Fort Simpson in north latitude  $62^{\circ}$ . As Fort Simpson is situated more than two hundred miles to the north of the northerly boundary of the territory we are describing, this fact proves much in favor of its climate, especially of the southern portion of the territory which extends nine hundred miles to the south of Fort Simpson.

This in a great degree corroborates the statement of Mr. McLean, a gentleman who has resided in the territory for twenty-five years. He says, "There are many favorable situations for agriculture to be found in every district of the Company's Territories, excepting, perhaps, one or two districts on the shores of Hudson's Bay. The banks of the Arthabaska, Slave and McKenzie Rivers present many localities fit for farming operations, and in the southern districts they are of course far more numerous."

This agrees with the description by Ross Cox of the Arthabaska River. He says, "It is here a noble river flowing through a rich pasture country thinly wooded." And a little further he adds, "For the last one hundred and twenty miles its navigation was uninterrupted by rapids, with a smooth steady current, and the soil on each bank was of the richest description."

When what is known of this territory is carefully considered, and the largest reasonable deduction made for unfavorable parts of it, there remains the strongest reason to believe that it presents a vast field for settlement and enterprise; as it consists chiefly of that easily cultivated prairie land which European immigrants and some of our native population now seek in the adjoining parts of the United States.

It seems, therefore, in the highest degree advisable to make a careful exploration of the country between Lake Superior and Red River, with the view to opening a line of communication with the settlements on the latter and the territory generally. In such exploration the lines of natural water communication should be likewise carefully examined. From what is already known there is reason to believe that they present one hundred and fifty miles of available navigable water,—possibly there may be more.

Any considerable extent of navigable waters in reaches of a useful length, that might be connected by roads, would be of great importance in reducing the expense of opening the communication and the cost of transport upon it.

Indifference as to the maintenance of the territorial extent of the Province is much to be deprecated. We have already had some experience of the serious evils arising from the loss of territory,—quite sufficient to be a warning against supineness in future.

It is but a few years, comparatively, since the Province lost what was called the Disputed Territory, on the head waters of the River St. John, of New Brunswick.

A few intelligent persons, took an interest in the subject at the time, but the mass of the people of this Province were wholly indifferent to it. The majority of those who thought at all on the subject were satisfied that we had quite enough of land without it.

But now how does the matter stand? We want a railroad through British Territory to the sea, and we have to make one of upwards of six hundred miles in length to Halifax, instead of one of less than three hundred.

red miles to St. Andrews. And whether we adopt now a line to Halifax or to St. Andrews, we have in either case, a hundred miles of additional road to build, at a cost of a million sterling, which would have been avoided had we retained the Disputed Territory. We thought then that we did not want the land, but we now find we do. We find it necessary (as will be seen from a foregoing part of this report) to open Colonization Roads over the rugged intervening country to get at the fragments of it that are left to us; and that it is only in approaching the frontier that the good land begins which is already sought by the surplus population of the parishes on the St. Lawrence. There is no doubt that our settlements would now have been rapidly extending on each side of the River St. John had we retained that territory.

I trust that we may not through supineness now be left to experience in the loss of the Red River and Saskatchewan Territory, consequences immensely more serious.

To recur to the subject of establishing a line of communication with the Red River settlement. It may be said that St. Paul's, in Minnesota, which the settlers of Red River now frequent, is their natural market; but it must be observed that the same distance would bring them to the Canadian shore of Lake Superior,—whereas, at St. Paul's they are still a hundred and forty miles from the nearest part of that lake, and as far from its shipping port and ultimate market, Chicago, as they were from Lake Superior before they left home.

As being connected with the Red River and Saskatchewan Country it seems appropriate very briefly to notice part of the adjoining British Territories.

The territory northerly of Lake Arthabaska is of no importance at present. Oats and barley can be successfully cultivated in the southerly parts of it only.

Its chief feature, the great River Mackenzie, with its forests, and meadows and coal beds on both banks, and its thousand miles of deep navigation—connecting the Arctic sea and its whale fisheries with the great interior habitable valley of North America, will probably become of some commercial importance when the Saskatchewan Country becomes inhabited.

The case is very different with regard to New Caledonia, including with it Vancouver's Island and the northern or British part of Columbia.

With a breadth from east to west of from three to four hundred miles, it presents a coast of five hundred miles in direct length to the Pacific, without including the circuit of Vancouver's Island.

Though much of this country is mountainous and exceedingly rocky, its valleys contain much good land.

The mildness of its winter, and, as Sir John Richardson describes it, the total immunity from protracted cold, is its prominent characteristic, in which it differs from countries even more to the south on the eastern part of the continent. This, no doubt, with its maritime position and harbours open all winter, will make it a valuable field for settlement and commercial enterprise, separately considered.

These characteristics are more to be valued, however, as far as we are concerned, on account of their great importance to the interior country on

the Saskatchewan, to which it presents the advantage of a comparatively near and accessible sea-coast in British Territory, with ports open all the year.

When the great distance from the Atlantic to the Saskatchewan is considered, the advantage of a short communication with the Pacific will be at once apparent.

We have only to look to the struggles of Russia at present to obtain an open seaport on the northern coast of Norway, and the important result to her nationally that followed her acquisition under Peter the Great of a footing on the Baltic, to judge of the importance of New Caledonia to the Saskatchewan Country when it becomes inhabited.

It is worthy of remark that the valley of the Saskatchewan, including its lower course, is similar in extent to that of the Volga, which it also resembles in soil and climate and in its isolated position.

A railroad through British Territory to the Pacific has been spoken of. As the difficulty of crossing the Rocky Mountains is, no doubt, less there than further south, on account of their being lower and intersected by rivers of considerable magnitude, the construction of such a road would doubtless be more practicable than within the United States territory; and its importance is obvious. But as it will be a work of immense expense it may not be constructed for many years to come.

It would be highly interesting, however, and if we should be called upon to take action for the development of the Saskatchewan country, it would be of importance, to ascertain more definitely, by cursory exploration, the capacity of that stream for steamboat navigation, and the regimen of the river as to freshets and droughts, also the facilities offered by the country beyond it for opening a line of communication by land, or partly by water, to the Pacific.

With a line of connection to Red River, and steamers of small draft on the Saskatchewan, a simple and economic communication with the Pacific might probably be established more advantageously than elsewhere.

When the North West Company of Canada carried on an immense commercial intercourse with this country, many years ago, (before the trade was diverted to Hudson's Bay), it must be remembered that canoe navigation commenced at Lachine, whereas steam navigation now reaches the head of Lake Superior—which sea-going ships may also do—within 350 miles of the heart of the territory.

#### MAP OF THE PROVINCE.

In connection with this general geographical view of the Province and the territory connected with it, it may be appropriate to mention the subject of a Map of Canada now being prepared in this office.

A map of the Province shewing the lots and ranges of each township on a scale sufficiently large to be practically useful, is now much required, not only for the use of this Department and its various Land and Timber Agencies, but also, I believe, for other branches of the Public Service, Public Institutions and the country generally.

Several maps of the Province have been published, but none on so large a scale as to meet the requirements of the Department. Mr. Bou-

chette's map of the British Dominions in North America and a portion of the United States, published in 1846, possesses much merit. The great extent it embraces, however, required the scale to be so small that the subdivision of the townships could not be represented, and there have been great additions made to the geography of the Province by subsequent surveys.

The map now being prepared is on the scale of two miles to an inch, which will give a useful representation of the individual farm lots in each township, and make the sections of it very serviceable for the use of the municipalities as well as of private individuals.

The maps of the Province hitherto published have more or less become obsolete—parts of them founded on imperfect information proving quite inaccurate when surveys came to be made. In the map in preparation this evil will be avoided, as nothing will be introduced into it that has not been determined by survey, leaving the unsurveyed parts blank on the plates of the map, to be added as surveys advance.

There will be also prepared an edition of the map on the scale of twelve miles to an inch, for the more ordinary purposes for which a general map of the Province is required.

Having concluded this general view of the Public Lands of the Province and the Territories belonging to or connected with it, I shall proceed to make such observations as seem necessary, on subjects falling under the head of Departmental Administration.

### THE SALE AND MANAGEMENT OF PUBLIC LANDS.

The principal measures sanctioned by Your Excellency since this Department was entrusted to my charge, to be noticed under this head are:

The system now established of requiring payments for Public Lands sold, to be made into the Banks entrusted with the custody of Public Monies.

And the measure decided upon, and now to be established, of substituting a few large Circuits or Land Districts, instead of the present numerous local Land Agencies,—these Land Districts to be visited in rotation, by Travelling Agents attached to this Department.

Some time will necessarily elapse before the latter measure can be brought into complete and perfect operation, owing to the obscurity and disorder of the accounts of some of the Agents, whose transactions will have to be wound up—requiring in some cases much investigation.

The very serious evils and long accumulated abuses which have rendered the adoption of these measures necessary will be explained in treating of each. It is extremely satisfactory to know that the loss to the public and wrong to individuals occurring under the former system of Agencies will be prevented in future.

The measures adopted will yield all the advantages of the American system, with greater security to the Public Revenue against defalcation. By the American system the Registrar who effects the sales of land is a check on the Receiver to whom the price is paid, which gives considerable security; though connivance between these officers is still possible. By the system we have adopted, the Bank Agent, who takes the place of the

Receiver, has not only his situation in the Bank, of more importance to him, at stake, but is unable, were he willing, to entail loss on the public, the Bank being responsible for his acts.

### PAYMENT INTO BANKS.

Previously to the adoption of the system of requiring all payments for lands to be made into the banks having the custody of public monies, there was no check on the accuracy of the returns made by the Crown Land Agents either of the lands they sold or the monies received by them. The integrity of the individuals was the only security Government had for their faithfulness.

Any Agent who was so disposed could refrain from rendering account of any number of the instalments paid to him, and make use of the money for his own benefit. He could continue to do so from year to year without any risk of discovery till the purchasers had paid their last instalments, and, becoming weary of waiting for their patents, applied to the Crown Land Department to know the cause of delay.

But the Agent could protect himself from such a consequence by a timely repetition of the operation, paying up the withheld instalments out of the amount of others last received.

In this manner the Agent could stand fair with this Department, its books being based on his own returns affording no check on his proceedings.

It has been ascertained that under the security afforded by the system existing heretofore, payments were frequently taken from two parties and receipts given to both, for the same lots; and persons entitled to Crown Patents have been most improperly kept out of them for years after they should have received them.

Several cases of very serious defalcation, resulting from long continued malpractice, were of late brought to light, not by any check existing in the system, but by the over speculation and blundering of the parties concerned. Thus showing, that where the same lack of integrity was combined with greater caution and capacity, there was no security for the public.

The glaring excess, of late, of these and other abuses explained under the following head hastened a total change and the adoption of a system, of which payment of all monies receivable, into the banks, forms a part.

### CROWN LAND AGENCIES.

Government having decided on the substitution of Travelling Agents for the sale of Public Lands instead of the existing system of Local Crown Land Agencies, it may not be out of place here to explain in some detail the abuses that have called for this important change, and the intended system for the protection of the public against such abuses in future which my experience has now enabled me to suggest.

Heretofore the system of Agencies, through which the disposal of the Public Lands has been carried on, has been based in error, and has been the fruitful source of confusion, antagonism and ill-feeling, as well as undue speculation on a large scale, while the supervision exercised over the sale of lands in the department has been, in like manner, (the natural result of the defective basis in which the transactions originated,) uncertain and unsatisfactory; all which has led to a constantly accumulating mass of undecided

cases. Nor is this accumulation of undecided cases of recent date, but it has been going on for more than a quarter of a century; some old cases being indeed gradually cleared off, but new ones at the same time added in a greater ratio to the heap.

By the present system now to be superseded there is an Agent for every petty locality, some agencies being composed of only one, two or three Townships. These Agents are paid by a per centage on their receipts, which, although in the aggregate the expenses of the system are considerable, is in almost every instance of small amount (on account of the smallness of the agencies), and in some cases a mere trifle, while only in a very few instances is it sufficient to constitute a means of livelihood for the Agent. Thus, taking the year 1855, out of upwards of sixty Agents in the whole Province, there were only three whose commissions exceeded £300 each, while only three more exceeded £200, the rest varying from that down to a few shillings; the whole amounting, in the aggregate, to £4,664 1s. 6d. Under such a system no better could perhaps be expected than that the Agents, to whom the pay could be no object, would neglect the duties of their Agencies, as in fact they had to give their more particular attention to whatever other pursuit they could make a living by, making the transaction of their Crown Land business altogether a secondary object, and in some instances there was reason to believe only applying for or consenting to retain the Agencies at all because they could be made subservient to other objects. In other instances again in localities where the transactions were larger, and the per centage derived was consequently (although in few cases sufficient to look to as a means of livelihood) an item of considerable importance, there being in such localities a greater scope for speculation, it is notorious that the Agents have realised large fortunes, and this entirely by their connection with the public lands, although they could not, as Agents, deal directly in them.

There is indeed reason to believe from numerous cases of which I have obtained communication, that some of these Agents have been in the habit of withholding information from intending purchasers, and referring them to third parties to whom pretended sales were made, and thus compelling the real purchaser to pay a large bonus, according to the value of the lot before he could obtain it; and yet so fearful were parties (through whom such transactions have been ascertained) of offending the Agent, who might in future oppose a barrier against their purchasing at all, that they have declined to make any actual complaint, and thus the Department, although having good reason to suppose such transactions as above described to have been anything but uncommon, has been unable to take action thereon.

And it must be remarked that such cases as have become known are those in which land speculators were the actors; and if even they were unable to protect themselves against such exactions, to what extent must not the yeomanry of the country have been imposed upon, who, unconscious that they had been cheated, or not knowing how to seek redress, have had to bear these impositions as best they might.

It is known that large sums of money have been kept back by Agents, and used for their own purposes, and this too although they are required to make, and do make, Monthly Returns. Lands, however, were sold of which no returns were made at the time, and the Department had no means of knowing anything about it until years afterwards, when any purchaser who had paid up in full commenced to abuse the Department for not issuing

his Patent; at last producing the Agent's receipts as evidence of his having paid. Several cases of this kind have already come to light, but such Agents as were guilty of this practice of course took care generally to pay up in such cases as were likely to come before the Department; at the same time, it is to be presumed, withholding others, and thus managing to keep a floating balance of the public money on hand for their own use and profit. I entertain serious apprehension that when those agencies come to be wound up, too many such cases will be discovered.

Again, as regards the departmental action arising out of the Agency system, it is to be observed, that the direct and legitimate gain to the Agents resulting from their transactions being, except in two or three cases, altogether a secondary object, it could scarcely be expected that their time could be very effectually devoted to the duties of their office, involving as those duties do, the collection of evidence in disputed cases, in preemption right, squatters' claims, &c., &c., and reporting to the Department—in all which no money transactions take place, and consequently no per centage or pay accrues to the Agent. The result is that the duties are in general not satisfactorily performed, and the inevitable train of consequences ensues—inability of the Department to decide, or the probability of a wrong decision based upon insufficient evidence,—murmurs, complaints and public dissatisfaction.

In order to attach the due weight to these circumstances, it must not be overlooked, that this Department has always been, more or less, in the position of a Court of Equity, partly indeed referring to the Governor in Council for a higher sanction to its judgments, which sanction however in most cases implies but the form of adopting the departmental report. In disputed cases, which are of almost every imaginable variety, great numbers of explanations, affidavits, &c., &c., are often filed, besides which the urging of the one side or the other, either personally or by writing, being often in the hands of some able, influential and persistent advocate, and thus, with *ex parte* statements so urged, and no officer on the spot whose report of the facts of the case could be confided in, it can scarcely be wondered at if wrong decisions were sometimes given; or if, feeling the evidence to be insufficient, decisions were altogether deferred—a contingency scarcely less injurious to the country than to decide wrong. These deferred cases indeed became the great curse of the Department, for, every time they were mooted new evidence was given in, the case had to be taken up and studied *de novo*, again perhaps to be thrown aside, every investigation becoming more difficult and more tedious until, notwithstanding any amount of labor bestowed upon them, there was a constantly accumulating mass of such cases, which some means would have had ultimately to be taken to wipe off, but which under that system would continue to accumulate.

As an instance of the conflicting nature of the evidence that has to be dealt with sometimes, it may not be out of place to mention here, that in a recent case, involving an inconsiderable amount, forty affidavits were filed on the one side and thirty affidavits flatly contradicting them on the other.

Under these circumstances it was thought expedient instead of continuing a host of petty local Agents, to appoint officers of the Department, charged with the special duty of periodically visiting certain parts of the country, selling the lands, and hearing disputes on the spot, and reporting to the Department the result of their transactions on each visit or circuit. A

few days would then suffice in each instance to go over and finally decide the cases so reported.

It is perhaps proper to mention here that already the system has been established of having payments for lands made directly by the purchaser into the Banks.

There have been up to this time between sixty-five and seventy Agents in the whole Province, and I believe that about six or eight Travelling Agents will be sufficient for the duties, as, being paid by fixed salaries, such as will make it an object for them to retain their offices by their zeal and efficiency, they will be able to devote their whole time, attention and talents to the task confided to them. A section of the country will of course be set apart for each of these officers to make his circuit through, due notice being in every instance given of the time and place where he will attend. Where much land is for sale, and much demand for it, frequent visits will have to be made; while in localities where the lands are all sold and the collection of instalments only to be attended to, one or two visits in the year will suffice. Besides the mere sale of lands and the collections to be made, it will be the duty of these officers to interest and identify themselves thoroughly with the colonization and settlement of the country, by keeping up such communications as may be necessary to place the advantages of their respective sections and the lands for sale there, constantly before the public eye.

The sections to be visited by the several Agents in succession, none visiting the same section twice consecutively; thus adopting as far as practicable that system of rotation which is found so advantageous in the military and ecclesiastical services.

Under this system every Agent will be governed by the knowledge that he is to be followed on each circuit by another who will check his transactions, and that undue local connection which has hitherto led to connivance and imposition in the sale of lands will be prevented; and the appointment of special commissions for the investigation of cases and complaints now so often necessary, and which is attended with considerable expense, will be nearly altogether avoided.

The commissions on sales and collections accruing to the whole of the present local Agents, amounts, as already stated, in the aggregate to £4,664 1s. 6d. The six Officers proposed would require to be paid at the average rate of from £300 to £400 per annum, and their travelling expenses might amount to something over half as much more, say in all about £3,000 per annum for the whole Province. But even if the actual amount paid were as great, or greater than is now paid to the Agents, there would still be a great saving in the diminution of labor imposed upon the Department, and upon individuals having contested claims to prosecute, at the same time that the additional facilities it would afford for the public business of the Department and for the settlement of the country, would be invaluable.

The Agents temporarily employed on the free grant roads are not included in the number of local Agents now existing, nor does their pay form part of the sum total stated as paid to Agents in the shape of percentage. These Agents for placing settlers on the free grant lines of road it might still be considered expedient to retain for the moment, inasmuch as the scenes of their labors are in remote parts, out of the line of ordinary

practical travel, and therefore could not be visited sufficiently often by the officers proposed without wasting too much of their time.

One of the first objects to be attained under the new system, will be to commence to wipe out the mass of undecided, stayed, forfeited and contested claims which are such a fruitful source of heartburning and ill-feeling throughout the country. Even in the best settled parts of the country where it is supposed that there are no lands for sale, there are, nevertheless, many lots scattered about, which, when a question is raised respecting them, are found to be unpatented and unsold, and yet the Department is unable to say, without a very protracted investigation, whether or not any recognizable claim exists against them. To clear off this state of things Schedules are now being made of all the lands disposed of, shewing the remaining lots, the condition of which, from some difficulty or another, is still in an unsettled state. Thus it will not be necessary to wait as hitherto, as regards each lot, until the question is *forced* upon the Department; until time after time it has been taken up and laid aside again, and until papers have accumulated which it becomes a laborious proceeding even to read, but to take up Township by Township and County by County, and clear off every thing in succession, recognizable claims being at once admitted, and vacant lots sold at auction. This proceeding will be much facilitated by the map of the Province already mentioned, now in course of compilation, which will indicate the state of things even more readily than Schedules can, as every lot can be colored off according as it is finally disposed of, until it can be seen at a glance that none remain. The case of Squatters has also to be dealt with, as it is inconsistent with the dignity of the Government, or of the people themselves, that a continual contest should be going on between them and the Government, and between each other, as regards one who, having made a small clearing, considers himself entitled to a whole lot, and another who has come on after him and made a larger clearing, and a third who has done likewise, &c., &c. These Squatters should be forced to become purchasers within a given time.

#### RESUMPTION OF LANDS FOR NON-FULFILMENT OF CONDITIONS OF SALE.

Some remarks are necessary on the subject of the regulations for the sale of Crown Lands, and the systematic violation thereof by certain classes of persons who have speculated in land to which they acquired neither a legal nor an equitable title, and which they could hope to hold only through a partial administration, or rather a special inversion of the law to their benefit and to the detriment of others.

In 1852 regulations for the sale of lands were ordained by the Government, by which Crown Lands were to be sold to actual settlers only. The Order in Council by which effect was given to such regulations, stipulated the terms distinctly, and it was published in every paper in the Province, so that ignorance of its provisions could not in any instance be pleaded with justice.

It had been the intention in the first instance to apply the above rule only to new settlements, or places where the settlement of a locality would be retarded, or the settlers injuriously affected by the reservation of blocks of land in their midst by speculators, held to their detriment, to acquire value by their labor, and accordingly a subsequent Order in Council

restricted the application of the rule to recent surveys, leaving the remaining lands in the old settled townships, where the non-construction of roads, &c., could not be supposed to affect the public interest so injuriously, to be disposed of unconditionally for cash. The lands sold for actual settlement only were at a lower price than those sold unconditionally, and were payable in yearly instalments.

It will be readily seen that the object of this law was to procure the more speedy settlement of the wild lands of the Crown, by enabling industrious actual settlers to obtain them on the easiest terms without the disadvantage of intervening blocks being held by speculators, without roads or improvements. The merits of the question need not now, however, be entered into farther than to state the fact, that wherever carried out honestly, by honest and intelligent agents, the rule for actual settlement has produced the result that almost every lot open for location has been settled upon; while in localities where, from the incompetency, or in some cases, what is worse, the connivance of the agents, settlement has been very much retarded, and where it exists it is in many cases on the part of squatters who have settled on lands they have not had an opportunity of purchasing, and which are nominally sold to other parties.

The investigation lately held into the transactions of the land agency in the County of Huron has revealed a very bad state of affairs in this particular, which is not however by any means confined to that County.

I have now to treat the question of how those persons ought to be dealt with, who, either with or without the connivance of the Agents of the Department, have made *illegal* purchases of lands which they now nominally hold, or which, having themselves paid but trifling amounts for, in the shape perhaps of first instalments, they have since sold their claims to, for larger sums, to other parties.

Those pretended purchasers are for the most part men of wealth and consequently of influence, and no doubt have in many cases been induced to purchase, not only from the enormous profits of such transactions, but from the impression that they would ultimately be able to induce the Government to yield to their solicitations and confirm the sales. I cannot, however, conceive that any sound policy would sanction such a course, either on the ground of expedience or of right. That the law itself was expedient or otherwise is not the question. Such as the law is it is well understood, and it has been sustained by successive administrations for many years; and to permit parties to benefit by its known and public infraction, to profit in fact by their own wrong, would be alike injurious to those parts of the country where settlement has been thereby retarded, contrary to justice as regards those persons who were denied the right of settling on the vacant lands illegally withheld from them, and adverse to public morality as regards the interference of the Government to shield the wrong doer. If such a course were permitted the industrious poor man who, having settled on one lot, abstained, out of respect for the law, from paying the trifling sum of a first instalment on the adjoining lots to secure them also, or for want of the same influence with the Agent was refused the privilege of doing so, would justly exclaim that there was one law for one class and another law for another class of the people. Those persons also, who, knowing that certain lands were for sale only to actual settlers, knowing that the law required settlement to be immediate and continuous

from the date of purchase, and knowing that there was no adverse occupation on certain lots, have made their selection and settled on those lots accordingly, and offered to purchase in conformity with the law, would be greatly wronged if their improvements, the fruits of their labor and industry, were now to be handed over to those who have certainly acquired no such claim in equity and no title whatever in law.

The only difficulty that appears to me in dealing with those pretended sales, arises in cases where a third party has purchased, not knowing the illegality of the original title he was purchasing; or being compelled to purchase because he was an actual settler on the land, and could not otherwise save the product of the labor he had expended, and has gone on making further improvements in good faith. The vicious title acquired through the original illegal sale cannot certainly be recognised, the purchase of a bad title being in this as in other cases at the risk of the purchaser; but the party so situated may be allowed to purchase by pre-emption, leaving him otherwise to have his recourse against whosoever obtained his money under pretence of selling him a title which he (the vendor) knew to be illegal and void.

The parties who have entered largely into the speculation of making purchases contrary to law, have no doubt been tempted by the large profits generally realised. Lands taken up by the payment of a first instalment of £7 10s for every two hundred acres, being readily resold after the lapse of a short period, at a premium varying from 100 to 1,000 per cent. and upwards, on the amount paid. No right or title, in the least degree available to the purchaser, being conveyed in return for this enormous profit, there is no excuse whatever for the transaction any more than there would be for a similar act under any other circumstances in which a man may be tempted by his cupidity to get possession of his neighbor's money without giving him an equivalent for it.

Numerous applications, I may say thousands, have been made from time to time at the Department, by actual settlers, who were desirous of having the regulations waived to enable them to obtain additional lands in their vicinity, which applications have been uniformly refused, and it would not only be unjust towards them but pernicious in its moral effect if the same transaction which the Government had refused to permit them to accomplish openly and honestly, were ultimately ratified in favor of those who had effected it clandestinely through the connivance of Agents, or by purchasing in fictitious names, or under conditions which they have never fulfilled.

It must be observed that the law was made to favor the industrious poor man, not the speculator—the intention was in fact expressly to protect the former against the latter; but if effect were now given to the illegal purchases made, the law intended for their protection would thus be turned into an engine of oppression and injury to them. For, if the lands generally had been sold unconditionally at public sale the settler with his limited means might have been as able to obtain 200 acres at a fair value as the rich man would have been to purchase large tracts, for which he had to pay the same proportional value, on speculation; whereas, if the sales by which lands have, in many cases, been clandestinely taken up by a mere nominal payment were sustained, the result would be the same as if it had been the intention to withhold them from the class of actual settlers refer-

red to for the express purpose of conferring them upon speculators, such result being directly the reverse of the intent of the law. It has been said that laws are often so ambiguous as to admit of being twisted to any purpose, but there is not a pretence of misconstruction in this case, the transactions being as contrary to the letter as to the spirit of the law; nor is it pretended that they can be made legal otherwise than by giving retroactive effect to any measure by which they could be sustained. Were the Government to adopt any such course it must be apparent that the Act by which it should be effected would simply amount to an *ex post facto* law equalizing wrong.

I do not wish to condemn speculation, for legitimate speculation is synonymous with enterprise and material progress; but there is field enough for that without violating the law. The lands set apart for actual settlement belonged to those who had put themselves in a position to comply with that condition, and whose labor in developing the resources of the country in conformity with the conditions specified, was considered an equivalent for the credit and easy terms of payment they obtained. It was not therefore a legitimate speculation for parties to traffic in those lands without acquiring any legal title to them to put themselves in the place of the actual settler, without fulfilling the obligations incidental thereto, and under the colorable pretext of a title obtained by a palpable infraction of the law, to sell to others that which they had given no just or legal consideration for, and could convey no legal title to.

The price of lands set apart for actual settlement was payable in two ways: first, in money, at the lowest rate and on the easiest terms; and second, in labor and occupation of an equally specific and definite description. The second was no less a price set upon the land than the first—and in fact, as regards the country, it was the highest consideration of the two, to be received by the public in lieu of the lands alienated to the settlers. It is well known that the value of lands has risen so rapidly of late years that, taking the period from the adoption of the system to the present time, those lands have been worth, upon an average, double or treble the money prices set upon them, coupled with the other prices payable in labor, &c. Even, then, if the whole of the money price had been payable in cash, it would be an illegitimate and improper transaction by which the law breaker could be allowed to speculate in public property to double or treble the amount he had invested in it; in other words that he should be allowed by a payment of £75, (the money price of a 200 acres lot at the price stated,) and without paying the other consideration required, to speculate on the full value of property worth from £130 to £225, or upwards, in cash. But the case is immeasurably worse when these speculations are effected by payments of only £7 10s., that being the amount of the first of ten yearly instalments by which the actual settler is allowed to pay the money part of the price of his land. It is obvious that such transactions could not occur often, except on the principles of contraband trade; for, if equally open to the law-abiding as to the law-breaking part of the community, things would soon find their level. Therefore, it is only as an illicit traffic that these parties have carried on their land speculations, being tempted by enormous profits to incur the risks incident to such a course.

I have entered thus fully into this question in order that it may be perfectly understood throughout the country; and I entertain no doubt but that the principle of even handed justice which ought to prevail will

be appreciated by the community—notwithstanding the erroneous views which interested parties may strive to inculcate.

The lands in some new townships and surveys, it must be remarked, have been sold without the condition of actual settlement, since the adoption of the system I have been treating of; but this was done on the principle of public competition, the terms of sale having been fully advertised and well understood. It may indeed be desirable to throw open more lands to competition in the same way, without any condition but that of certain payments to be made, and sales effected on these terms no doubt afford a legitimate field for speculation. But even if it were found expedient to do away altogether, with any condition of actual settlement in future sales, that would offer no ground whatsoever for altering, in favor of particular individuals or a particular class, the terms of sales already made, or giving effect to transactions that were illegal and void from the beginning,—to do which would be alike contrary to public morality, to public justice, and to the rights and interests of the community.

#### RIGHTS OF PURCHASERS OF PUBLIC LANDS AND NECESSARY RESERVATIONS.

A conviction has become prevalent of late of the necessity of extending more ample protection against trespassers than the law at present affords to the purchasers of Public Lands who have not completed the payment for their lands or obtained patents, and who, consequently, not having perfect titles, are unable to exercise the full rights of proprietorship for their own protection.

With this view it is desirable that purchasers who have paid part or the whole of the price of their lands, as well as settlers under licenses of occupation should, as far as consistent with the greater interest of the public, be clothed by law with the same power to protect their lands from trespass as if they had obtained patents, by rendering the receipt for the payment of part or the whole of the price of any lot, or the license of occupation to it, sufficient as a title for that purpose.

In doing so however it will be necessary to be very guarded in order to avoid giving occasion for the practice of serious abuses, injurious not only to the just interests of other parties, but also to the interests of the public, and even to the progress of the settlement of the country.

As it might not at first sight appear that any precaution is necessary in granting such protection to purchasers of Public Lands and actual settlers, some explanation may be necessary.

The first sufferers from abuses that would arise from the unqualified application of the principle, would be the lumberers cutting timber under license from the Crown.

Here it is of importance to observe that all the lands Government now has for sale are in lumbering countries.

Past experience shows that, wherever the system of the sale or granting of public lands admitted of it, abuse was practised largely to the injury of licensed lumberers, by parties obtaining the best timbered lots within the limits of their licenses under the fictitious pretence of becoming actual settlers, but solely with the intention of cutting the timber.

At present if a licensed lumberer cuts timber on a lot purchased under the fictitious pretence of settlement through ignorance of the purchase, as is often the case with all purchasers from commencing to cut timber in the faith of obtaining license as usual, he is not at the mercy of the purchaser; and Government, with whom he has to deal, knowing that he was proceeding in good faith, and had to pay for all he took indifferently, and had done no real wrong, deals equitably with him; but were the unqualified right as by patent given to the purchaser under fictitious pretence of settlement, the latter would naturally wait till the lumberer had made the timber valuable by investing capital in manufacturing it, and then he would seize it as his, so as to reap the largest profit from his nefarious enterprise by the help of the law.

The purchaser need not limit his profit to one lot; he might purchase several in fictitious names or those of his friends or people in his employment. The first instalment on each would be but a trifle. This has already been done on a large scale, but at less cost, on the location ticket system, though not quite to the same degree of injury to the license holder, he having been only plundered of the standing timber, the law not yet admitting of his being robbed of timber that he may have manufactured.

By this simple process an unscrupulous man might become owner of a raft of timber worth a Thousand Pounds by a trifling outlay in the course of a few weeks; besides, he might keep the land if it were worth having. Of course he might lose it by non-fulfilment of settling duties, on the principle of resumption, but as his doing so would be a future affair it would not interfere with his present profits.

If the purchaser were a moderate man, possibly he might be content to make a profitable compromise at the expense of the lumberer, instead of depriving him of everything.

To purchasers of this class and to those who wish a more sure way of depriving the licensed lumberer of the best of his timber groves, an unqualified change in the law would no doubt be very satisfactory.

The purchasing of land under the fictitious pretence of settling on it, but really for the purposes of lumbering and speculation, is injurious to the public interest, as well as to the licensed lumberer working in good faith under license from the Crown.

The lands are obtained under a false pretence for purposes for which they were not intended, and on advantageous terms, designed for the encouragement of actual settlers only; and even these advantageous terms are not complied with. The lots purchased are the best timbered, which would yield Government more in duty on the timber than the price even if finally paid would amount to.

The speculator pays Government less than the licensed lumberer, while he obstructs the settlement of the country infinitely more by taking up the lands to the injury of the actual settler; whereas the licensed lumberer cannot obstruct settlement at all, the lots included in his license being at all times open for sale and settlement.

As the law now stands, lumberers suffer occasionally great injustice. They have to make dams, slides and booms, sometimes at great expense, wherever there are obstructions on the streams by which they float down

their timber. These they use in common. They have also to make roads for hauling out the timber to the streams. These roads are sometimes confined to narrow passages, being the only ones the ruggedness of the localities can afford. When the lands are surveyed and thrown open for sale any one may purchase the lots containing these slides and other works, and compel the lumberers to pay toll for making use of the works they themselves have constructed at considerable cost. Such cases are comparatively common. I have now a letter before me respecting a case in which two persons who had purchased lots including a dam and a slide constructed by the lumberers, were levying such tolls as would yield them, probably, a yearly profit equal to the full price of the lands.

They are also exposed to injury in another way. Lumbering countries are often rugged, presenting sometimes only particular routes sufficiently level to admit of heavy loads of timber being drawn out to the streams, rocks, ridges or steep banks rendering it elsewhere impracticable. Any one purchasing a lot covering one of these routes or part of it can levy toll on the lumberer, by obstructing the way, or oblige him to draw out his timber by some other but much longer road at great additional cost.

A lumberer cannot foresee at what point of his operations he is going to be assailed by purchasers—he cannot tell whether it will be his best groves, his shanties and stables, his slides or his roads, that they will take; his business requires all his capital; he cannot afford to purchase the lots including them, nor is it desirable he should. A lumberer who is at work with only a single party of men cannot be interrupted for even one day without incurring a loss equal to the whole price of one of these lots. He trusts to his contract with the Crown for protection as well as for permission.

Men who spend thousands in preparatory arrangements for getting out Crown Timber, and who pay to Government from £150 to £5,000 a year, and who know that their lumbering operations do more to encourage settlement than any thing Government has yet been able to do, think naturally enough that they are wronged if any system be followed which needlessly admits of any abuse to their injury.

Hitherto the sale and settlement of Public Lands have chiefly been in parts of the Province where lumbering was not carried on to any great extent; now it is quite the reverse. In future our surveys and sales of land will be nearly altogether in lumbering districts, which will render it more important than it heretofore has been to keep in view the relative rights of the lumberers and the settlers. And in affording protection to purchasers of Public Lands who have not completed payment, it will be necessary also strictly to protect the just interests of lumberers holding timber licenses from the Crown.

To effect this it is necessary that all future sales and grants of Public Lands should be distinctly restricted from including slides, dams and other works on streams to facilitate the descent of timber, and the ground necessary for the use of them; and all portage roads and roads necessary to pass rapids, falls and other obstacles in such rivers,—and that they should be subject to the right of way where necessary to give access to Crown Lands and Timber.

The reservation of the right of way is necessary for other objects than the protection of the lumberers; it is necessary for the future common

roads of the country. In Upper Canada there are road allowances at regular distances in straight lines between the lots. To them the right of way is, unless otherwise obtained, restricted. In the parts of Upper Canada already settled these suit well enough because the country is in general plain and even.

In the townships of Lower Canada, which are generally hilly and uneven, there is in each lot an allowance of five per cent for roads, which can be taken wherever necessary by the proper authorities; and the system suits the country well.

The regions of Upper Canada remaining to be surveyed and settled are on the whole quite unlike the part already settled, but closely resemble the townships of Lower Canada, being generally more or less uneven, hilly or rugged. In such a country regular road allowances in straight lines will not only be often unsuitable for roads, but will be occasionally absolutely unserviceable. In the parts of Upper Canada remaining to be surveyed and sold, it will, therefore, be necessary to reserve the right of way. Such a reservation is requisite for the purpose of facilitating the opening of roads by Government for the settlement of the country.

#### CLAIMS FOR DEFICIENCIES IN GRANTED LANDS.

Claims against Government can now be made good for deficiencies found in the actual quantities of lands granted, however long ago, and of however little value when granted, the claimants obtaining in compensation lands equivalent to the deficiencies estimated at what their present value would be.

The exorbitant quantities of land now to be obtained in compensation for insignificant deficiencies in old grants, present undue encouragement for the exercise of ingenuity in searching up and exaggerating claims that otherwise never would have been raised; and the disproportion between the value given in compensation and that which was originally intended to be given by the original grants, is such as to render it highly necessary that the period allowed for the bringing forward of such claims, which is now practically unlimited, should be restricted to five years from the date of the patent, and that the value of the compensation should be limited to that of the deficiency at the time that the patent was issued, with legal interest thereon to the date on which compensation is awarded.

#### WOODS AND FORESTS.

This Branch of the Department has grown up entirely within the last few years, commencing with 1852, previous to which date there was no special surveillance over the trade, though it must be evident that no branch of the public service required it more. The revenue accruing from Timber necessarily requires much greater watchfulness than that derived from land; for so long as the purchase money of the land sold has not been paid in full, the patent does not issue, the interest accumulates and the land remains growing more valuable every day, in security for the ultimate payment. But it is otherwise with timber, which, if not detected and the payment secured in time, is carried away, when it becomes impossible to get any further account of it. The benefit resulting from the organization of a Branch of the Department specially devoted to the surveillance of the *Woods and Forests*, was strikingly illustrated in its commencement, and it

has been gradually increasing in usefulness ever since. The average amount accrued from that source of revenue for the four preceding years, was £25,378 19s. 4d from which it immediately rose, the first year of the change, to £53,013 5s. 3d., notwithstanding the remission of half the amount accrued on Red Pine that season. The succeeding year (1853) it rose to £64,660 14s. 9d., and continued at about the same for two years; but during the season closed on 31st December last, there has been a slight falling off, resulting from a temporary depression in the trade, the amount being as already stated £57,109 18s. 10d. It will be observed that the amount collected and the amount accrued do not exactly agree. This arises from the circumstance that in every year there are some outstanding amounts of the previous year to collect, and some of what has accrued in that particular year left in arrear. This is particularly the case in such a year as the one now past, when, on account of the tightness of the money market, three months additional time was given by Order in Council, for the payment of Ground Rents due on 31st October, which deferred the payment to 31st January. It is therefore found most expedient to make up any statement for affording information regarding the business of the season, from the amounts accrued rather than from the amount of collections, as per appendix P., for otherwise in such a case as the above, the annual ground rents paid on 31st January last, being again payable on 31st October, the rents of two years would be crowded into one, which would not afford a correct view of each year's business respectively. These rents do not, however, enter into the accounts of 1856 though given in the statements as accrued in that year, and form no part of the gross amount stated at page 8. Ground rents are never in arrear or outstanding; (an extension of the period at which they fall due, by Order in Council, in a special time of depression being no exception), for if not paid when due, the right to the license simply lapses. With dues accrued on the quantities of timber cut, however, it is different, as the timber, even after it has reached market, is sometimes not sold till the next year, and in some such cases it is extremely difficult to enforce payment. It can scarcely however be said that there is ever any ultimate loss to the public of dues once ascertained on timber, except in some few cases of petty trespass.

The Province is divided into eleven agencies of Woods and Forests, those agencies being so arranged geographically as to afford the agent in each case the greatest facility possible in exercising a surveillance over the trade in the tract under his charge. The duties of those agencies were at one time performed by the local Crown Land Agents, with the exception of the Ottawa Agency, which was always the most important seat of the lumber trade. The management of the trade by the land agents was very defective; in fact the abuses were so great that the total amount collected in all the petty agencies was a mere trifle; nor is this to be wondered at when it is considered that these agencies were so numerous as to preclude the possibility of such a remuneration as would induce men of business capacity to accept them, or if they did accept them, to devote a sufficient degree of attention to the duties thereof. The excessive number of these agencies grew up from the supposed benefit to the settler desirous of purchasing land of having an agent as near the spot as possible to sell it to him, a ground which could not even be supposed to exist in reference to Timber Agents, who required to be located in positions forming the principal avenues to more extensive sections of country, where mercantile men and others could have more ready access to their offices. It must be apparent

also that a man capable of acting as a land agent under such a system might be able to sell a lot of land and make a satisfactory return thereof to the Department, and yet be wholly unfit to cope, and protect the public interest in his dealings, with such a class of men as the lumberers, many of whom are among the most acute and energetic men in the country.

Indeed it has become apparent that the system of having a host of petty land agents is defective in respect of land sales as well as in the management of the timber business, more particularly of late years, since the value of land has risen so rapidly that it has become a question, not only of locating actual settlers, but also of dealing with the most keen and active speculators, showing in fact reasons no less powerful for the change I am now effecting in that branch of the service than those which existed for the change already effected in the affairs of the Woods and Forests.

An evil which was loudly complained of in the timber trade was, that where an efficient control existed, as, for instance, on the Ottawa, the Crown dues were rigidly exacted, while in those localities where the agents were remiss or incapable, the greater part of the timber escaped without payment of the dues accrued upon it. Those therefore who paid in full for their timber felt that they were subjected to an unjust distinction, when they had to compete in trade with those who were able, through a defective system, to obtain theirs for nothing.

For these reasons the Agencies of Woods and Forests were accordingly separated from the Land Agencies and consolidated into larger territorial divisions, to which agents at fixed salaries were appointed, who were required to devote their whole time and energy to the due performance of their duties, instead of those duties being as before, made objects of secondary importance to men who had to maintain themselves by other means.

But although the new organization of these agencies has proved beneficial, it is not to be expected that such organization could be thoroughly perfected in the first instance, for such things are naturally progressive, as trial and experience indicate the propriety of further amendments. Thus it may be remarked, for instance, that the Saguenay Agency has been less productive than was anticipated; so has the Madawaska and Chaudiere Territory, and so of several others, while some have realized larger sums than it was supposed they would. But it must be considered that there has been a great depression in the trade for some years back, which has peculiarly affected localities where there were but few operators, as, for instance, on the Saguenay, where the principal Firm—one of the largest in the Province—was obliged, from unforeseen losses in shipping Deals to England, to suspend operations almost entirely. So also of the St. Maurice, where business was carried on for some time in a speculative spirit and with such an excessive degree of excitement that a corresponding degree of embarrassment ensued, which checked the trade for the moment, but it is now recovering, and there is no doubt that in this case the highest expectations will be realized, for the country is now well explored and in a great measure surveyed, the timber is known to be abundant and of good quality, and the Government works are in good order and are being extended, rendering the facilities for the descent of timber greater than in any other large field for timber operations in the Province, while its proximity to the greatest timber market in the Province gives it another great advantage.

The Agency at Montreal for the lower portion of the Ottawa is held in conjunction with the Deputy Supervisorship of Cullers, which is found to work well; and a similar arrangement which I intend carrying out respecting the St. Francis Agency and the office of Deputy Supervisor at Sorel, will, I have no doubt, be equally satisfactory and will effect a considerable saving in expense.

The only Agency where any great difficulty now exists is on the River Ristigouche and Bay of Chaleurs where it is found to be almost impossible to control some of the New Brunswick Lumberers, or collect the amounts due by them; the timber, when once afloat, being so easily got into the New Brunswick waters, from whence it is shipped and where the Agents cannot follow it. One great cause of the difficulty in this particular is to be found in the fact of there being no road to render that part of the country accessible in winter; a want which is severely felt by the inhabitants of that fine section of the country and a serious loss to the Province at large. If a good road were made, as already stated, by the valley of the Matapedia, it would be susceptible of settlement throughout its entire length, and would afford such means of communication at the proper season as would enable the Department to take the steps necessary to put a stop to the depredations yearly practised, and to secure the revenue. Indeed it is not too much to say that the immediate result of the construction of such a road would pay the interest of the amount that would require to be appropriated for that purpose. The shipment of the entire timber product of that part of the country from the New Brunswick side is also a draw-back to our local interests in that direction, which might probably admit of a remedy, as it has in some measure been the effect of the best shipping point on that part of the Canadian coast being taken up by an Indian village when a better site for the Indians could be found in a different locality.

In speaking of the New Brunswick Lumberers as causing difficulties by their depredations and defalcations, I must not be understood as referring to them all, which would be unjust, as many of them are most prompt and honorable in their dealings; but where circumstances admit of it, there will always be men found capable of availing themselves of dishonorable advantages.

The revenue accrued from the Huron and Superior Agency as yet consists almost entirely of Ground Rents, the amount of duties accrued on timber cut being proportionately very small, but the payment of ground rent is a transaction necessarily preliminary to the cutting of timber; the number of licenses which have already been taken up indicate the probability of a pretty large trade growing up there within a short period; and this circumstance is the more encouraging, from the fact, that the development of a large trade in that direction will form a new source of productive industry, not indeed new in its character, but new in its results inasmuch as the production, however large, will not materially affect the old established markets, the over-stocking of which has already been so often followed by ruinous consequences, but will find an outlet in the opposite direction, for the supply of the Prairie Countries to the West, entering into competition with the produce of Michigan and Minnesota.

Of the Ottawa Agency I need not say more than that it is the most important, and so far, the best organized in the Province. The development

of the system there has however been slow and gradual, great frauds having been at one time practised and much timber carried off unpaid for in cases which could scarcely be called fraudulent, inasmuch as it was merely the result of a defective system.

### PROVINCIAL TIMBER SLIDES AND SUPERVISOR OF CULLERS OFFICE, CONNECTED WITH WOODS AND FORESTS.

The management of the Government Timber Slides and the control of the Supervisor of Cullers' Department have of late come under this Branch of the service, as, indeed, they are properly and inseparably connected with it; the Supervisor being, of course, independent in all matters relating to his judicial functions in respect of the culling and measuring of Timber &c. The connection of both these Departments with the management and superintendence of the Woods and Forests is indeed essential, no less to the general interests of the trade than for the purpose of aiding in the collection of the revenue. The Supervisor as an Officer of the Government has necessarily always had communication with the Government on various subjects connected with his office, and even if no other direct object had been in view it must be at once apparent that such communication should be through that channel at head quarters by means of which the government of the trade generally is conducted, and where there must necessarily be more knowledge of its affairs than in any other Department of the Government which might accidentally be made the means of communication.

Besides this, however, a direct object is gained, by making the office of the Supervisor subservient to the collection of the Revenue accrued from Timber in connection with the Collector of such revenue at Quebec, and in whatever other way it can be best adapted to the circumstances in connection with the Crown Timber Agents, wherever else it may be found expedient to establish Deputy Supervisors. Formerly the Collecting Agent at Quebec had to be continually on the watch for the arrival of rafts, to note every change in the places where they were moored or laid up, and to prevent any of the timber from being shipped without payment of the amount due thereon; all these being most difficult services where the large number of ships and the immense quantities of timber of all kinds in the port of Quebec created a degree of confusion which rendered these duties almost impossible of performance.

The Supervisor's Office, however, had necessarily cognizance of everything, as buyer and seller can only act upon specifications obtained from thence, while numerous cullers operating in every part of the Port supplied all necessary information, which a united action between the two offices has rendered available to the Crown Timber Agent in securing the revenue: Besides this, there was an unfairness in the old system by which it frequently occurred that the purchaser was not aware that any privileged claim, such as Crown dues, stood against the Timber until he was prepared to ship it, when he found that the Crown Timber Agent had a claim against it upon which a summary seizure could be effected if he ventured to ship without paying the Crown dues, when he had already perhaps paid the seller in full without knowledge of such a charge. This injustice has been obviated by the system now in force by which the amount of Crown dues is endorsed on every specification as soon as the timber has been measured and as sales can only take place upon these specifications, the

purchaser can always see the amount due the Crown and keep it back in any payment he may make the seller until satisfied that it has been paid, and if he sees no such endorsement he is safe in assuming that no Crown charge stands against the Raft.

The Supervisor of Cullers also makes a separate return from the Crown Timber Agent, which constitutes a check upon his collections.

Another necessary connection between the offices arises from the fact that through the Supervisor only can the Crown Timber Agent ascertain the quantity in feet upon which the Crown Dues are levied. Before this system was adopted an average was assumed and the timber counted, or attempted to be counted, for it was never very correct; the evil of which was that a piece of timber of half the size and less than one-fifth of the value was charged as much as the largest and finest tree that went to market; an injustice that has now been done away with.

Most of the same reasons are applicable to the management of the Slides being connected with this Branch of the Service, as exist in regard to the Supervisor's Office, and by connecting the local offices together the service is rendered more efficient, the same operations for determining quantities of timber passing, &c., are rendered suitable for both which would otherwise have to be performed twice over, and in every respect the amalgamation has been found to work advantageously.

#### WOODS AND FORESTS RESUMED.

I now come to observe the general policy observed in the Government of the trade, in so far as it depends upon the regulations framed in this Department or ordained by the Governor in Council under authority by the Act made in that behalf, 12 Vic., cap. 30.

There is, perhaps no other Department of the Government through which such persevering efforts have been made to secure special advantage to particular interests as has been the case in relation to the Woods and Forests. It appears to have been the rule at one time to deal with special cases and the exception to govern by a general system based upon laws or regulations equally applicable to every case. Various means had been tried to check the system of holding in reserve immense tracts of territory without either operating upon, or paying any equivalent for the privilege of being permitted to reserve such tracts. The want of success in every attempt made to curtail such undue privileges redoubled the outcry against them on the part of those who did not participate therein, thus creating a constant agitation and a feeling of uncertainty and doubt in relation to the institutions connected with the trade.

The Ground Rent System having been at last adopted, however, the feelings of those who advocated extreme privileges, and those who opposed them were tranquilised for the moment; the former being satisfied that it maintained their position for a time and the latter seeing that if ultimately sustained it would reduce all monopolies of timber territories to their just proportions, to such extent, in fact as parties might see fit to pay for upon an intelligible principle equally open to all to avail themselves of according to their means.

The holders of extensive limits were by this system fully protected at the moment, by being enabled to maintain their positions by the payment of 2s. 6d. for every square mile of area held by them, a charge which

though in excess of—or in addition to—all previous charges for the timber cut, &c., (which otherwise remained the same as before) was yet so trifling as to be but lightly felt. But the principle of the ground rent system is, that when timber berths remain unoccupied the rent goes on increasing in geometrical progression as a penalty for the monopoly by which one person withheld from others that which the non-occupation of it proved that he did not require for himself; while, if the holder of any such privilege did require it for actual use, the payment of the extra rent for a few years was not more than the privilege of reserving it was worth.

It will be readily seen however that the operation of such a system would reach a climax within a limited period; that although it could scarcely be said to be even a check in any degree upon monopoly, in the first instance, the increase in the annual rents on unoccupied tracts, after the first few years, became so sudden and great that a crisis became inevitable.

This crisis arrived in the year before last, 1855, the rents of unoccupied berths having in many cases reached a figure the preceding year which if again doubled, with a certainty of being quadrupled in 1856, would have rendered the grounds untenable.

A general effort was therefore made by those interested to have the system suspended or rescinded.

A new feature in the controversy arose on this occasion from the interference of a great body of the Shipping Merchants of Quebec, who submitted a counter petition opposed to the views of those of the Producing Merchants, who desired to be relieved from the accumulating Ground Rents.

The lumber trade being one of the principal resources of the country the regulations by which it is governed must always be of great moment and worthy of the greatest consideration, and therefore, I trust that the importance of the subject to the country at large may be deemed sufficient to warrant a pretty extended reference to the consideration bestowed upon it at the period of the crisis referred to, and which has resulted in establishing a degree of permanency in the institutions connected with it which was previously unknown.

As the lumber trade is ordinarily conducted in this country there are two distinct branches of it, viz: that in which the Producer is engaged and that which is carried on by the Shipper. There are some firms who are engaged in both branches of the trade, but although mutually dependent, they are always distinct from and sometimes antagonistic to each other. The principle feature in which they conflict is that it is the interest of the Producer that the prices should rule high as compared with the cost of production, while it is the interest of the Shipper that they should rule low in the Lumber Markets of this country as compared with the prices in England.

This subject was very fully treated of in the evidence taken before the Parliamentary Committee, in 1849, appointed to enquire into the causes of the ruinous state of the trade which had existed for some years previous to that date (See Appendix P.P.P.P., of that year) which it may not be considered inopportune to refer to as perhaps the greatest crisis the trade has ever had to contend with, since it grew to anything like its present importance.

By the evidence obtained by the Committee on that occasion, it will be seen that, commencing with the year 1846, there was a supply in the Quebec Market wholly disproportionate to the demand, originally caused by an unwisely forced production, and aggravated in the succeeding years by a diminished consumption arising from the general depression in commercial affairs which occurred in 1847. The important fact to be observed here is, that in 1846—a year in which the statistics of the trade prove that all the elements of prosperity existed in the highest degree, the most wide spread ruin occurred among the producers. The business of 1845 was most profitable to the country and to individuals engaged in the trade, while the business of 1846 was ruinous to individuals and a loss to the country. The demand and the shipments in 1845 exceeded those of previous years; the demand and the shipments of 1846 were equally great, or even slightly in excess of those of the previous year. The reason of the prosperous state of the trade in the one year and its ruinous state in the other is therefore to be found in the fact, that in 1845 the supply was in just proportion to the demand, while in 1846 a supply was forced upon the market out of all proportion even to the great demand and shipments of that year; the result was, that in the one year individuals realized a profit on their business and the country at large reaped a profit on the total export, while in the other year individuals had, from over supply, to sell for much less, timber which (from over stimulated production, enhanced price of labor, &c.) had cost more, and were therefore in many instances ruined, a loss being at the same time sustained by the country at large, which, in the total export of the season, parted with so much capital at something like half its value.

The over production of 1846, (which did not all reach market that year) continued to depress the trade for several years, the supply of square timber resulting from it, in Quebec market, having been as follows, viz:—In 1845 there was a supply of 27,702,344 feet, to meet an export of 24,223,000 feet; but in 1846 a supply of 37,000,643, to meet an export of 24,242,689 feet; and in 1847 a supply (including the over stock of previous years) of 44,027,253 feet, to meet an export of 19,060,880 feet. Here then the distinctive interest of the different branches of the trade may be seen; the business of 1845 which was so profitable to the producers and the country, having been of but doubtful benefit to the shippers, who had to pay quite as high a price here as the prices in England would justify; while the business of 1846, which was so ruinous to the producers—who had to sell at less than the cost of production—was profitable to the Shippers who obtained the timber in Quebec at about half the price it had cost them the previous year, while there was not a corresponding diminution of price in the English markets, at least during that season, and those of them who had contracted realized the full benefit of their contract prices, on the diminished rates they had to pay in Canada.

It is needless to discuss the continued depression of the succeeding years, in which the general derangement of commercial affairs—which began in 1847—was the principal cause; but there can be no doubt, that so far as the Lumber Trade was concerned, the depression was aggravated by the enormous production of 1846, which continued to hang upon the market for years after. But it is important to observe that the cause of the over-production itself was shown, by the Parliamentary enquiry referred to, to have been in part indeed the natural stimulus arising from the successful

operations of the previous years, but in part, also, the unwise course, at that time pursued by the Government, of forcing production, as will hereafter appear upon explanation of the regulations

It is to the advantage of the shipping interest that production should again be forced; it is to the advantage of the producing interest that it should be limited: Shippers and Producers are alike essential to the trade, and while it would be a mere waste of the labor and capital of the Province for the Government to *force* production, it may be safely assumed that the true course is to let the trade, as far as practicable, regulate itself without interfering on the one side or the other. But it so happens that there must be some regulations to govern the cutting of Timber on Crown Lands, and it is an unavoidable incident of such regulations that they must exercise some influence upon the trade. The object the regulations should have in view, therefore, in this particular, is to exercise that influence to the least extent possible at the same time that they hold out equal facilities to all desirous of embarking in the trade, due protection to all in the rights acquired and full security for investments of capital necessary to be made, to render the resources of the timber territories available, but not to lock them up in unproductiveness.

Such being the principles at stake and such the adverse interests involved both parties memorialized the Government, each endeavoring to secure the preponderance of their particular views.

The Memorial in the shipping interest did not, however, correctly represent the grounds upon which those who signed it really opposed the object sought for by the producing interest. I would indeed be sorry to accuse gentlemen of their standing and respectability of any intentional mis-statements, but yet, from being ignorant of that branch of the trade with which they were not connected and of the regulations by which it was governed, they allowed themselves to be led into a train of argument which raised entirely false issues, some erroneous information or misconception, having led to the result that every paragraph in their memorial conveyed, either inferentially or directly some statement that could not be sustained by facts.

They assumed in the first place that the Ground Rent was "a condition agreed to by the License holders when they obtained the privilege of cutting, &c." which was not the fact as regards the great bulk of the trade, the Timber Berths having been obtained without any such condition, and the Ground Rent being an additional impost to which they have since been subjected. They next stated that "of late years the bulk of the Timber Limits of the Crown have been monopolized by a few Houses," whereas, there had been no change by which this could have been effected, the only change introduced for several years having been the very one they were seeking to maintain, establishing Ground Rents, &c., as the most efficient check upon monopoly which had yet been found.

I may here remark that the assumption that a great monopoly of the Timber Territories existed was at best a chimera, as proved by the fact that there are upon an average about nine hundred Timber Berths under license in the hands of about five hundred persons. The assertion, therefore, that there is Monopoly where there are five hundred competitors, each equally free to deal to a large or a small extent as he sees fit, or his means will allow, needs no further contradiction.

There may indeed be some local monopolies, where persons of large means buy up the lesser establishments in their vicinity ; but anything approaching a general monopoly in this trade, under existing regulations, is impossible ; and, so far as any local monopoly exists, it is not by Government that it has been created or is sustained, but by the influence of capital, the application of which for the purposes of trade the Government cannot control. The greatest local monopoly that has yet arisen in the trade was that which existed for a few years on the St. Maurice, and there it arose from the influence of capital at public competition, although the regulations on that occasion were specially calculated to throw the trade of the territory into the greatest number of hands possible. Capital, however, bore down all opposition for the moment, and it is due to the firmness with which the Government resisted repeated, most urgent and most influential appeals to relax the regulations that that monopoly was ultimately broken up.

Indeed it may be truly said that the shipping branch of the trade, as carried on at Quebec, bears much more the character of a monopoly than the producing branch, the whole of the business arising from about five hundred competitors on public lands, and perhaps an equally great number of producers on private lands, being, so far as the business centres in Quebec, in the hands of about forty shippers, nine or ten of whom do more than three fourths of the whole business. But this, in like manner, so far as it can be called a monopoly, is the result of capital, and is not influenced by Government, which can as little interfere to limit the operations of the Producer to one Timber Berth or a hundred Timber Berths, as to limit the business of the Shipper to one Ship or a hundred Ships.

The memorialists also stated that the monopoly of which they complained was "to the almost total exclusion of those whose means or influence was not so great as to obtain limits." There was here a remarkable instance of men of high position descending to meddle with other people's affairs, and being thereby led to commit themselves to vulgar errors on matters of which they were themselves wholly ignorant. It will be seen that in the above they asserted two distinct grievances as the causes of the monopoly they complained of ; first, that those without a certain amount of means could not obtain "Limits" or Timber Berths ; and second, that, (failing means) they might be obtained by influence. The first must indeed be admitted. Men of means will acquire Timber Berths as well as houses and lands and ships to the "exclusion of those whose means are not so great as to obtain them ;" it is an old grievance for which Governments have not yet found a remedy.

And even if, at the suggestion of these memorialists (who, by the way, were not of the class who usually advocate such a doctrine) the Government had taken, or should yet take some undefined way of throwing the Timber Berths into the hands of those who have not means to obtain them in a legitimate manner, those who possess means would (provided the tenure justified the investment) immediately buy them out, and then there would be the same cry for a repetition of the operation.

With respect to the second grievance, it is sufficient to say that it is not to be found in the law or the regulations affecting the trade ; and as it could only exist in violation of both, the memorialists should have established the fact, before they claimed credit for it as such, whereas they did not attempt to substantiate even one case of such violation.

They suggested in conclusion that if the license holders were unable or unwilling to pay, &c., their Timber Berths should be thrown open to competition, and they, the memorialists, believed that, notwithstanding the depressed state of the trade at that time, they would be readily taken by others without loss to the revenue.

It is difficult to write seriously on such a proposition; there can be no doubt that if the opportunity had occurred and had been taken advantage of to submit to public competition, privileges which have already been in many cases dearly bought, and in the development of which on the whole hundreds of thousands of pounds of private means have been expended (as shown by Returns laid before Parliament in 1852), they would readily be taken without loss to the revenue, but it was an issue not more reasonable nor likely than that the ships of the memorialists would have been made available to the revenue if they had asked for a change in the navigation laws.

Such was the false position assumed by the shipping interest at the period referred to, but the erroneous grounds upon which they opposed the prayer of the producing merchants of course made no argument either for or against the latter, which had to be dealt with upon its own merits.

The memorial of the producing merchants was signed by some of the shipping merchants also, who are connected with or interested in the business of the producers, and there appeared to be two or three Firms, not known to the Department to be connected with the producing interest, who signed, it is presumed, in a liberal view of what they conceived to be for the good of the country and the trade at large: some merchants and others of Ottawa had also joined in it, who are not personally engaged in the trade, but whose interests are bound up with those of the producers.

The object of the memorialists, as expressed, was to obtain a cessation for three years, or until the then existing depression had passed away, of the penalty imposed for non-occupation of Timber Berths. Although the object sought was professedly of a temporary nature however, it would no doubt have been made a precedent for seeking Government interference in every fluctuation of the trade thereafter. It would have been the first precedent that could be quoted since the adoption of the new system, and therefore I shall state the reasons that induced its rejection, as I conceive that upon the integrity of the system being maintained in the future depends much of the prosperity of the trade.

It is to be observed that when the great depression occurred in the trade, which began in 1846, and from which it was about four years before it could be said to have recovered, the ground rent system was not in force. The license holders were at that time subject only to the payment of the amount of duty accrued on the quantities cut; they were then as now obliged to occupy every year, but under pain of forfeiture of the right to renewal of license instead of the penalty of an increased payment. It was complained of this system that it favored monopoly, inasmuch as a Berth could only be proved unoccupied at a very heavy expense, and then it was still subject to be repurchased by the former holder. The standard of occupation (that is the quantity required to be cut to constitute occupation) was in 1845-6 made too high, thereby having a tendency to force production. In obedience to the cry of monopoly, then prevalent, notice was also given by the Department, about the same time—there being then no statute upon

the subject—that all the larger Timber Berths would be subdivided in three years; this also, although never actually effected, had a tendency to *force* production, as license holders were naturally desirous of making the most of their Berths by cutting off all the best timber in the interim.

Parties differed in opinion as to the exact amount of influence these rules exercised upon the over production, but it was generally admitted that they exercised some influence in that way. At all events the result of the ruinous state of the trade was that the Government did afford relief in these particulars, the notice of subdivision was withdrawn, the standard of occupation was reduced, and finally the parties were allowed from year to year, up to 1850, to hold their Timber Berths without any condition of occupation at all, and without any payment where they did not choose to occupy.

The action of the Government on the trade, during the periods of great prosperity and succeeding depression referred to, was thus in opposite extremes. It therefore became expedient that a better permanent system of regulations should be framed for the government of the trade, and the regulations of which the ground rent system is a part were finally the result.

By this system an annual ground rent was imposed on Timber Berths in excess of the duty, as a regular permanent charge. And as a check upon monopoly it was provided, by way of penalty, that the ground rent should double upon each renewal of license on Berths which had not been occupied during the preceding season, and continue doubling every year, so long as the Berths continued unoccupied. Thus the rent paid for the largest size of Berth the regulations permit—in excess of all other charges—is £6 5s, the same being payable annually. But upon non-occupation for one season the rent rises to £12 10s,—upon non-occupation for a second season to £25,—for a third season to £50,—and so on (as the system was first introduced) without limit, but reverting to the original rate of £6 5s, whenever occupation recommenced.

For the first few years after the introduction of this system it could not force production to any very sensible extent; but the constant increase, in geometrical progression, at last comes to a point when the increase is so great and sudden that those who held any timber berths in reserve, had either to occupy or relinquish them. Unfortunately as regards the great bulk of the license holders, the operation of the system had just reached the point, (when they had either to produce more timber, or relinquish that which they had already paid a series of rents for, and, in some instances, otherwise laid out money upon, without return) at a moment when the trade was in a state of considerable depression and required a decreased instead of an increased production. This state of depression too, arose from causes wholly foreign to the internal management of the trade; for it differed from the previous great crisis in the trade (that of 1846-7, &c.), in this, that it arose less from an excessive production than from a sudden cessation of demand,—the result probably of the war then raging. It differed also in degree, bearing only the character of a temporary embarrassment as compared with the wide-spread ruin which fell upon the trade on the former occasion. It was, none the less, necessary however to apply a remedy, if practicable, in time, and it was in this view that the producers sought to be temporarily authorised to suspend production where the ordinary tendency of the regulations was to enforce it.

It was not therefore, as put by the opponents of the producing interest, a question of the holders of timber berths, fulfilling or failing in their obligations, and even if it had been so, the maintenance of the penalty in its full force, would not, at least for some time, have compelled any considerable relinquishment of licenses. On the contrary, the parties would have continued to hold them, and endeavored, by extended operations, to reduce to their original amounts, the Ground Rents on such berths as the penalty had most accumulated upon, thus risking the consequences of increased production rather than abandon their licenses.

The real question at issue therefore simply was, whether the penalty for non-occupation had been made too severe or not?

But there was also the question of whether the exceptional circumstances then existing, arising out of the war or otherwise, were such as would justify the temporary suspension of the penalty?

On the first head, as regards the penalty for non-occupation generally, it is to be observed, that if any regulation were to succeed in compelling the occupation of all the lands licensed, it would force a production far beyond the requirements of the trade; no regulation could permanently have this effect, however, as the result of an excessive penalty would be to cause the relinquishment of a portion of the territory now under license, which (apart from the question of whether it would not afford in every period of excitement, too great a facility for a rush into the trade) would leave a portion of the timber lands wholly unproductive, either in ground rents or duties, which now afford a very considerable revenue.

The system of regulations for the granting of licenses to cut timber began by a course of trial and error and has gradually been perfected by experience.

The Ground Rent system was a trial; it has proved a most happy and successful one, which has given general public satisfaction to the trade; but it would be too much to pretend that in the first trial there had been no error, that it had been perfected at once without any experience of it practically.

In the introduction of the system the then remote contingency was not provided for, that if no limit was set to the ultimate amount the ground-rent might reach, great hardships might in some cases be the result; such for instance as might arise in case of several timber berths being taken up in a previously inaccessible locality; assuming in such a case that the license holders (joining together for that purpose) proceed to improve the stream (as is frequently done to the extent of many thousand pounds), lay out all the means they can command in the operation and before the rents have reached an excessive amount are enabled to occupy the lower berths; but some pressure then comes, they cannot push their improvements immediately to the upper berths, and the Ground Rents arrive at a point where they compel relinquishment, while they could not compete for the re-purchase on equal terms with any new purchaser who would have the advantage of their outlay.

It has been suggested that a remedy for this might be found by admitting improvements in lieu of occupation, which would be just in principle, but practically extremely difficult of application.

The cases urged upon the Department from every part of the country would be numerous, the evidence to be adjudicated upon would be entirely *exparte*, the exact nature of the improvements to be admitted would always be a matter of dispute, and however honestly administered the system would give rise to constant accusations of partiality and favor.

Upon a full consideration therefore of all the circumstances it appeared that the difficulty might be met by a general rule, calculated to perfect and give permanency to the system as a whole, instead of impairing it.

A rule was accordingly adopted which consists in limiting the extreme amount of Ground Rent on any berth to a sum equal to what the berth would produce in duty, if duly occupied, the rent remaining at that rate per annum, till occupation commences—reverting then of course to the original rate as before. This, while it entails a heavy payment on those who reserve berths for future use, as much in fact as they would have to pay for the timber if they cut it, affords no public ground for complaint, for the public get the price of the timber annually while the timber itself remains, with the public interest in it, for future revenue, unimpaired; at the same time it prevents the system from becoming oppressive, and therefore, inoperative, as all oppressive laws ultimately become.

On the other head, with regard to the temporary suspension of the system, the same issue as was then involved, is now at stake and must continue to be so. It must be remarked, as a general rule, that any departure, for partial, local or temporary causes, from the fixed laws affecting the trade is bad in principle, and calculated in every case to produce a bad effect. If, when a depression has arisen from over production, or other causes, which the trade has brought upon itself, the Government should once step in to affect the market, or the supply, directly or indirectly, the same interference would be looked forward to again, and induce an over speculative spirit in time of prosperity, sure to end in a similar result. If the Government were at any time to relax the conditions it has seen fit to impose upon the holders of unoccupied timber berths without some other cause than the ordinary fluctuations of the trade, public confidence would be shaken either in the efficacy of the system itself or in the administration of it. Nothing but the strongest necessity, arising from causes foreign to the trade itself, could at any time justify an exception to this as a general rule, and the only question on this point worthy of consideration at that time was, whether the effects of the then state of war were such as to justify its being made an exceptional case.

In considering this question it became necessary to take a retrospective view of the trade for some years, from which it appeared that there had not been any very excessive supply in the Quebec Market as compared with the export. The supply was indeed somewhat excessive in 1852, and the stock of square timber on hand at the close of that year (18,151,750 feet) was also excessive, but the producers—profiting from the sad experience of 1846 and the embarrassments of succeeding years—having cautiously limited their operations, the supply was much less in 1853, and the stock on hand (12,632,929 feet,) at the close of the season greatly reduced. But from the great demand these were years of great prosperity to the producing interest, and consequently an impetus was given to the supply produced in 1854, which was very great; but the export was also greatly increased, and the stock in hand at the close of the season (13,465-

602 feet) though large yet with the more limited production for 1855, was not at all such as seriously to embarrass the trade had the usual demand existed. From whatever cause, however, the demand had greatly diminished, for at the time the subject was most strongly pressed upon the Government, say 2nd July, 1855, the tonnage arrived in Quebec, from sea, was 121,778 tons against 240,021 tons to the same period of the previous year; and at the close of the year 346,449 tons against 580,323 tons the previous year; and in like manner, the quantity of Square Timber exported in 1855 was 15,389,774 feet against 25,346,800 feet in 1854. There is a defect in the present law which prevents the statistics being got so correctly in respect of Deals. There is also a large quantity of Timber usually absorbed in Ship-building and exported in that shape, in which there had also been a falling off. The result of a full investigation of the subject, however, was to show that the trade was on the whole in a healthy condition, and that the depression at that period was only temporary, for although there had been no excessive production for some years previous, as compared with the export; the export itself had been great, having been gradually increasing till it produced a temporary glut, not in the Quebec Market but in the English Markets, which had precisely the same effect, and which was in some degree aggravated no doubt by a diminished consumption resulting from the War and the tightness of money matters consequent thereon.

The prayer of the Memorialists, therefore, to be authorised to suspend their operations for three years without incurring the penalty of increased rent, as provided by the regulations for non-occupation, was refused, for even if such an extreme case could arise, there did not then appear to be any cause operating to produce such permanent embarrassment as would have warranted the Government in interfering with the integrity of a system which had, so far been found to give stability to the trade and satisfaction to the public.

The result has justified the course pursued; the report in 1856 having been nearly up to the average, or 3,919,378 feet (equal to forty six million inch board measure) in excess of the previous year. The season was in fact, upon the whole, a very fair one, both for the producer and the shipper, and this without any such extreme measure on the one side or the other as the Government had been asked the year before, to adopt for the safety of the trade.

The only change adopted was one which had not an immediate effect; it consisted, as already stated, in making the Ground Rent on unoccupied Berths cease to increase when it had reached the extreme amount which Ground Rent and the Dues accruing on Timber cut would both amount to upon a Berth which was occupied. The public could scarcely ask more, as a protection against monopolising Timber Berths than that the parties who do so should be made to pay for the timber when they don't cut it, the same as when they do cut and carry it to market.

In former years more stringent laws were made against holding Timber Berths unoccupied, but the result was, as has already been seen, that when the crisis came the Government always gave way, thus proving that extreme measures are always the least effective, while they lead in matters of trade, to uncertainty and fluctuation. I have entered thus at length into the circumstances attending the appeal of the opposing interests to the Government in 1855, because there was then undoubtedly serious apprehensions

entertained by many that a time of great embarrassment and difficulty was at hand ; while a crisis had actually arrived in regard to testing the efficacy of the By-Laws by which the trade is governed, so far as it is, as a whole affected by the operations on public lands ; and because, therefore, the action then taken has so far solved a difficult problem and is likely to exercise a permanent influence on the trade.

The decision on this occasion was not, however, sufficient to prevent one more attempt being made to obtain exceptional privileges in favor of Saw Mill Establishments, for which several petitions were presented to the Government which were lately under consideration and rejected, and as the subject is of very great importance to the country it may be desirable that I should explain the principles and policy involved in the question.

In the memorials laid before the Government there was some difference in the mode of arriving at the end desired but the object was pretty much the same ; one requiring that the total quantity of Logs cut for a Saw Mill Establishment should be set against the total area of Timber Berths held for the same ; in other words that the cutting of double the quantity required to be cut to constitute occupation on one Berth, should entitle the parties to hold another Berth unoccupied, without increase of Ground Rent : another that they should be relieved from increasing Ground Rents on certain Berths till improvements were made, &c., &c. The main ground on which a preference was asked being, that Saw Mill Establishments were more beneficial to the Country than Square Timber operations, and also, that they required a greater supply of Timber in reserve for future use.

Many of the arguments used by the parties had, indeed, already been admitted reasons in favor of encouraging Saw Mill Establishments in preference to the Square Timber Trade, and are so acted upon, such preference being conferred by existing regulations by which something less than half as much is charged for Timber cut on public lands for Saw Mill purposes that is charged for what is cut for sale as square timber.

It has been contended, however, that this advantage is not so beneficial as the one sought for, inasmuch as the lesser price paid for Saw Log Timber tends rather to stimulate production, while the great evil by which the trade is so constantly embarrassed is over-production, and the memorialists in this case in urging its effect in over-stimulating the trade as an argument against the compulsory occupation of every berth, contended that the amelioration they asked for would have a tendency to check manufacture, by enabling them to hold the timber berths, required for future use, for a number of years without being forced to occupy them.

But it is difficult to see how such arguments could apply without giving a direct sanction to monopolies in general, for if the lesser price charged for the raw material, of which deals are manufactured, tends to stimulate production, it does so only because it enables the producer to sell at a cheaper rate, and, therefore, enter into more extensive and more successful competition with similar products of other countries : but to enable certain large dealers to lock up and withhold large quantities of the raw material from being manufactured, except as they saw fit to bring it upon the market, would tend to check the supply, limit the extent of our competition with other countries and give a fictitious value to the article, for the moment, adverse to every correct principle of trade.

It is true the few interested would benefit by it *for a time*, but where the raw material is so abundant the trade would again, ere long find its own level, because other capitalists, seeing the advantage derived by the favored few, would buy up timber berths at the enhanced price (or fictitious value), which the exceptional rule in favor of berths held for saw mill purposes would give them; or, what would be the same thing in effect, would turn the berths they already hold for the square timber trade, to saw mill purposes, and erect large establishments for the manufacture of deals; and when the supply had again reached the same limit as is now complained of, similar arguments would be adduced in favor of some new antidote to prop a trade, which, instead of being left to rest on its own basis and find its own level—the only stable principle upon which any branch of trade can be successfully conducted without injury to other interests—had been fostered into an unnatural growth.

If the exceptional rule asked for by the Petitioners had been conceded, there would have been a general outcry against it by all parties not immediately interested in favor of it. No such exceptional rule could exist for any length of time in face of the general feeling of the trade against it, and the inevitable result would be its repeal at no distant date, thus creating fluctuation and uncertainty—the evil features of the worst system to which any trade can be subjected.

It is evident also that by giving an artificial value to the manufactured article, its sale would be limited and the raw material, in the shape of square timber or saw logs, purchased for exportation instead, on which no restriction or check could be placed. The great bulk of the square timber exported is afterwards sawed and thus enters into competition with the sawed lumber exported; so that the parties are really in opposition with themselves when they complain of the over supply of sawed lumber in the home markets, and seek a cure by some further check upon its manufacture here, which, if it did have the effect they desired on the one hand, would simply stimulate in the same degree the export of the raw material, thus merely circumscribing their own branch of the trade, so far as it is in their hands, without the power to check in any degree the other and main source of supply, which in fact governs the market.

The only strong argument in favor of the pretensions of the saw mill proprietors is, that their establishments require a larger permanent supply of timber than is required for operations in square timber, and should therefore be allowed to have reserved berths for future use. But, granting this to the fullest extent the present regulations do not prevent parties from holding, in reserve and unoccupied, any extent they may see fit for future operations. They have only to pay for this privilege an additional amount of Ground Rent, the extreme amount of which has been limited, as already explained.

As shewing the degree of protection already extended to Saw Mills, the practical way to view the case would be to place the burden of the extra rents they have to pay for the greater extent of territory they conceive it necessary for them (as compared with square timber dealers) to reserve for future use, against the lesser price they have to pay for the timber. Such a comparison would at once shew that no sums so paid for extra rents reach anything like the amount to which the saw mill proprietors are relieved by the lesser price charged for the saw logs.

Besides, even if desirable, the larger permanent supply required by Saw Mills as compared with Square Timber Establishments, is a matter which could not be regulated by any *practical* means the Government could adopt. The fact is that these Timber Berths have become matters of exchange, are something bought and sold for purposes of speculation, and have their price according to their market value at the time being, depending upon their situation and the amounts expended in improvements upon them or otherwise, so that it is quite common for parties who have more than they they want to sell out, and for those who have less than they require to buy them up. The timber territories in the principal Lumbering districts are greater in extent than the wants of the trade, and if any of the large Saw Mill establishments should at any future time fall short of the supply of Timber necessary to their successful operation, there are always more open to be acquired at their market value for the time being, either from the Crown or individuals who already possess them. Any exclusive means by which they could be allowed either to acquire or retain them would not be permanent, and would only give to them a fictitious position, which, in the certainty of its instability, would ultimately tend to their own detriment.

There was a time when exceptional rules were the bane of the Lumber trade; when the consideration of special cases on special grounds was so common that it was almost the rule instead of the exception, and the result was, not only an accumulation of such cases constantly before the Government, but the still worse consequence of a state constantly bordering on anarchy in the Lumbering districts of the Ottawa. No proper government of the trade can possibly exist except by general regulations equally applicable to all, and under which all can exercise like privileges. No better proof of the soundness of this principle could be given than the operation of the exceptional rule prayed for by the Saw Mill proprietors would afford if conceded, for even if the theory upon which it was asked were correct, its application would be impracticable. To exempt all Berths held for Saw Mill purposes from double ground rent would not be attainable in practice, because the double rent accrues only on *unoccupied* Berths, which, though ostensibly held for that purpose, would merely be reserved and might be turned to any other purpose at some future time. To admit of a certain extent being held, free from the double ground rent system, in proportion to the operations of the different establishments, would leave the question of proportion each year to be determined according as the operations varied, and would thus also be impracticable. It would also aggravate the evil complained of, for it would stimulate production inasmuch as the largest operators would be entitled to the largest reserves.

One mode in which the parties suggested that effect might be given to their wishes was that their operations on any part of a River should count against all they held on that particular stream. This would be equivalent to granting the whole territory on such River in one license by occupying one portion of which the trade might be totally excluded from an immense area of country, thereby giving rise to continual local discontent and heart burning, while the benefit usually derived from the Lumber Trade in drawing settlers into various parts of the country, where they form the nucleus of larger settlements, would altogether cease.

The arguments which have been strongly urged upon the Government for the relief of parties holding Timber Berths, on which the rents have run

up to the highest scale, but which cannot be used till improvements are made, would be equally applicable to a number of cases which have not been brought under notice, but which, if the concession were made in one instance would immediately pour in upon the Department, and it is scarcely necessary, after what has already been said, to enlarge further upon the impolicy of exceptional rules in special cases, where all can secure to themselves the enjoyment of equal rights under general regulations. If the lumbering grounds acquired in certain localities are not available till further improvements are made, the parties need be under no apprehension of others acquiring them, should they for the present give them up, as they would be alike useless to others as to them. If in any case the present holders meant to make the improvements themselves, it would not be proper that they should be allowed to lock them up for years, till it suited their convenience to make such improvements, when others would perhaps make them in less time if they had an inducement to do so by finding the Timber Berths open to be acquired. If, on the other hand, the parties in any case desired to hold them till the improvements said to be necessary are made by the Government, the policy would be still more questionable if they were allowed to hold, by special exemption even from ordinary charges, property to which the Government was about to give increased value by the expenditure of public money.

I have entered into so long an explanation on this head in order that the policy of the Government on such questions should be publicly known and understood throughout the country, and with the view that it may have a tendency to check the continual efforts which are sometimes made to obtain particular advantages, and in which there must always be more or less risk of some changes being effected, at particular times, as for instance when the change of the head of a Department occurs and the new one may not be prepared with the information necessary to shew the tendency of propositions professedly based on public grounds, but having, in fact, a more limited scope, for it is desirable that it should be a well established principle of public policy, thain no case can the Government properly interfere to the advantage of individuals by setting aside principles or abrogating laws or regulations by which the community at large is governed.

I may here add a few words on the subject of a different system which has been tried on the St. Maurice from what has prevailed in other parts of the country. Timber Berths have been generally acquired by priority of application. This system has obtained for a great length of time, consequently the original title to many of them is now very old. When first granted in that way the demand was less than the supply, therefore every man got what he was the first to ask for, and when another saw fit to go beyond the location so granted he was treated in like manner. Some went to a great distance along a main stream, where the navigation was good, rather than incur the expense of making a stream full of falls and rapids fit for the descent of timber: another, judging differently, took what his predecessor left and expended his means in slides, booms, dams, &c., rather than in carrying his supplies farther into the interior and "driving" his timber a greater distance, and thus the process gradually went on in the development of the trade.

The same system may still be said to obtain, the first applicant being entitled to obtain license upon complying with the terms; nor does he

thereby receive anything that would bring a price, at public sale, over and above the rents and duties chargeable, for he only gets what has been open to the public all along, and which nobody would take before him. He has however to incur a very considerable expense in exploration and survey to enable him to acquire a new locality.

Berths which become vacant by forfeiture or otherwise are not however granted in this way until they have been offered at public sale, but if not then saleable they are open to the first applicant, as above.

The exceptions to this rule are where any particular tracts of country have by any means been withheld from being absorbed by this gradual process, and afterwards thrown open at once, when numerous parties would naturally desire to compete for the same privileges: in such cases the Berths were disposed of accordingly by public competition; as, for instance, on the Gatineau, which had been withheld from the public generally—by special privilege in favor of a few who undertook to improve it—for a period previous to 1843, when it was thrown open to competition by public sale. Other sales were held on the same principle, whatever remained unsaleable on these occasions being thereafter open to the first applicant.

The St. Maurice Territory was long open to be acquired as above described, but the great falls of Shawenegan formed a barrier which private enterprise could not overcome, and therefore the country above remained for the most part unappropriated.

When the Government Works were undertaken, however, an additional value was at once given to the territory, and then it would have been unjust that the few, who might accidentally be the first to learn the fact, should be able to take advantage of the increased value, which they did nothing to create, by acquiring the best Berths, simply by priority of application. The general regulations were accordingly suspended in respect to that territory, a cursory survey made, and the Berths disposed of by public sale.

In the regulations adopted for the sale however a different system was adopted from any that had been previously tried.

Previously, sales of this kind had been for a cash bonus, payable in hand and in excess of rents and duties, which otherwise remained unchanged.

But on this occasion the sales were for an enhanced rent, instead of a bonus, the competitors being successful who bid the highest rent, the amount for the first year being payable in cash.

By this it was supposed that the cash payment would be so much less as to afford small dealers a better chance of getting a share of the territory, which the large Houses would otherwise be likely to monopolise.

The result, however, was that these Houses purchased almost everything at enormously high rents. But the sequel shewed that they hoped to induce the Government to reduce the rents, which was accordingly tried when the next year's rent fell due, but refused. When the third year's rent fell due, still more strenuous efforts were made to the same end and continued to be made up till 1855, when, the Government having remained firm, the most of the unoccupied Berths were forfeited by non-payment.

This result, I believe to be fortunate, for if the Government had yielded to the pressure brought to bear by the very influential parties interested, it would justly have shaken the confidence of the lumbering community. gene-

rally in the administration of the system, and it would have excited the hopes of all who, right or wrong, might require some special intervention to relieve them from obligations they did not wish to fulfil, an evil which I have already sufficiently commented upon. I believe it will also have a beneficial effect upon the territory, which will now be disposed of as required for actual operations without the danger of being again irrationally bought up by a few in the hope of the Government relieving them from the terms.

### LUMBER ACT, CULLING OF TIMBER, &c.

I have already adverted to the Supervisor of Cullers' Department necessarily falling under this Branch of the Service. And I have now to remark that much change is needed in the organization and practical working of that Department.

As the law at present stands a considerable quantity of Lumber escapes which it does not appear to have been the intention of the Act to relieve from its operation. The facilities for this which the present law affords arise perhaps from the circumstance that the framers of the Act had in view more particularly the cure of a local grievance in respect of the transactions between buyer and seller in our own Markets, and did not then fully consider the importance of giving a character to our Timber in the Markets of other countries. For the latter purpose the present law is entirely valueless, for the classification effected by the Culling of the Timber here is disregarded in the shipment; it merely affects the transaction between the producer and the shipper and its usefulness ends there; whereas its importance might be greatly increased and so extended as to give a higher character to our best Timber in the British Markets, and discourage the manufacture or export of the inferior.

It is also found to be defective in some particulars even of a local character, such for instance, as in respect of the Board of Survey in disputed cases in which an amendment has been called for by the trade for some time back.

The increase of the salaries of those connected with the Supervisor's Office, rendered necessary by the increased cost of living, has so added also to the expenses, that taken in conjunction with the fact of a considerable quantity passing without the cognizance of the office, by virtue of the 24th section of the Act 8 Vic. cap. 49, the fees are not now sufficient for the maintenance of the staff; the amount having been about £1,000 deficient in each of the last two years; this, if allowed to continue, would ultimately become a charge upon the revenue, which it has not as yet done only because of a surplus existing from former years.

Some economy may indeed be effected in certain particulars, but as things now stand there will pretty certainly be a deficit henceforth, unless a re-organization takes place, and it need scarcely be remarked that if it be desirable for the trade to have this establishment, it is necessary for the trade to pay for it, and to have it on the most effective footing practicable.

In concluding my remarks on the Woods and Forests, I may mention as indicative of the important nature of the subject, that the total export of timber of all kinds, as obtained from the customs returns for the past year, amounted in value to £2,504,970 15s. 5d., besides ships built in Quebec, which must also properly be classed as exports as they are almost

all sold out of the country, and the value of which, for the past year amounted to £303,269 7s. 6d., making the total export of wood goods £2,808,240 2s. 11d.

It must be observed however, that the customs returns of exports are almost invariably less than the true quantities; the only apparent reason for this is, that as there are no duties to be collected thereon, it is difficult to impress sufficiently upon those concerned the importance of correct statistical information; a great improvement has however been effected of late in this respect.

There is no difficulty in giving a correct return of the quantities cut on public lands, but that, it must be remarked, does not truly represent the total exports, there being great quantities exported from private lands, while the large local consumption is alike supplied from both sources.

### TOWN PLOT RESERVATIONS.

It has been the practice of Government hitherto to a considerable extent to instruct surveyors on the surveys of townships to mark out and report upon such town or village sites as they might find to be eligible, which when the demand for them arose were afterwards surveyed into building and park lots and advertised for sale.

Experience presents many reasons for the discontinuance of this system. As the sites of towns and villages where the business of a country is to be transacted depends so much on causes that develop themselves with the progress of settlement and on individual enterprise and the direction that contingent circumstances may give to lines of internal communication, there is no certainty of the sites thus selected by direction of Government proving to be those most suitable for the future business of the country.

In cases where individuals had previously settled on important positions, and had made improvements of value, it would be difficult to say whether they had done so with or without a view to the sites becoming town plots, and when the lands they occupied were selected as such they had to be treated with as much consideration as other occupants of waste lands. If they were dealt with differently by being expelled from their farms without compensation for their improvements, they would justly feel that they were treated with great injustice. If a few building lots only were given to them at a certain estimation of their future value, they might be nearly equally wronged, as they would be in the meantime deprived of the fruit of their industry and the prospect of future compensation from the increased value of the few building lots might never be realized. While on the other hand, if they were allowed to retain the whole on paying for it as farm land, on account of the uncertainty of its ever becoming of value as a town plot, the cost of the survey into building lots would be in such cases also lost to the public, and the monopoly of the site which the intervention of Government was supposed to prevent, would be as great as if the lands had been sold in the usual way without such intervention.

Again, where such sites were unoccupied before being selected as town plots the survey of them for that purpose immediately became an inducement for squatters to throw themselves upon the lots,—each trying to secure advantage in purchasing by occupying as many lots as he could.

Thus conflicting claims to lots arose from rival occupation, entailing the necessity of special commissions being appointed for their investigation, without the certainty of their being conclusively settled, owing to the obscurity of the evidence.

In this manner much expense has been incurred without any adequate advantage being gained to the public by the reservation and laying out of town lots. It is proposed therefore to discontinue this system and leave the enterprise and the business of the country to determine the sites of its future towns and villages, which the experience of the United States proves can be done with perfect success without the intervention of Government. For similar reasons the reservation of mill sites should also be discontinued.

### Mining Locations.

This subject refers chiefly to Upper Canada, no action having yet been taken in the matter of Mining Locations in Lower Canada.

Applications for licences to explore were first made to the Secretary of the Province. In 1846 the business was transferred to this Department.

Mining locations on Lakes Huron and Superior, of ten square miles each, were assigned to applicants on payment of the sum of £150 to cover the cost of survey and other contingencies, to be afterwards credited to the party as part of the price of the location on the sale being confirmed, or to be forfeited in case of his neglecting to *bona fide* carry on Mining operations within eighteen months, or to pay any of the instalments of the purchase money. The price was four shillings an acre, payable in five annual instalments.

As I have before stated, sixty-eight tickets for mining locations were issued under these regulations. On twenty-nine only of these have the subsequent required payments been made.

These regulations were superseded by others authorized by Order in Council of the 21st September, 1853, it having been found that neither the anticipations formed by Government at the period of the promulgation of the former regulations had been realized, nor, on the other hand, had individuals desirous of engaging in mining pursuits been enabled to effect their object without compelling them to purchase locations so extensive as to occasion a needlessly large expenditure of capital. The extent of the location being alike an encumbrance to the holders and an obstruction to the enterprise of others.

By the present regulations any person, on payment of the sum of Twenty-five Pounds, can obtain a license to explore for minerals in any locality he may desire. The license remains in force for two years, and authorizes the holder to select and take possession of a tract not exceeding four hundred acres, to be paid for at the rate of seven shillings and sixpence an acre at the expiration of two years.

These are more suitable than the previous regulations. But the payment of Twenty-five Pounds is an unnecessary burthen on exploration and a check upon enterprise, and should be done away with.

As the expense attending an exploration of any probable utility in the distant regions on the shores of Lake Superior or Lake Huron must necessarily be very considerable, and the risk of finding nothing to repay him

for his trouble and outlay is very great, it is unreasonable to entail on the explorer an additional loss of Twenty-five Pounds.

It is to be borne in mind that the difficulties of exploration are much greater on the Canadian than on the American side of the lake, not only from the greater distance from settlements and supplies, but also from the circumstance of our side of the lake not being surveyed into sections as in the United States mining regions, where the explorer can at once determine the position of the tract he wishes to secure, and purchase it without the cost of an exploring license. Whereas with us the explorer must, even besides that, incur the further expense of employing a surveyor to determine the exact position of the ground he selects, if he be so successful as to find a site worth purchasing.

Considering this, it is to be regretted that the expense of subdividing the lands on our mining coast, from its extent, would be so great as to render it inexpedient with reference to the means of the Province available for such purposes. But with the view of giving the utmost facilities alike for mining and settlement it is intended to have the exploration of the country north of Lake Huron vigorously carried on as soon as the season admits, by several parties under the direction of Mr. Salter, so that the subdivision of such tracts as may offer the greatest inducements may be prosecuted without delay.

And it is proposed also that a cursory exploration should be made of the country bordering on Lake Superior for the purpose of ascertaining the most favorable sites for commencing a series of similar surveys with the design of developing its mineral resources and its lands fit for settlement, which, since the opening of the Sault Ste. Marie Canal, have become of increased value and importance.

#### FISHERIES.

In a country like Canada presenting so many facilities and inducements to agricultural industry it is not surprising that her fisheries should attract little attention excepting in particularly favorable localities, but they are of more importance than is generally supposed, and the enactments from time to time for their protection indicate a sense of the danger of their destruction and the necessity for their preservation.

By the census of 1851-2 the number of barrels of fish cured in Upper Canada during the preceding year was 47,580, of which 36,055 were cured in the County of Essex, where the River St. Lawrence passes from Lake St. Clair to Lake Erie. Next in number is the County of Prince Edward where 4,482 barrels were cured. The adjoining County of Northumberland on the Trent shews 1,359 barrels. The Counties of Huron and Bruce on the Shore of Lake Huron shew respectively 1,313, and 1,660 barrels. Simcoe, 693; Lambton on the River St. Clair, 442; Leeds, Addington and Frontenac, on the Lake of the Thousand Islands, 306,265, and 124 barrels respectively and the County of Peel 143. Leaving 737 barrels as the quantity cured in the remaining thirty one Counties of Upper Canada.

It will be seen from these details that the Fisheries of Upper Canada are of considerable importance as yielding a staple of commerce and a useful article of domestic consumption in the localities where they can be profitably carried on within the settled parts of the Province. No doubt,

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as settlement takes place on the Northern Shores of Lakes Huron and Superior, the Fisheries of these Lakes will increase in importance.

In Lower Canada, by the same census the number of barrels of fish cured was 80,306, of these 63,932 barrels were cured in the county of Gaspé. This quantity evidently includes the dried cod fish of which each cwt. would be equal to a little more than a barrel, 6,354 in Bonaventure, to which should be added about 40,000 cwt. of dried fish, 6,423 in Rimouski and 1,466 in Kamouraska shewing the comparative fishing advantages of these counties lying in the Gulf and Salt Water portions of the River St. Lawrence.

In the County of Sherbrooke 970 barrels were cured, in Saguenay 443 in St. Hycinthe, 165; and in Montmorency, 156 barrels; leaving 397 as the total number cured in the remaining twenty-eight Counties.

Apart from the fisheries of the sea board and Lower St. Lawrence the quantity of fish cured in Lower Canada is not so great as might have been expected.

The product of the Salmon Fisheries of Lower Canada have been steadily decreasing. The total number of barrels of salmon taken on all the coasts of Canada in the Lower St. Lawrence and the Gulf, including the Canadian Coast of Labrador, during the year 1856 did not exceed 2,500 barrels. The decrease in this branch of the fisheries has been very great. To give a striking instance, the River St. Paul, on the coast of Labrador, which at one time yielded fourteen hundred barrels of salmon in a single year now yields only ninety barrels.

It is evident that if measures be not taken, of a more effective nature than any that have hitherto been adopted, for its protection this valuable branch of fishery will come to an end.

The enactment of laws will avail nothing unless they provide such superintendence as will be sufficient to carry them into effect.

For the preservation of our fisheries of every kind, it is desirable that such superintendence should be established and organized in such a manner as to ensure the law being carried into effect in all parts of the Province where there are fisheries of any considerable value. Our cod, mackerel and herring fisheries, as well as our salmon fisheries require such supervision for the preservation of the fish and checking unlawful fishing.

Our salmon fisheries have become so reduced on some of our rivers from the scarcity of the fish as to render it advisable to adopt the system of artificial fish-breeding as a means of restoring them to their former value. As the application of this system is simple and has been attended with success in European Countries, it might, under the superintendence proposed, be carried out with equal success in our rivers.

To assist in forming an idea of the value of the fisheries of the coasts of Canada on the St. Lawrence and Gulf, I would remark that during the summer season, six or seven hundred American Schooners resort to our coast on the Gulf to carry on various fisheries, especially that of mackerel. These schooners are about eighty tons average burthen, (carrying ten men) and are worth from six to seven thousand dollars each.

Besides these, from three to four hundred schooners from Nova Scotia and New Brunswick resort to the Magdalen Islands and the Canadian coast of Labrador, chiefly to carry on herring and cod fishing.

To these may be added the six hundred resident seal fishers on the coast of Labrador who take about seven thousand seals annually.

The value of the fisheries prosecuted on our coast is probably about £400,000 annually.

### COLONIZATION ROADS.

I have already noticed generally the localities in which Colonization Roads have been or are now being opened, and briefly indicated the object in view in the opening of such roads.

For further details as to the particular roads in Lower Canada, and the expenditure on each, I beg to refer to the Report of the Inspector of Agencies already mentioned. Appendix M.

It seems necessary here to enter a little more into the reasons which have rendered the application of Public Monies in this manner in Lower Canada desirable and expedient.

In the eastern part of Upper Canada it has been found expedient to devote the Colonization Funds to the opening of roads into the interior of the Ottawa and Huron Territory to admit of the influx of settlers where the natural barriers presented by extensive rugged and comparatively barren tract, were such as to be insurmountable to individual enterprise. On the most of these free grants of land are made to actual settlers, as already explained, to encourage settlement and ensure the maintenance of the roads.

These roads are intended in a great degree for European immigrants and the most energetic efforts are being made by the Bureau of Agriculture to direct the attention of that class of settlers to them.

A portion also of the Colonization Grant, with the Improvement Fund created by the Land Act of 1853, were devoted to the thorough development of the extensive tract of fertile Crown and Common School Lands in the Counties of Huron, Perth, Bruce and Grey, by the construction of several leading and cross roads, which have materially aided the rapid settlement of that section of the Province.

The Colonization Roads in Upper Canada were made under the direction of the Minister of Agriculture. Detailed statements of the works are to be found in the Reports of the Bureau contained in the Appendices to the Journals of the Legislative Assembly.

In Lower Canada the application of the Colonization Funds is modified by the nature of the country and the object to be effected.

Attempts to direct the attention of European immigrants to the vacant lands of Lower Canada have not hitherto been successful except in a limited degree in some parts of the Eastern Townships.

It is therefore by the expansion of the native population alone that the vacant Public Lands in Lower Canada are being settled.

Before the year 1836 the settlements of the Canadian population of French origin nowhere extended beyond the Seigniories fronting on the St. Lawrence and a few of its chief tributaries, while the subdivision of property by parents among their children and the impoverishment of the land by over cropping had been continued to such an extent as seriously to limit the industry and reduce the comparative wealth of the rapidly increasing Canadian population.

When the inhabitants of the parishes were aroused to an increased sense of the evils of this over condensation by a series of unfavorable seasons they sought room for expansion in the townships behind the Seignories, where a few settlements of European immigrants were enjoying abundance from the fertility of the soil. But they found that much of the nearest and best of the unoccupied township lands had been alienated in improvident grants chiefly to non-residents, and that the remaining vacant lands were comparatively inaccessible to them.

Under such circumstances, though settlers from the parishes spread rapidly over the unoccupied lands of the townships that were accessible, it is not surprising that a disposition to emigrate to the United States began to be displayed, especially by the young and enterprising.

To prevent the loss of this valuable portion of our population, and at the same time obviate the necessity for the over subdivision of property, it became evidently expedient to give the population of the thickly settled parishes the opportunity of expansion by opening roads leading from them into the vacant public lands suitable for settlement.

Besides the lower territories—owing to the more broken character of the unoccupied portion of Lower Canada—a great part of these consisted, as already stated, of many comparatively small tracts behind the old settlements, of value chiefly to the people of the vicinity.

The result of the expenditure of the Colonization Funds in opening roads for settlement into these and in the more distant territories is on the whole very satisfactory, (even unaided as it has latterly been, by the inducement of free grants, given on the Colonization Roads in Upper Canada,) as shown by the rapidity with which the lands on them generally are being taken up. Many tracts of vacant Public Lands are in this manner becoming occupied by the native population of the Province, (best suited to make use of them) that would have otherwise remained undisposed of.

It is very desirable that the Colonization Roads in progress, especially those leading to important regions for settlement, should be completed as rapidly as the public funds disposable for such objects will admit; and others projected to meet the wants of settlement in such directions as on careful examination are most likely to prove advantageous.

#### BOARD OF EXAMINERS,—PROVINCIAL SURVEYORS.

The numerous and very serious errors of past surveys of Public Lands in both sections of the Province having been a continually recurring subject of remark it seems suitable briefly to mention that active measures have been taken, for some time past, by the Board of Examiners, of which I am *ex-officio* President, to raise the standard of the profession.

These Boards, one for each section of the Province, meet quarterly in the cities of Quebec and Toronto respectively for the examination of candidates for admission as Provincial Land Surveyors, and for hearing and deciding on complaints against members of the profession, whom they are empowered to suspend or dismiss on sufficient cause being found.

By a recent enactment candidates for admission as Surveyors are required to have at least an elementary knowledge of Geology and the Boards have adopted a course of examination accordingly which they have communicated by circular to the profession (see Appendix X.)

To secure the necessary degree of preliminary education an examination has to be undergone by students prior to being admitted as apprentices.

In order to protect the public, as far as possible, against the recurrence of the evils arising from the incompetency of Surveyors, in future the most efficient only are to be employed by the Department, and such only as are qualified to survey on astronomical principles.

#### BOUNDARY COMMISSIONERS.

As the boundaries between lands in Upper Canada cannot be finally determined by the Courts of Law, a cheap, expeditious and economical method of obtaining this finality is an object of the highest importance to every landed proprietor.

The Boundary Commissioners Act of 1838 was passed for the attainment of this object, and in several districts gave great satisfaction—settling many disputed boundaries, and saving the cost of protracted litigation; but owing to some of the Boards not having regulated their decisions by the existing Surveying Laws, the Act was allowed to expire.

By the 31st section of the Surveying Act of 1849, 12 Vic. cap. 35, and the 8th section of the Act of 1855, 18 Vic. cap. 83, a portion of the duties performed by the Boards of Boundary Commissioners under the Act of 1838 were imposed on this Department. Owing to the rapid growth of the Province and the great increase in the value of lands these duties are now so great as to require almost the whole of the time of the Senior Surveyor for Upper Canada, who should have leisure for the projection of plans for the development of the public lands, and his other duties.

The following circumstances also render the discharge of those duties unsatisfactory. In many cases a view of the premises, which he cannot take, is required to insure a just decision of the boundaries, and unfortunately the Provincial Land Surveyor sent by the Department to perform the work, sometimes becomes a partizan and does not present that impartial view of the matter in his returns of survey which alone could enable the Department to arrive at a just decision.

The appointment of County Boards of Boundary Commissioners, with powers to decide all cases of boundary would be an effectual remedy for these evils. I have accordingly prepared a bill for this purpose.

The experience which the people of Upper Canada have acquired in the working of Municipal Institutions since the Union will much facilitate the operations of Boards of Boundary Commissioners.

#### REGULATION OF THE CROWN LAND OFFICE.

This Department had not long been under my charge before it became apparent to me that, owing no doubt, to the successive changes of Ministers holding the office of Commissioner of Crown Lands, and the circumstance of much of their attention being occupied by their Legislative and Executive duties, leaving little to devote to the internal organization and management of the Crown Land Office, a degree of irregularity had arisen and practices had grown up which greatly impaired the efficiency of the Department.

The head of a Department embracing so many duties and comprising various branches, having previously a separate existence, with functions peculiar to each—on assuming the charge of this office, is necessarily, to a

certain degree, dependent on the leading subordinates of the office, so much so as, under the pressure of political duties, to render it much the easier course to make no important change in the existing routine of the Department.

The natural consequence of which is, that the authority of the head of the Department does not practically bear, in a sufficient degree, on the government of the office under his charge; the direction of the business of it falls to the heads of branches, each of whom conducts the duties of his own branch according to his own views, while their inferiors feeling the absence of general control, become indifferent and inattentive to their duties and irregular in their attendance. In this manner there arises not only a want of co-operation, common principle and systematic action, but sometimes even antagonism; and an undue share of labor falls to the diligent and zealous from the remissness of the indolent.

Such a state of things I found had arisen in this Department. All the office work of importance had fallen into the hands of two or three individuals. No important business could be expedited but by them; they had always done every thing of the kind, which was accordingly always left to them; while the others employed in the office never having any responsible duty to perform were from want of practice comparatively incapable.

The consequence was that when there was more such work to be done than these few individuals could perform, it accumulated, and public business was obstructed and dissatisfaction caused, by the delay while the remissness of some of the clerks in attendance to their office duties was such as to attract public attention.

From the same cause also, and from the want of systematic control and direction it had become the practice for the heads of branches or leading subordinates to transact business with the public independently of the head of the Department and of each other, certain official documents being signed by them and issued without the cognizance of the Commissioner, clashing occasionally with each others duties and involving serious errors.

These irregularities were aggravated by the custom of allowing every one who pleased to enter the office and communicate directly with any one employed in it.

In this manner not only was much time lost unintentionally even, in unnecessary conversation as is to be expected when an office becomes a common thoroughfare, but the zealous and diligent were interrupted in the discharge of their duties and important public business delayed by the protracted and often futile searches of persons trying to find out subjects of speculation.

It will be evident when the great number of letters and references to this office is considered, that while these speculators were enjoying this undue advantage, the necessary communications of persons residing at a distance (who form the majority of those having business with this office) had to remain unanswered to the annoyance and injury of the parties.

Also from the facilities afforded by the indiscriminate access to them, important documents, such as field notes, were sometimes torn and parts of

them taken away, evidently from interested motives, and to the injury of those whose rights were based on such documents.

The records of the office being thus accessible to them, such land speculators with the advantage of the superior local information which from the nature of their business they possess were enabled to acquire the most valuable vacant lands in a very objectionable manner, to the injury alike of the Public who received no equivalent for the lands and of the actual settler requiring it who had to pay much more to the Speculator than he would otherwise have had to pay to Government.

This was effected by diligently searching up old land claims of every kind. It was then only necessary to find out the parties in whose favor these rights could be made good or the irrepresentatives, and, if they were not already sufficiently indifferent, to deceive them by misrepresentations as to the value of their rights, by exaggerated statements as to the difficulty and improbability of making them good, and thereby get from the parties transfers of their rights for a most insignificant consideration. These were chiefly free grant claims.

In this manner the original intention of Government in favor of the individual holding the right was defeated, he, by a species of imposition, receiving only a trifle in lieu of the benefit intended for him. The actual settler was injured by being obliged to pay a high price to the Speculator and the latter was enabled to obtain the land without paying an equivalent for it either to Government or any one else.

There was also another abuse facilitated by the uncontrolled access to the records of this office.

It afforded to the same class of speculators the opportunity of obtaining most ample information with respect to lands offered by Government on advantageous terms to actual settlers, not only of a general nature but as to character and quantity of the lands in detail. By making timely use of this information they could forestall the actual settlers and pick out the best lots by taking them up in the names people of employed by them for the purpose of taking temporary occupation and commencing to clear lands as if complying with the condition of actual settlement, but solely with the view of disposing of the lands to actual settlers at a greatly advanced price.

In this manner the measures taken by Government for the benefit of actual settlers were turned against them by such speculators, who reaped the full advantage of the favorable terms intended for the settlers only.

Large transactions of this kind have been effected and are now being carried on and it will be necessary for the Government to use every means in its power to prevent, as far as possible their being consummated to the injury of the actual settlers.

To remedy the irregularities which facilitated these abuses and ensure greater efficiency in the office under my charge I found it necessary to take the business more immediately under my own control and direction than has been hitherto usual. To effect this it became unavoidable to require all communications or inquiries on Departmental business to be made through one channel under my immediate cognizance.

By this means parties communicating with the office are limited much more to specific business, the time of the officers and subordinates

much less encroached upon, and in some instances transactions of a reprehensible nature were in this manner brought under my observation that would otherwise have passed unnoticed.

Also, instead of leaving all business and references of importance to accumulate in the hands of a few individuals of the office. I have found it very advantageous to call into action and develop the abilities of a greater number of the persons employed by requiring them to report upon and expedite such cases as according to their ability they were able to undertake

It will be evident that by adopting in this manner the well understood principle of the division of labor a much greater amount of business will be accomplished without the delay formerly occasioned by its having been left to be performed by two or three individuals.

In order to render the services of this Department in the fullest degree available to the Public, I found it necessary to carry strictly into effect the Order in Council requiring punctuality of attendance on the part of Clerks and others employed in Public Offices; the great amount of public business to be transacted rendering diligence and assiduity especially necessary in this Office.

It is commonly, though erroneously, supposed that the survey and sale of Public Lands and the management of the Crown Timber Forests solely constitute the business of this Office; they form but a small portion of its duties compared with those arising from its being an office of record and consequently of continual reference on matters connected with the boundaries of real estate throughout the Province—or of a judicial nature in determining land claims and cases of contested boundaries, or such as have been imposed upon it by various Legislative enactments, (See statement of Extra Duties, Appendix O) the expense of which should be provided for in such enactments instead of being added to that of this office.

The measures I have adopted for the better regulation of the Crown Land Office are the result of mature consideration, after adequate experience of the previously existing practice. From the nature of some of them a considerable length of time will be required before they can be carried into perfect operation or their beneficial effects be fully developed.

Respectfully submitted,

By Your Excellency's most obdt. Servt.,

JOSEPH CAUCHON,

*Commissioner of Crown Lands.*

CROWN LAND DEPARTMENT,

Toronto, 31st March, 1857.

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APPENDIX  
TO  
THE REPORT  
OF THE  
COMMISSIONER OF CROWN LANDS  
FOR  
1856.

*(For List of Appendix see last Page.)*

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APPENDIX

RETURN of Officers in the Crown Land Department,

Branch.	Officers.	Designation.
	Hon. Jos. Cauchon.....	Commissioner.....
Secretary	E. A. Genereux.....	Secretary.....
Registrar	J. Morphy.....	Registrar.....
Accounts	Wm. Ford.....	Accountant.....
"	J. Alley.....	Assistant do.....
"	J. Tolmie.....	Clerk.....
"	C. T. Walcot.....	Clerk.....
"	D. A. Grant.....	Temporary Assistant.....
"	J. V. Gale.....	Temporary do.....
Corres. W.	J. C. Tarbutt.....	1st Clerk Correspondence West.....
"	A. Kirkwood.....	Clerk.....
"	A. J. Taylor.....	Clerk.....
"	C. Gamon.....	Temporary Assistant.....
Corres. E.	W. F. Collins.....	English Correspondence East.....
"	Thomas Hammond.....	Clerk.....
"	V. E. Tessier.....	Clerk.....
"	T. Cherrier.....	Clerk.....
"	F. D. Dugal.....	Temporary Clerk.....
S. G's. Office late	William Spragge.....	1st Clerk.....
"	T. Hector.....	2nd Clerk.....
"	F. T. Roche.....	3d Clerk.....
"	F. A. Hall.....	Clerk.....
Surveys. W.	A. Russell.....	Senior Surveyor and Draftsman.....
"	H. J. Jones.....	Clerk.....
"	Thos. Devine.....	Assistant Surv. & Draftsman.....
"	J. Prendergast.....	Copying Clerk.....
"	J. W. Bridgland.....	Temporary Assistant Surveyor.....
"	W. F. Whitcher.....	do Clerk (restored).....
"	F. Bannister.....	Temporary Clerk.....
Surveys. E.	J. Bouchette.....	Senior Surveyor and Draftsman.....
"	E. T. Fletcher.....	Assistant do.....
"	G. G. Dunlevie.....	Assistant do.....
"	J. F. Bouchette.....	Temporary Assistant do.....
"	F. Chassé.....	Copying Clerk.....
"	E. Caizac.....	Temp. Assist. Surv. & Drafts.....
J. E. and C. D.	F. T. Judah.....	1st Clerk.....
"	L. R. Fortier.....	Assistant.....
Wds. & Forests	W. McD. Dawson.....	Timber Superintendent.....
"	S. P. Beauset.....	Draftsman.....
"	P. M. Partridge.....	Accountant.....
"	L. A. Robitaille.....	Clerk.....
Messenger	J. Bradshaw.....	Messenger.....
"	G. Fisher.....	do.....
"	J. Innes.....	do.....
"	E. Dumontier.....	do.....
"	P. Cahill.....	Temporary do.....

Crown Land Department, Toronto,  
31st December, 1856.

A.

for the Year ending the 31st December, 1856.

Appointed.	By whom appointed.	Annual Salary	
27th January, 1855.		£ s. d.	
1st January, 1854.		1250 0 0	
July, 1851.	Comms'r. of Crown Lands.	360 0 0	
10th April, 1852.	do do	300 0 0	
February, 1848.	do do	402 10 0	
23rd October, 1853.	do do	300 0 0	
16th October, 1854.	do do	300 0 0	
31st August, 1856.	Lord Elgin.	270 0 0	
11th Sept, 1856.	Comms'r. of Crown Lands.		10s. per diem.
17th March, 1842.	do do		10s. per diem.
21st March, 1854.	Governor General.	402 10 0	
29th October, 1854.	Comms'r. of Crown Lands.	270 0 0	
28th August, 1856.	do do	175 0 0	
7th August, 1843.	do do		10s. per diem.
24th January, 1842.	do do	402 10 0	
17th August, 1852.	do do	218 15 0	
6th October, 1852.	do do	270 0 0	
18th Feby., 1854.	do do	270 0 0	
1st January, 1829.	Sir John Colborne	460 0 0	10s. per diem.
17th June, 1839.	Sir George Arthur	373 15 0	
22nd June, 1847.	Comms'r. of Crown Lands.	300 0 0	
1st January, 1847.	Mr. Secretary Daly	270 0 0	
22nd Novb., 1839.	Lord Sydenham	460 0 0	
9th Nov., 1840.	Sir George Arthur	300 0 0	
4th March, 1850.	Comms'r. of Crown Lands.	300 0 0	
1st August, 1851.	do do	200 0 0	
22nd January, 1856.	do do	200 0 0	
1st October, 1856.	do do		At 13s. 8d. per diem.
28th August, 1856.	do do		10s. per diem.
March, 1818.	Sir J. C. Sherbrooke	460 0 0	
	[Appointed Deputy Surveyor Gen. E., 12th May, 1827.]		
21st Dec., 1841.	Surveyor General Parke	300 0 0	
22nd March, 1852.	Comms'r. of Crown Lands.	275 0 0	
9th January, 1854.	do do		11s. 6d. per diem.
28th May, 1855.	do do		10s. per diem.
23rd July, 1855.	do do		10s. per diem.
12th June, 1849.	do do	300 0 0	since dead.
30th Nov., 1854.	do do	200 0 0	
October, 1841.	do do	460 0 0	
1st June, 1854.	do do	225 0 0	
7th March, 1855.	do do	270 0 0	
1st April, 1855.	do do	225 0 0	
27th March, 1852.	do do	93 15 0	
1st September, 1844.	do do	93 15 0	
1st Nov., 1848.	do do	93 15 0	
9th March, 1855.	do do	93 15 0	
2nd Sep., 1856.	do do	93 15 0	

(Signed,)

JOSEPH CAUCHON,  
Commissioner.

## APPENDIX

List of Crown Land Agents for Canada East, dates of their made during the year

AGENTS.	COUNTIES.
Arcand, J. O. C.	Megantic, part of
Baron, Thomas	Two Mountains, part of
Bastien, F. X.	Ottawa, part of
Bochet, Amable	Port Neuf and Champlain
Blanchet, Cyprien	Megantic, part of
Bourgeois, G. A.	Drummond, part of
Boutillier, Thomas	Inspector of Agencies, Canada East
Beaudet, N. A.	Arthabaska
Daly, Alex.	Leinster, part of
Dery, J. P.	Portneuf, part of
Deguisse, Florence	Kamouraska, part of
Eden, John	Gaspé
Felton, John	Sherbrooke, Stanstead & Drummond, parts of
Fleming, William	Huntingdon
Gauvreau, L. P.	Rimonski
Gibeau, A. T.	Ottawa, part of
Heath, Edmund	Pontiac, part of
Hume, John	Megantic, part of
Kaines, Geo. (Acting Agent)	Two Mountains
Kane, John	Saguenay, part of
Kemp, O. J.	Stanstead, Massisquoi & Shefford
Lafontaine, A.	Ottawa, part of
Lavallée, A. B.	Two Mountains & Terrebonne, parts of
LeBel, J. P.	Sherbrooke & Drummond, parts of
Larue, S. V.	Bellechasse
Lynch, John	Ottawa, part of
Labarre, D. G.	St. Maurice
Lewis, J. S.	Beauharnois
LePage, J. B.	Rimonski
McLean, Donald	Ottawa, part of
Morrison, William	Berthier
Pratte, F. X.	Drummond, part of
Radford, Walter	Ottawa, part of
Ross, Andrew	Megantic, Dorchester & Bellechasse parts of
Stewart, McLean	Quebec
Sheppard, C. C.	Drummond, part of
Têtu, François	L'Islet and Bellechasse, parts of
Tremblay, Edward	Saguenay, part of

EMOLUMENTS.—5 per cent. Commission on first £500 currency, 2½ per cent. for next £7000, and 1½ per cent. for any sum exceeding £7,500.

Crown Lands Department,  
Toronto, 31st December, 1856.

## B.

Appointment and Commission allowed to each on Collections ending 31st December, 1856.

APPOINTED.	COMMISSION.	REMARKS.
15th December, 1849	£ s. d.	
4th August, 1845	0 3 4	
4th August, 1815	5 2 3	
30th June, 1813	6 3 0	
1st March, 1846	3 11 10	
23rd March, 1850	0 3 0	
30th March, 1851	4 12 10	
7th April, 1854	460 0 0	Salary.
12th June, 1844	5 14 3	
12th July, 1851	4 4 8	
25th May, 1850	0 1 0	
24th April, 1851	1 15 8	
30th June, 1843	0 0 0	Nil.
21st August, 1852	27 0 5	
22nd July, 1848	0 16 0	
5th May, 1855	0 0 0	Nil.
3rd September, 1855	6 19 5	
21st June, 1852	2 14 8	
14th May, 1854	14 6 10	
30th June, 1843	26 1 6	
15th April, 1818	3 8 0	
11th October, 1845	40 6 2	
12th August, 1843	10 7 11	
31st May, 1852	1 3 3	
11th October, 1852	93 15 0	Salary.
20th June, 1849	0 0 0	Timber Agent.
17th September, 1855	6 0 2	
16th December, 1848	3 4 2	
12th December, 1855	4 13 8	
4th August, 1845	0 17 5	
4th June, 1843	5 7 11	
10th March, 1856	0 7 6	
4th August, 1845	0 12 2	
30th June, 1843	11 2 4	
27th September, 1845	5 14 6	
7th December, 1850	0 1 6	
25th May, 1850	9 13 5	
15th June, 1855	11 2 8	
	0 11 8	

JOSEPH CAUCHON,  
Commissioner of Crown Lands.

## APPENDIX

List of Crown Land Agents for Canada West, dates of their made during the year

AGENTS.	COUNTIES.
Alexander, John.....	Simcoe.....
Anbridge, T. A.....	Wentworth.....
Askin, John B.....	Middlesex & Elgin.....
Baines, Thomas.....	York, Ontario & Peel.....
Ballard, N.....	Prince Edward.....
Brooke, J. E.....	Kent.....
Campbell, D.....	Norfolk.....
Carroll, John.....	Oxford & Brant.....
Clarke, Samuel.....	Halton.....
Clark, John.....	Huron.....
Crawford, Walter.....	Peterboro' & Victoria.....
Durie, John.....	Carleton.....
Gibson, David.....	Inspector of Agencies, Canada West.....
Geddes, Andrew.....	Wellington.....
Harris, William.....	Renfrew.....
Hart, S.....	Stormont, Dundas & Glengary.....
Huber, H. S.....	Waterloo.....
Jackson, William.....	Grey.....
Leslie, Anthony.....	Lanark.....
McAnnany, Francis.....	Hastings.....
McNabb, Alex.....	Bruce.....
McPherson, Allen.....	Frontenac, Lennnox & Addington.....
Moynahan, D.....	Essex.....
Scott, W. J.....	Leeds & Grenville.....
Scott, Alexander.....	Lambton.....
Sharman, J.....	Perth.....
Smith, E. P.....	Northumberland & Durham.....
Smith, Henry.....	Lincoln, Welland & Haldimand.....
Stewart, Neil.....	Prescott & Russell.....
Wilson, Joseph.....	Sault Ste. Marie.....
French, Thos. P.....	Agent for the Settlement of the Ottawa and Opeongo Road.....
Perry, Eber.....	Agent for the Settlement of the Addington Road.....
Hayes, M. P.....	Agent for the Settlement of the Hastings Road.....

EMOLUMENTS.—5 per cent. on first £500 currency, 2½ per cent. for next £7000, and 1¼ per cent. for any sum exceeding £7,500 currency.

## B.

Appointment and Commission allowed to each on Collections ending 31st December, 1856.

APPOINTED.	COMMISSION.	REMARKS.
	£ s. d.	
18th April, 1843.....	200 16 2	
27th April, 1853.....	63 18 5	
July, 1839.....	148 6 4	
July, 1841.....	277 4 1	
6th July, 1851.....	40 9 10	
24th August, 1853.....	106 13 9	
July, 1839.....	120 8 10	
20th November, 1844.....	158 19 9	
27th April, 1853.....	32 13 10	
25th November, 1846.....	164 3 6	
11th April, 1849.....	185 3 3	
10th March, 1845.....	100 2 6	
4th April, 1854.....	460 0 0	Salary per annum.
8th June, 1845.....	399 18 4	
June, 1851.....	145 13 5	
20th November, 1844.....	80 15 9	
26th April, 1856.....	97 14 1	
3rd November, 1854.....	244 8 10	
30th April, 1844.....	76 14 4	
May, 1840.....	81 7 11	
29th April, 1851.....	288 1 9	
20th November, 1844.....	121 1 7	
21st April, 1853.....	53 2 3	
July, 1839.....	91 14 6	
31st May, 1854.....	106 14 4	
27th April, 1853.....	185 4 0	
20th February, 1843.....	166 13 2	
6th June, 1850.....	37 15 0	
26th September, 1855.....	126 0 0	
25th July, 1845.....	10 18 9	
17th September, 1855.....	.. .. .	Salary 20s. per diem.
27th March, 1856.....	.. .. .	Salary 20s. per diem.
3rd July, 1856.....	.. .. .	Salary 20s. per diem.

JOSEPH CAUCHON,  
Commissioner of Crown Lands.

APPENDIX D.

LIST of Crown Timber Agents in Canada East and West, date of their Appointment and Salary allowed to each for Services, during the year ending 31st December, 1856.

AGENTS' NAMES.	AGENCIES.	APPOINTED.	SALARY.
Belle, Charles E.	Lower Ottawa.....	6th May, 1854.....	£ 360 0 0
Dubé, C. T.	Lower St. Lawrence.....	15th March, 1855.....	175 0 0
Dubinger, George.	Saguenay Territory.....	30th May, 1854.....	300 0 0
Hammond, Nath.	Peninsula of Canada West.....	13th October, 1854.....	250 0 0
Larue, S. V.	Madawaska and Chaudière.....	15th March, 1855.....	175 0 0
Mâsse, Edwd.	Collector of Slide Dues, Ottawa.....	10th February, 1855.....	250 0 0
Nagle, G. J.	St. Francis Territory.....	30th May, 1854.....	300 0 0
Powell, A. W.	Huron and Superior.....	30th June, 1855.....	250 0 0
Russell, A. J.	Ottawa and Tributaries.....	June, 1846.....	410 0 0
Stewart, McLean.	General Collector at Quebec.....	27th September, 1845.....	450 0 0
Verge, J.	Peninsula of Gaspé.....	15th March, 1845.....	150 0 0
Wells, Oliver.	St Maurice Territory.....	11th October, 1852.....	360 0 0
Way, J. F.	Ontario Territory.....	6th May, 1854.....	360 0 0

The Duties of the Crown Timber Agents are: to grant Licenses to cut Timber, collect the Crown Dues, protect the Public Domain from Trespass as regards the Woods and Forests within their respective Agencies, and general administration of the Timber Regulations, &c.

JOSEPH CAUCHON,  
Commissioner of Crown Lands.

Crown Lands Department,  
Toronto, 31st December, 1856.

APPENDIX E.

LIST of Agents—Jesuits' Estates, Crown Domain and Seigniorly Laurzon.

NAME OF AGENT.	NATURE OF AGENCY.	Date of Appointment.	Remuneration received in 1856	REMARKS.
Felix Fortier.....	Agent Seigniorly of Laurzon, and Superintendent of beach and deep water lots Port of Quebec.	September, 1855.....	£ s. d. 520 5 1	
Joseph Laurin.....	Agent Crown Domain..... Commutation Agent <i>Censive</i> Quebec.	September, 1855.....	163 1 10	The whole of this remuneration (£125 being salary and balance commission,) is received as Crown Domain Agent. As Commuting Agent he is paid by the Applicants themselves \$4 on each commutation; there were 11 in 1856.
Valère Guillet.....	Commutation Agt. <i>Censive</i> Three-Rivers.	June, 1854.....		Received no commission from Govt. Is paid by Applicants £1 10s. on each Commutation; there were none in 1856.
Valère Guillet and Flavien Lottinville.....	Commuting and Collecting Agents, Seigniorly Cap Magdeleine and Jésuits' Estates, Town of Three-Rivers.....	June, 1855.....	18 2 2	This amount received as Collecting Agents; as Commuting Agents they receive the usual Fee. No Commutations in 1856.
Honorable Louis Panet.	Commuting and Collecting Agent Jésuits' Estates, District of Quebec.....	Appointed by late Commissioner Jes. Ests.	193 18 8	do do 5 Commutations in 1856.
Louis Guillet, Jr.....	Commuting and Collecting Agent Jésuits' Estates, Seigniorly Batiscan.....	June, 1848.....	25 5 7	do do 1 Commutation in 1856.
Jean Bte. Vatin.....	Commuting and Collecting Agent Jésuits' Estates, Seigniorly Laprairie.....	Appointed by late Commissioner Jes. Ests.	70 7 4	do do None in 1856.
Ambroise Trudel.....	Commuting Agent, Seigniorly Laurzon..	June, 1854.....		Remarks opposite V. Guillet's name apply here 6 Commutations in 1856.

JOSEPH CAUCHON,  
Commissioner of Crown Lands.

Crown Lands Department,  
Toronto, 31st December, 1856.

APPENDIX F.

STATEMENT of number of acres sold, amount of sales and amount collected, Canada West and Canada East, for the years 1854, 1855 and 1856.

	Acres sold.		Amount Sales.		Amount Sales.		Amount Sales.		Amount Collections.		Amount Collections.		Amount Collections.	
	1854.	1855.	1856.	1854.	1855.	1856.	1851.	1855.	1851.	1855.	1856.	1851.	1855.	1856.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Clergy Lands Canada West	127,638	120,037½	81,066½	61,671 0 0	92,823 13 1	66,150 0 7	101,300 19 4	98,012 0 1	99,021 6 11					
do Canada East.	19,501	9,731	12,473½	4,997 11 4	3,704 6 11	2,678 13 5	4,911 6 5	3,921 5 5	1,948 8 3					
Crown Lands Canada West	520,180½	461,368	140,520	184,000 4 2	161,833 11 9	52,319 9 4	37,012 1 7	63,193 5 7	41,329 13 8					
do Canada East.	71,943	65,855	46,118½	8,365 15 0	7,175 7 2	5,145 15 3	4,441 9 4	3,598 13 2	3,302 8 2					
Common School Lands....	304,985½	312,393	47,725	153,665 7 0	159,143 18 1	31,835 19 0	26,081 18 1	42,820 13 6	25,036 9 6					
Grammar School Lands....	3,369½	1,097	2,340	1,514 8 3	689 13 6	1,906 15 3	5,951 12 6	3,510 4 3	3,833 13 11					
Total.....	1,056,617½	979,481½	330,263½	414,214 5 9	428,370 10 6	160,036 12 10	179,699 7 3	214,386 2 0	174,472 0 5					

Crown Land Department, }  
 Toronto, 31st Dec., 1856. }  
 JOSEPH CAUCHON,  
 Commissioner of Crown Lands.

## APPENDIX G.

STATEMENT of Receipts by the Crown Land Department for the year 1856, which are considered as Revenue.

	Quarter Ended 31st March, 1856.			Quarter Ended 30th June, 1856.			Quarter Ended 30th Sept. 1856.			Quarter Ended 31st Dec. 1856.			Total for 1856.			
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	
Garrifraza Road Fees .....	59	10	0										59	10	0	
Crown Instalments, Canada West.....	11,712	1	6	8,706	8	1	7,665	4	7	12,823	3	9	40,906	17	11	
Crown Instalments, Canada East.....	662	9	4	1,108	16	5	608	2	10	622	15	6	3,002	4	1	
Crown Quit Rent .....	91	17	10	16	5	0	62	5	7	53	2	11	228	11	4	
Crown Arrears of rent .....	34	15	8	19	7	1							51	2	9	
Woods and Forests .....	9,244	11	2	3,153	4	1	14,427	16	8	18,418	14	1	45,244	6	0	
Surveyors Fee Fund Canada West 18 Vic. cap. 83 .....	62	12	5				46	16	7	33	13	11	143	2	11	
Localities Fees, Canada East.....	2	0	0	2	5	0	30	12	6	3	15	0	38	12	6	
Casual Fees.....	25	6	8	14	5	0	8	2	6	20	2	6	67	16	8	
Mines.....	125	0	0				5,227	8	0	25	0	0	5,377	8	0	
Gain on Scrip.....							0	3	1				3	12	1	
Surveyors Fee Fund, Canada East 18 Vic. cap. 83 .....				43	16	7	12	4	11				9	18	1	
Ottawa Slides.....				587	16	7	3,043	2	8	3,551	9	8	7,182	8	11	
Crown Rent.....										90	0	0	90	0	0	
													£	102,469	12	9

JOSEPH CAUCHON,  
Commissioner of Crown Lands.Crown Land Department,  
Toronto, 31st December, 1856.



APPENDIX

Statement of Surveys performed in the

YEAR.	Subdivided into Farm Lots.	Into Town and Park Lots.	Verification Surveys and Township Outlines.	Exploratory Lines between Seigniories and Crown.	Total Acres.	Cost of Surveys.		
	Acres.	Acres.	Acres.	L. miles.		£	s.	d.
1841.....	92474	.....	40500	45	132974	660	4	9
1842.....	79072	.....	27765	12	106837	965	11	7
1843.....	82600	.....	86848	27	169448	1194	13	7½
1844.....	74034	750	90500	65	165284	1579	11	9
1845.....	108785	920	110291	46	219996	2237	4	9
1846.....	42000	.....	52056	153	94056	1754	2	7
1847.....	39000	1532	240500	532	281032	1982	18	2½
1848.....	23000	500	295000	515	525500	5782	13	4
1849.....	150600	50	80000	248	230650	3600	4	5½
1850.....	191500	.....	170000	71	361500	2139	5	7
Carried forward..	1090065	3752	1193460	1714	2287277	21896	10	7½

(Chiefly River Surveys.)

I.

years 1841-1856, inclusive, in Canada East.

LOCALITY.
{ Clarendon, Onslow, Arthabaska, New Richmond, Port Daniel, Mann, Fief St. Clair, Seigniorie of Madawaska and Lake Temiscouata, Carleton, Alton, Ristigouche.
{ Marlow, Buckland, Linière Grieve's Tract at Shawenegan, Exploratory Line from Grand Bay to Chicoutimi.
{ Parts of Wolfstown, South-Ham, Ixworth, Outlines of Tadousac and St. John's, Rear lines of Fief St. Denis, St. Roch des Aulnais, St. Anne and River Ouelle.
{ Part of Simard, Aston Residue, part of Harvey and Tremblay, 7th Range of Onslow, Town and Township of St. John's, augmentation of Bulstrode, Village of Huntingdon, augmentation of Aston, Lines between Crown and Fief St. François, and between Crown and augmentation of Nicolet, Beach of Montreal, and general exploration of the Lower Saguenay Country from Black River to Mille-Vaches, a distance of about 60 miles.
{ Part of Leeds, St. Giles and Broughton-line, Grand Calumet Island, Bagot, Village of Bagot Town, and Grand Bay, Village of Grenville, Sydenham Road Line, Aston Gore, Rear Ranges of Lochaber, 6th and 7th Ranges of Lochaber, Town of Chicoutimi, Laterrière, Seigniorie of Anse de L'Etang, Lines between Fief St. Clair and Crown and between Lacolle and Crown, Whitworth.
{ Gore of Stanfold, Front of Three Rivers, Division Line of Champlain, Batiscan and Radnor, St. Maurice Forges, Somerset, Allumettes Island, scaling of Gatineau from Wakefield, 36 miles back, Verification of Grenville, part of Shefford, part of Bagot, Residue of Maddington, Exploration between the lower St. Francois and River Bleue, Exploration of North Shore of lower St. Lawrence from River Blanche down to Trinity Bay, about 100 miles.
{ Batiscan and Radnor line, River du Lièvre, Gore of Aston, Belle Anse Road, Gaspé, Village of Elgin, River Gatineau, Madawaska and St. Johns Settlements, part of Colrairie, River St. Maurice, Cap Chat, Price and Adstock, Front of Cox, Great Bear and Maganisibi Rivers, Broom Creek, River du Moine, and North West Branch, Village of Godmanchester, Township of Masham, Wexford, Morin, Gaspé Bay North and South, Sydenham, Cap-Rosier, Fox, York, Douglas, Mal Baie, and Percé, Coulonge and Black Rivers, Park Lots in rear of New Carlisle.
{ Astronomical Base line Ottawa, Brandon, Mansfield, Waltham, Chichester, Sheen, Augmentation of Milton, part of Cathcart and Chertsey, part of Viger, Morin, River St. Maurice and tributaries from Weymontachinque upwards, Augmentation of Harrington, Outlines of Seigniorie of Petite Nation, Township Divisions on Gatineau, Bagot Road, Saguenay, Exploration from Quebec to Lake St. Johns, and from St. Johns to Chicoutimi, North-East line of Caxton, Township Fronts from Tadousac to Bersimits, Callière Road, Village at Pointe aux Allouettes, Havre du Palais, Village of Masham, part of Bagot, Wotton and South Ham, Islands in Lake Magog, Garthby and Stratford, Exploration between Ristigouche and St. Lawrence, Line between Seigniorie of Beauport and Notre Dame des Anges, Lacanardière, District line between Three Rivers and Montreal.
{ Forsyth, Shenley, and Lambton, Aylmer and Forsyth, Road Line in Lambton, Township Shawenegan, Kettle Island, Verification Line in Bristol, Winslow Lateral Outlines of Fief Grandpré, Line from Stoneham to Lake St. John, River du Moine and North-West Branch, Line between Ashford and Augmentation, Labarre, part of Chertsey, 6th and 7th Ranges of Litchfield, Jonquière, 7th Range Kildare, part of Armagh, Village of Aubigny, Seigniorie of Lauzon.
{ Beach Lots on Rivers St. Charles and St. Lawrence, Maniwaki, and Egan, Line between Signay and Labarre, Astronomical Line on North-West of Gatineau River, Clergy Reserve in Orford, part of Beresford, Inspection of Mill Sites Saguenay, part of Onslow, Gore of Somerset, St. Francis Territory, part of Caron and part of Mesy, part of Gosford, part of Chester, Gore of Hunterstown, part of Eardley, Boundary Survey Hereford, Auckland and Gore of Hereford, Shefford.

APPENDIX

Statement of Surveys performed in the years

YEAR.	Subdivided into Farm Lots.	Into Town and Park Lots.	Verification Surveys and Township Outlines.	Exploratory lines between Seignories and Crown.	Total Acres.	Cost of Surveys		
	Acres.	Acres.	Acres.	L. miles.		£	s.	d.
Brought forward	1090035	3752	1193460	1714	2287277	21896	10	7½
1851.....	130000	400	45500	10	175900	2655	9	4
1852.....	543800	900	90500	9	635200	5834	14	6
1853.....	355000	250	150000	.....	505250	5192	13	6
1854.....	220500	450	95000	5	316050	3228	3	9½
1855.....	471916	.....	60000	11	531916	9127	15	6½
1856.....	280200	220	174800	64	455220	6374	13	8
Total.....	3091481	5972	1809260	1813	4906813	54310	0	11½

Several of the Surveys paid for in 1855 & 1856 were ordered in 1854.

I.

1841-1856, inclusive, in Canada East—Continued.

LOCALITY.
Parts of Sheen, Signay, Tadousac, Bergeronnes, Escoumains, Remaining Outlines of Seigniories of Madawaska and Lake Temiscouata, Residue of Masham, Aldfield and Thorne, Mesy, Woodbridge, Resumed Boundary Survey of Hereford and Auckland, Village of Metabetchouan, Portage Road Gaspé, part of Beresford, Beach of River à Mars, Wexford, part of Caron, Kenogami Road, part of Labarre, Verification of Grenville, part of Chertsey, Calumet Village, Cathcart, part of Line of D'Auillebont and De Ramsay (half paid by parties), part of Three Rivers, part of Masham, Micmac Reserve, Ristigouche.
Montminy, DeSales, Mailloux, completion of Hereford Boundary Survey, Road from Tadousac to Moulin à Baude, parts of Wright, Rippon and Hartwell, Village of Tadousac, Village à Garthby, Neigette, Cabot, part of Village of Lafontaine, Residue of Wotton, parts of Montcalm and Beresford, Exploration of Wolfe, part of Frampton, part of Winslow, Residue of Chertsey, part of Thetford, Line between Seigniorie of Becancour and Aston, &c., additional Range in York, Mal Bay, Douglas and Percé, Bungay, Magdalen Islands, Bourdages, Park, and part of Colbert, Northfield, Rocmont.
Township of Wells, parts of Villeneuve, Daquam, and Bellechasse, Tremblay, part of Stratford, Bowman, Residue of Brandon, Township Divisions River du Lièvre, Portland, part of Thetford, Cap de la Magdeleine, part of Garthby, Mailloux and Buckland-Line, Outlines of Mesy, Caron, Metabetchouan and Charlevoix, Escoumains Village, Outlines of Iberville, part of Tadousac, Villages of Hypolite and St. Camille, Bigelow, Blake, Patton, part of Bourdages, part of Buckland, part of Beresford, part of Radnor, Rawdon and Kilkenny Line, Line between Godmanchester and Dundee.
Rear Ranges of Bristol, Rear Line of Seigniorie of Bourglouis, North-East Line of Seigniorie of Perthuis, part of Colbert, North-East line of Batiscan, part of Chilton, Temiscamingue, Residue of Weedon, Village of Hebertville, part of Woodbridge, Adstock, part of Howard, part of Harvey, Radnor, Subdivision of Seigniorie of St. Gabriel, Low, Begon and Raudot, parts of Ashford and Fournier, Peterborough, Winslow Village, Fleuriau, Fief du Sablé, Mount Murray.
Doncaster, Macpes, part of Viger, part of Begon, and Raudot, Arago, Matapediac, Dorset (at the expense of the parties), Residue of Simard, Residue of Woodbridge, Residue of Harvey, Hampden, Lasalle, Subdivision of Somerset Gore, Kensington, Wabasse, Egan, Exploration at Lake St. John, Residue of Aylwin and Wright, Association Survey of Lots in Metabetchouan, Labarre, and Mesy (performed 1854, reported 1855, at the expense of the parties), Line between Bourglouis and Gosford, Radnor, Joliette, Bourget, Village of Boisbouscache.
Part of Chapais, Marston, Verification of Line between Grantham and Upton, Aumond, Three Ranges of Howard, Cap Chat, Montcalm, Residue of Whitton, Verification of 12th and 13th Ranges of Kingsey, South-West half Chabot, Townships of Lafontaine, Dionne, Casgrain, and Elgin Road, Verification of part of Ham, Village of L'Achigan. (in Kilkenny), Ditchfield, Common of Huntingdon, Residue of Cathcart.

NOTE.—In Surveys of Division lines between Seigniories and Crown Lands, the expense is borne equally by the Crown and the Seigniors.

Crown Lands Department,

Toronto, 16th February, 1857.

JOSEPH CAUCHON,  
Commissioner of Crown Lands.

APPENDIX

Statement of Surveys performed in the years

YEARS.	Subdivided into Farm Lots.	Into Town and Park Lots.	Verification Surveys and Outlines of Townships.	Mining Tracts.	Ind'n Reserves.	Total Acres.	Cost of Surveys.		
	Acres.	Acres.	Acres.	Acres.	Acres.		£	s.	d.
1841.....	249298	.....	18400	.....	.....	267698	1193	18	6
1842.....	317281	504	3000	.....	.....	320785	2042	10	10
1843.....	213751	237	308805	.....	.....	522793	1420	1	0
1844.....	2528	725	.....	.....	.....	3253	275	16	9
1845.....	45974	461	23600	.....	.....	70035	602	4	4½
1846.....	97925	13108	41082	.....	.....	152115	2320	13	1½
1847.....	80108	108	8300	108800	.....	197316	2440	17	2½
1848.....	130998	615½	.....	88053	.....	219666½	7533	15	1
1849.....	163294½	1453½	5112	264122	.....	433982	3166	4	6
1850.....	164392	1402	40800	.....	.....	206594	2461	19	1
1851.....	266635	221	.....	.....	.....	266856	2630	13	10
1852.....	405402	6173½	11700	.....	.....	423275½	5123	5	8
1853.....	580441	917	.....	.....	453548	1034906	9039	10	7½
1854.....	166981	1407	.....	6400	136538	311326	4344	19	0
1855.....	174099	2781	2950	.....	.....	179830	4702	3	8
1856.....	528035	6452½	.....	.....	.....	560955½	14657	9	3
	26468 Islands.	.....	.....	.....	.....	.....	.....	.....	.....
	3613610½	36566	463749	467375	590086	5171386½	63956	2	6

J.

1841 to 1856, inclusive, in Canada West.

LOCALITY.	
{	In the Townships of Admaston, Bagot, Blithfield, Bromley and Stafford, and Verification in Grimsby.
{	In the Townships of Onondaga, Oneida, Seneca, Tuscarora, Sarnia, Arthur, Sydenham and North Crosby, Town-plot of Colchester, and Verification in Eldon.
{	In the Townships of Peel, Wellesley, Sullivan and Brantford, Town-plots of Barrie and Woodstock, Verification in Scymour and Beverly, and Outlines of Clergy Block 260,270 acres.
{	In the Township of Moore, and Town-plots of Caledonia, Indiana and Tuscarora.
{	In the Townships of Bentinck, Glenelg, Brantford, Zone, Town-plots of Harwich, Meaford, Woodstock, and Verification in Hope.
{	In the Townships of Derby, Egremont, Holland, Normanby, Sullivan, Toronto, Town-plots of Bytown, Lindsay, Shrewsbury, Sault Ste. Marie, Verification in Arthur, Seymour, Kingston, Hamilton and Toronto.
{	In the Townships of Elma, Wallace, Grey, Howick, Morris, Turnberry, Kinloss, Huron, Kincardine, Bruce and Saugeen, 1075 miles of branches of the Ottawa River, and fronts of 17 mining tracts on Lake Superior.
{	In the Townships of Morris, Admaston, Artemesia, Holland, Melancthon, Town-plots of Barrie, Bytown, Gosport, Mining tracts on Lakes Huron and Superior, 764 miles of branches of the Ottawa, and 447 miles of exploring lines in the Ottawa country.
{	In the Townships of Maryborough and Mornington, Town-plots of Johnston and York, Mining tracts on Lakes Huron and Superior, Verification in Caistor and Edwardsburgh.
{	Lots in Toronto and Sydenham and Durham Roads, in Holland and Walsingham, Town-plots of Bytown, Durham, Penetangore, Sydenham, Verification in Aldborough.
{	In the Townships of Osprey, Artemesia, Saugeen, Kincardine, Brant, Bentinck and Glenelg, Park lots in Sydenham.
{	In the Townships of Arran, Saugeen, Huron, Brougham, Egremont, Bruce, Wilberforce, Tossorontio, Elderslie, Grattan, Town-plots of Southampton, Thornbury and Sydenham, and 69 miles of Renfrew County line.
{	Lots on the Ottawa and Opeongo Road in the Townships of West Gwillimbury, King, Bruce, Carrick, Kinloss, Minto, Grey, Culross, Elderslie, Grattan, Normanby, Greenock, Turnberry, Town-plots of Priceville, Peterborough, Bytown and Charlotteville, Indian Reserves on Lakes Huron and Superior, and 155 miles of exploring road lines in the Ottawa country.
{	In the Townships of Howick, Melancthon, Elma, Town-plots of Mount Forest, Amsterdam, Bradford, Corrunna, Indian Reserves and Mining tract on Lake Superior, and 393 miles of exploring, county and road lines.
{	In the Townships of Fraser and Alice and St. Joseph Island, Town-plots of Sudbury, Sydenham, Ayton, Poole, St. Joseph and Hilton, Verification in Alveston and Paisley.
{	In the Townships of Wallace, Rama, Rolph, McKay, Proton, Balaklava, Luther, Denbigh, Ashby, Abinger, Effingham, Anglesa, Barrie, Somerville, Hinchinbrooke, Lots on the Addington and Hastings Roads, Long Point on Lake Erie, Islands in the Otonabee, 1102½ miles exploring and road lines in the Ottawa and Huron Territory, Town-plots of Alma, Inverhuron, Errol, Penetanguishene, Alveston, Owen Sound, Fordwich, Cranbrook, Eugenia, Paisley; and, in addition, P. L. S. Macdonald surveyed the Hudson's Bay Company's Posts, 37,280 acres, at the cost of the Company, and the Indian Department surveyed the Saugeen Indian Reservation, containing 407,546 acres.

## APPENDIX K.

## RETURN of Surveys for the year

No.	Surveyor.	Survey.
1	James Black	Survey of outlines Long Point on Lake Erie.
2	James Black	Subdivision of Long Point on Lake Erie.
3	E. R. Jones	Town Plot of Alma.
4	E. Malcolm	Township of Wallace.
5	C. Miller	Town Plot of Inverhuron
6	Chs. Unwin	Township of Rama
7	John Reid	Cameron Island.
8	Robert Hamilton	Township of Rolph.
9	John Robertson	Township of McKay.
10	A. P. Salter	Exploration on the North Shore of Lake Huron.
11	J. K. Roche	Township of Belmont.
12	P. S. Donnelly	Town Plot of Errol.
13	H. P. Savigny	Town Plot of Penetanguishene.
14	Samuel Smith	Town Plot of Alveston.
15	David Gibson	Township of Proton.
16	George McPhillips	Township of Luther.
17	William Rath	Township of Balaklava.
18	John Reid	Exploring line in rear of Burleigh Rapids.
19	Wm Rombough	Outlines of Denbigh and Ashby.
20	John Ryan	Boundary between Mono, Mulmur, Adjala and Tossorontio.
21	J. J. Haslett	Islands in the Otanabee and its Lakes.
22	A. B. Perry	Examination and Survey of road lines to the Madawaska
23	A. B. Perry	Lots on the Addington road and outlines of Abinger, &c.
24	Charles Rankin	Block B in the town of Owensound.
25	P. V. Elmore	Lots on the Hastings road.
26	John Reid	Part of the township of Somerville.
27	Francis Jones	Town Plot of Fordwich.
28	Thomas F. Gibbs	Township of Hinchinbrooke.
29	William Rath	Town Plot of Cranbrook.
30	George McPhillips	Town Plot of Eugenia.
31	Francis Kerr	Town Plot of Paisley.

As this is the total amount of the Accounts for Surveys completed and audited during the year, on which advances were previously made, it does not correspond with the Accountant's returns of Monies paid for Surveys which includes advances on Surveys in progress.

Crown Lands Department,  
Toronto, 31st December, 1856.

## UPPER CANADA.

ending 31st December, 1856.

Cost of Survey.	No. of Acres Surveyed.	No. of Miles Surveyed.	Remarks.
£ s. d.			
151 5 0		42	
683 7 6	19,462		
167 1 3	229		
473 0 0	52,349		
320 4 7	1,329		
318 16 3	15,011		
35 12 6	1,140		
703 14 3	41,633		
279 16 6	17,372		
928 16 11		500	
455 9 9		116	An examination and verification survey.
104 19 10	327½		
177 17 3	444		
499 2 5	812		
771 4 9	70,615		
1,027 7 0	91,618		
832 2 2	15,688	210	Survey £520 1s. 1d. Exploration £312 1s. 1d., and 400 miles of lateral exploration.
413 15 0		25½	
484 14 0	13,600		
264 13 6		27	
686 17 5	5,866		
456 13 8		125	Verification of old road lines.
		57	Survey of new road lines.
1,237 12 8	51,937		
34 6 9	92		
733 2 6	60,300		
329 6 10	22,622		
267 2 6	413		
1,154 8 5	75,280		
222 1 11	507		
203 13 6	799		
236 2 8	1,500		
14,657 9 3	560,955½	1,102½	

## RECAPITULATION.

Acres.  
528,935 subdivided into farm lots of 100 acres each at 3s. 10d. per acre.  
6,452½ " town lots of ½ acre and park lots 2 to 10 acres at 6s. 11d. per acre.  
26,468 Islands surveyed at 1s. 7d. per acre.

560,955½

Miles.

1,102½ miles of outlines of townships exploring lines, &c., &c., at £2 14s. 10d. per mile.

JOSEPH CAUCHON,

C. C. L.

APPENDIX L.—LOWER CANADA.

Return relative to Surveyors and Surveys, for the year ending the 31st December, 1856.

SURVEYORS.		SURVEYS.									
Names of persons belonging to the Survey Department.	Description.	Date of Appointment.	By whom Appointed.	Salaries.	Allowances.	Labours employed.	Amount paid to them as Wages.	Total expenditure during the year.	Land surveyed during the year.	Average cost per Acre.	Quantity (if any) of Land surveyed but not by a Govt. Surveyor.
Vital Drochers	Prov'l. Land Surveyor	15th Dec. 1847	Lord Elgin	20s per diem.	2s. 6d. for rations.	112	£2611 2 2	£6374 13 8	280,420, exclusive of verifications, surveys and explorations.	51s.	None but Govt. Surveys are returned to this Office.
D. P. Croteau	do	16th Nov. 1848	"								
L. P. O'Hanley	do	12th May, 1853	Board of Examiners								
H. Gilmour	do	30th May, 1849	Lord Elgin								
Fred. Bélanger	do	8th Feb. 1853	Board of Examiners								
Geo. N. Allbright	do	13th Oct. 1848	Lord Elgin								
Jno. Bignell	do	Nov. 1844	Sir Charles Metcalfe								
Patrick Daly	do	25th Dec. 1835	Lord Gosford								
A. Painchaud	do	12th May, 1853	Board of Examiners								
C. F. Fournier	do	25th July, 1826	Lord Dalhousie								
J. v. Neilson	do	8th July, 1852	Board of Examiners								
F. P. Quinn	do	15th July, 1844	Sir Charles Metcalfe								
F. J. O'Neill	do	26th Sept. 1839	Hon. P. Thompson								
Wm. Barrett	do	5th July, 1834	Lord Aylmer								
L. P. R. Blanchard	do	Feb. 1833	"								
W. W. O'Dwyer	do	16th July, 1844	Sir Charles Metcalfe								

Crown Land Department,  
Toronto, 14th March, 1857.

JOSEPH CAUCHON,  
Commissioner of Crown Lands.

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**APPENDIX M.**

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**STATEMENT**

**Of sums received and paid by T. Boutillier, Inspector of Agencies, from the 23rd February to 31st December, 1856, and a Report on the Progress of Settlement in the Townships of Lower Canada during the year 1856.**

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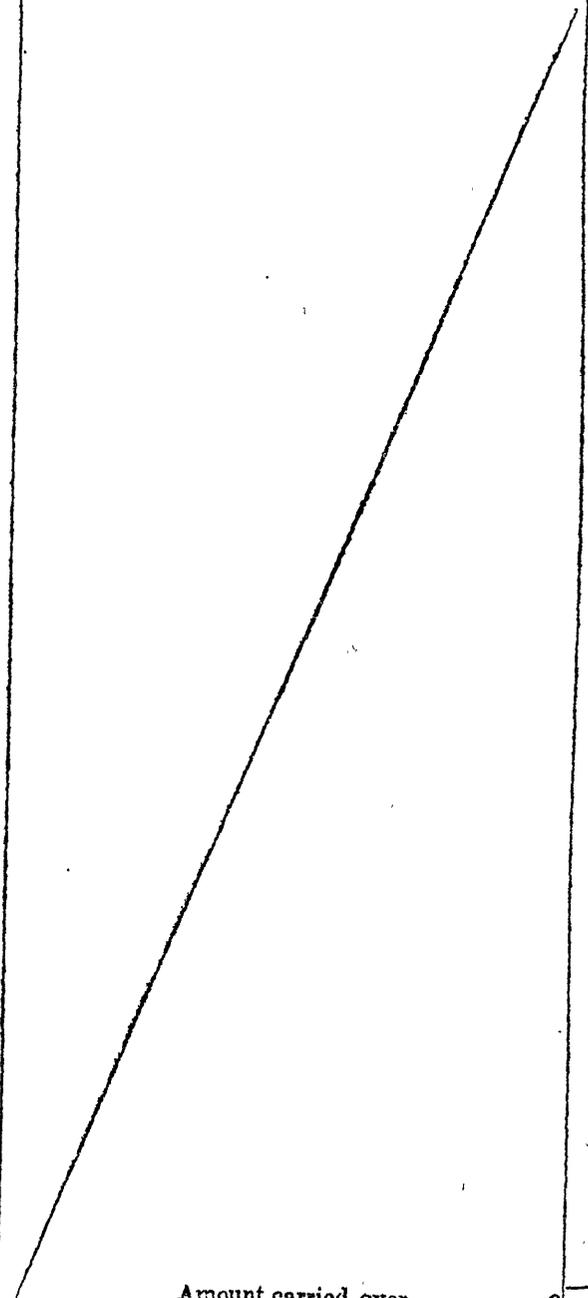


DR.

T. BOUTILLIER, Inspector of Agencies, in

1846.

Amount brought forward.....£ 9755 16 10½



Amount carried over.....£ 9755 16 10½

account with the Crown Lands Department.

CR.

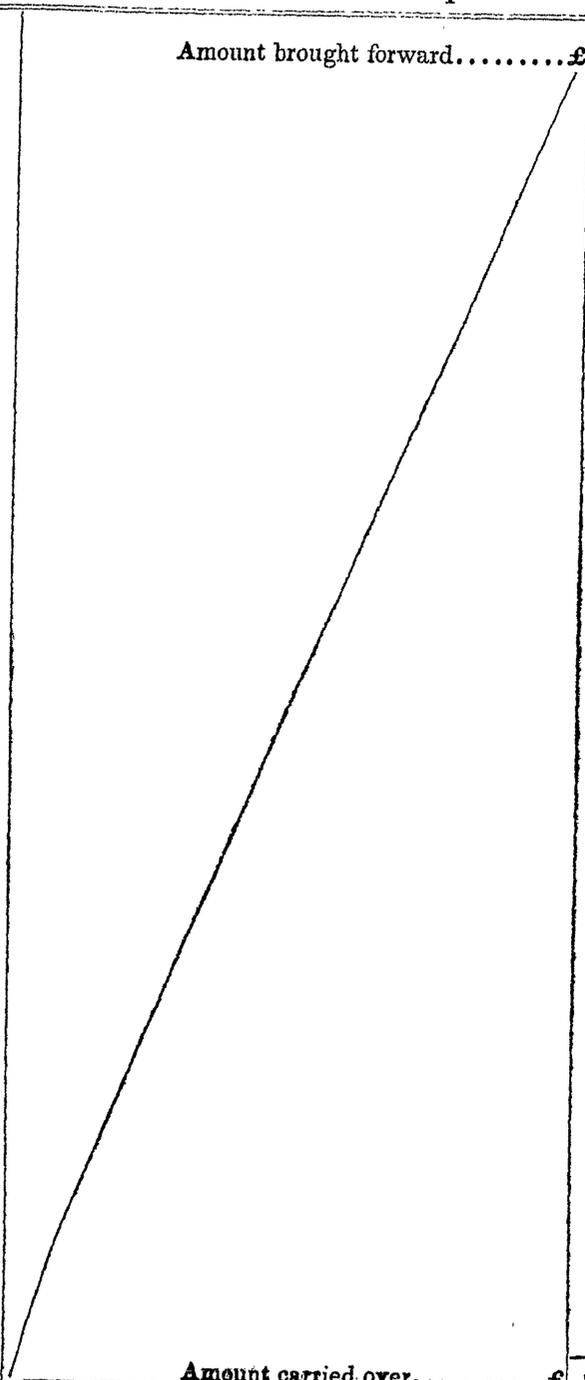
1856.		Amount brought forward.....£		1542 13 1½
Sept.	6	By 4 Checks of £25 each, P. N. Pacaud and J. T. Lebel, Sup't.....	£	100 0 0
"	8	" 1 " £150, John Kane, Attorney for the Municipality of Bagot.....	£	150 0 0
"	"	" 1 " £40, P. Dagneault, Sup't.....	£	40 0 0
"	"	" 1 " £14 2s. 8½d., A. Jetté, " ..	£	14 2 8½
"	11	" 2 " 1 of £85 and 1 of £65, B. Garneau and J. B. Coulombe, Sup'ts.....	£	150 0 0
"	"	" 4 " £25 each, Elie Audet, " ..	£	100 0 0
"	12	" 2 " £50 each, P. C. Rivard " ..	£	100 0 0
"	"	" 3 " £25 each, Luc Gélinas, " ..	£	75 0 0
"	"	" 1 " £100, N. Boucher, " ..	£	100 0 0
"	"	" 1 " £100, Ls. Arcand, " ..	£	100 0 0
"	13	" 2 " £50 each, P. Skelly, " ..	£	100 0 0
"	15	" 1 " £50, O. Bossé, Agent.....	£	50 0 0
"	16	" 2 " £25 each, Ls. Dufresne, Sup't.....	£	50 0 0
"	17	" 2 " £30 each, A. Cayer.....	£	60 0 0
"	18	" 2 " £50 each, Jos. Roy.....	£	100 0 0
"	"	" 2 " £50 each, D. Philipps, Sup't... ..	£	100 0 0
"	"	" 2 " £50 each, John G. Fair, " ..	£	100 0 0
"	20	" 1 " £50, J. E. Côté et M. Gaudette, " ..	£	50 0 0
"	22	" 2 " £25 each, V. St. Germain, Sup't... ..	£	50 0 0
"	25	" 1 " £25, A. Talbot, " ..	£	25 0 0
"	"	" 1 " £25, Z. Bertrand, " ..	£	25 0 0
"	26	" 2 " £25 each, Jos. Prince, " ..	£	50 0 0
"	29	" 2 " £50 each, P. N. Pacaud and J. T. Lebel, Sup'ts.. ..	£	100 0 0
"	30	" 2 " £25 each, Luc Gélinas, " ..	£	50 0 0
October	4	" 2 " £75 each, B. Garneau and J. P. Coulombe, Sup'ts. ..	£	150 0 0
"	"	" 1 " £100, J. B. Delisle and A. Wait, " ..	£	100 0 0
"	6	" 1 " £50, A. Boa, " ..	£	50 0 0
"	"	" 1 " £30, P. Dagneault, " ..	£	30 0 0
"	8	" 1 " £200, P. N. Pacaud and J. T. Lebel, Sup'ts.....	£	200 0 0
"	9	" 3 " £50 each, C. A. Verreault, Sup't... ..	£	150 0 0
"	"	" 2 " £37 10s. each, Jos. Prince, " ..	£	75 0 0
"	10	" 2 " £25 each, Luc Gélinas, " ..	£	50 0 0
"	11	" 2 " £25 each, Z. Bertrand, " ..	£	50 0 0
"	13	" 4 " £25 each, Wm. Bonnallie, Attorney of the Municipality of North Stukeley, ..	£	100 0 0
"	14	" 2 " £25 each, Elie Audet, Sup't.....	£	50 0 0
"	15	" 1 " £30, Revd. Ed. Richard, " ..	£	30 0 0
"	"	" 1 " £40, P. Skelly, " ..	£	40 0 0
"	"	" 2 " £37 10s. each, L. H. Lebel, " ..	£	75 0 0
"	16	" 1 " £25, Ls. Dufresne, " ..	£	25 0 0
"	"	" 2 " £50 each, John Kane, Attorney.....	£	100 0 0
"	"	" 3 " £50 each, Ths. Lloyd, Sup't.....	£	150 0 0
"	"	" 2 " £50 each, O. Bossé, Attorney.....	£	100 0 0
"	17	" 1 " £50, John G. Fair, Sup't.....	£	50 0 0
Amount carried over.....£				4956 15 10

DR.

T. BOUTILLIER, Inspector of Agencies, in

1856.

Amount brought forward.....£ 9755 16 10½



Amount carried over.....£ 9755 16 10½

account with the Crown Lands Department.

CR.

1856.	Amount brought forward.....£	4956 15 10
October 18	By 2 Checks of £50 each, Eucher Dion, Sup't....	100 0 0
" 20	" 2 " £25 each, P. A. Tremblay, " ..	50 0 0
" "	" 1 " £50, N. Miville, " ..	50 0 0
" "	" 1 " £50, Ls. Lapointe.....	50 0 0
" 23	" 1 " £50, J. E. Côté and M. Gaudette, Sup'ts.....	75 0 0
" 25	" 1 " £15, John Duff, Sup't.....	15 0 0
" "	" 4 " £50 each, P. N. Pacaud and J. T. Lebel, Overseers.....	200 0 0
" "	" 2 " £37 10s. each, Chs. F. Caron, Sup't..	75 0 0
" "	" 1 " £75, Jos. Roy, " ..	75 0 0
" 27	" 1 " £25, Ls. Dufresne, " ..	25 0 0
" "	" 3 " 2 of £50 each and 1 of £25, C. A. Verreault.....	125 0 0
" 28	" 1 " £133 19s. 6d., C. F. Dionne, Sup't,..	133 19 6
" "	" 1 " £50, N. Boucher, " ..	50 0 0
" 30	" 5 " £20 each, Ths. Lloyd, " ..	100 0 0
November 3	" 3 " £25 each, A. Talbot, " ..	75 0 0
" 5	" 3 " £25 each, Wm. Bonnallie, Attorney..	75 0 0
" "	" 2 " 1 of £25, the other of £24 18s. 7½d., Z. Bertrand, Sup't.....	49 18 7½
" "	" 1 " £250, P. N. Pacaud and J. T. Lebel, Sup'ts.....	250 0 0
" "	" 2 " 1 of £30 and the other of £20, J. E. Côté and M. Gaudette, by B. Garneau, Attorney.....	50 0 0
" "	" 1 " £125, B. Garneau and J. B. Coulombe, Sup'ts.....	125 0 0
" 10	" 2 " £30 each, Elie Audet, Sup't.....	60 0 0
" "	" 4 " 3 of £50 each and 1 of £25, Ls. Arcand, Sup't.....	175 0 0
" "	" 2 " £25 each, Jos. Roy, Sup't.....	50 0 0
" "	" 1 " £10, P. Dagneault, " ..	10 0 0
" 11	" 1 " £28 14s. 10½d., P. Skelly.....	28 14 10½
" "	" 1 " £66 13s. 0½d., C. A. Verreault.....	66 13 0½
" "	" 1 " £25, Wm. Bonnallie, Attorney.....	25 0 0
" "	" 6 " £25 each, J. B. Delisle and A. Wait, Sup'ts.....	150 0 0
" 12	" 1 " £25, Luc Gélinas, Sup't.....	25 0 0
" "	" 1 " £50, Eucher Dion, " ..	50 0 0
" "	" 1 " £35, Jos. Savard, " ..	35 0 0
" "	" 1 " £11 17s. 5d., Revd. Ed. Richard, " ..	11 17 5
" "	" 2 " £25 each, Andrew Boa.....	50 0 0
" "	" 1 " £50, P. N. Pacaud and J. I. Lebel, Sup'ts.....	50 0 0
" 17	" 8 " 6 of £5 and 2 of £10 each, V. St. Germain, Sup't.....	50 0 0
" 18	" 3 " £10 each, L. H. Lebel, Sup't.....	30 0 0
" 19	" 1 " £250, P. N. Pacaud and J. T. Lebel, Sup'ts, by B. Garneau, Attorney...	250 0 0

Amount carried over.....£ 7822 19 3½

DR.

T. BOUTILLIER, Inspector of Agencies, in

1856.	Amount carried forward.....£	9755 16 10½
£		9755 16 10½

St. Hyacinth,  
3rd February, 1857.

account with the Crown Lands Department.

CR.

1856.	Amount brought forward.....£	7822 19 3½
November 19	By 2 Check, 1 of £35 and 1 of £25, B. Garneau and J. B. Coulombe, Sup'ts.....	60 0
" 21	" 3 " 2 of £20 each and 1 of £22, Chs. Frs. Caron, Sup't.....	62 0
" 22	" 2 " £12 10s. each, N. Miville, Sup't.....	25 0
" 26	" 1 " £0 19s. 8d., John Duff, " ..	9 19 8
" 27	" 1 " £15, Jos. Savard, " ..	15 0 0
" "	" 1 " £45 10s., D. Philipps, " ..	45 10 0
" "	" 1 " £30, D. Philipps, " ..	30 0 0
December 3	" 1 " £75, Ths. Lloyd, " ..	75 0 0
" 6	" 7 " £10 each, Eucher Dion, " ..	70 0 0
" 10	" 2 " 1 of £25 and the other of £30 18s. 3d., Jos. Roy.....	55 18 3
" 12	" 5 " 4 of £50 each and 1 of £38 16s. 9½d., P. N. Pacaud and J. T. Lebel, Sup'ts.....	238 16 9½
" 13	" 1 " £24 8s. 3d., Luc Gélinas.....	24 8 3
" 15	" 1 " £10 0s. 3d., J. E. Côté et M. Gaudette, Sup'ts.....	10 0 3
" "	" 2 " 1 of £50 and the other of £41 18s. 8½d., Ls. Arcand, Sup't.....	91 18 8½
" "	" 1 " £43 13s. 10½d., L. E. Laroque, Sup't... ..	43 13 10½
" 16	" 1 " £20, Revd. Ed. Richard, " ..	20 0 0
" 19	" 1 " £21 15s. 3d., Jos. Prince, " ..	21 15 3
" "	" 5 " 4 of £25 each and 1 of £12 18s. 9d., John G. Fair.....	112 18 9
" 24	" 1 " £15, J. E. Côté and M. Gaudette....	15 0 0
" 27	" 4 " £12 10s. each, J. Ls. M. Martin, Sup't.....	50 0 0
" 31	" 4 " £25 each, J. B. Delisle and A. Wait. Balance.....£	100 0 0
		755 17 9½
	£	9755 16 10½

T. BOUTILLIER,  
Inspector of Agencies.



# R E P O R T .

## COUNTY OF CHICOUTIMI.

### *Kenogami Road.*

Superintendent—P. A. TREMBLAY.

Balance remaining from last appropriation.....	£416	15	6
Amount of last appropriation in 1856.....	400	0	0
			6
			816
Amount paid.....	443	16	0
Balance.....	372	19	6

This road begins at the Rapid “des Roches,” on the River Chicoutimi, and is to terminate at lake St. John; length, about 38 miles, of which nine miles were opened in 1854, 6 miles in 1855, and 5½ miles in 1856. This last part has cost on an average £80 10 0 per mile. A large number of small bridges were built. There is yet to be built on the second of the last five miles, another bridge, the span of which will not be less than 200 feet. Mr. Tremblay gives me the following statement relative to the lands which border the last 5½ miles which he opened this year.

“From the starting point to a distance of 45 chains, the land is sandy. From this point to the end of the work, the land is everywhere of excellent quality, composed principally of a layer of yellow earth on a bed of clay. Beyond this, the soil is equally good, to a far greater extent on each side of the road.

“The space included between the “River Des Aulnets,” the “Belle Rivière” the “Grande Décharge,” the middle of the 3rd double range of the township Caron, and Lake St. John, are, (except a few marshy spots) very well adapted for cultivation. The only obstacle to the opening up of this range of concessions, is the want of main roads to penetrate them.

“The Kenogami road is the main artery by which colonisation, trade and industry will some future day enter into the Saguenay territory. The new settlements now springing up round Lake St. John, will date the beginning of their prosperity from the completion of this road. From the 15th of November to the end of December, and from the 15th of April to the end of May, the settlers of the townships beyond Lake Kenogami are completely shut up.

“At other seasons of the year it is only with great loss of time and labour that they are able, to attend to any business beyond their own limits

or manage the removal of their families or their property. The journey in summer being practicable only in punts or in bark canoes. But, in order that colonization may derive all the advantages desired by the opening of the Kenogami road, it is indispensable that government should establish roads leading into the heart of the townships.

“The Kenogami Road is our “Grand Trunk,” the routes will be its feeders

“The information I have in hand is not sufficient to enable me to state with precision the progress of colonization during the last three years in the several Townships which compose the County of Chicoutimi; but one single fact will prove the rapidity of its increase, which is, that at six leagues beyond the Post of Metabetchouan, at the mouth of the River Ouïat-chouanish, there are a saw and flour mill at work since last summer. Large numbers of settlers are only waiting for a convenient communication to establish themselves on the splendid lands extending from the River Ouïat-chouan to the River Chamou-chouan. A chapel was erected last year in the Township of Mesy near the “DesAulnets” falls.

“Within the last three years property has doubled its value in the majority of the Townships of Chicoutimi. From calculations, that may be depended on, over £3000, would be needed to complete this route to Lake St. John, and it is a matter of the greatest necessity that it should be finished without delay.”

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#### COUNTY OF CHICOUTIMI.

##### *Bridge over the River du Moulin.*

Built with the aid and under the superintendence of the Municipal Council of the Township of Chicoutimi.

Amount of the two appropriations.....	£571 8 7
Do paid at different times.....	426 17 6
	<hr/>
Balance in hand.....	£144 11 1

The report of the Municipal Council has not yet been transmitted to me.

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#### COUNTY OF CHICOUTIMI.

##### *Bridge over the River à Mars.*

Built with the co-operation, and under the superintendence of the Municipal Council of Bagot.

Amount of the appropriation.....	£528 11 5
Do paid at different times.....	450 10 10
	<hr/>
Balance in hance.....	£78 0 7

This Bridge is not yet finished, but is nevertheless of use to the public. The balance remaining in my hands will be paid when the bridge shall have been approved of by the experts.



## COUNTY OF QUEBEC.

*Belair Road.*

Superintendent—JOSEPH SAVARD.

Balance unemployed, and remaining over from the appropriation of 1855.....	£4 13 6
Amount of last appropriation, 1856.....	50 0 0
	£54 13 6
Amount disbursed.....	£54 13 6

The Belair road, which is about four miles long, is open through its whole length, and can be used for summer vehicles, except about four arpents which are only available for winter conveyances. There are however only 21 arpents which may be considered completed. This road has no opening to the south-west, and abuts on the seignior of Mr. Duchesnay. It would be of much greater use if it could be extended about 2 miles, viz, to the road leading to St. Catherine's Church. See my report of last year.

The cost of this road has been £75 a mile, bridges included.

A large saw mill was built last year near the road.

The lands near this road are all taken and their price very much increased.

An additional sum of £50 is required to complete this road.

## COUNTY OF PORTNEUF.

*Rocmont Road.*

Superintendent—ALEXIS CAYER.

Balance of appropriation remaining over from last year.....	£103 6 1½
Amount since paid.....	80 0 0
	23 6 1½
Balance.....	23 6 1½

For the designation of this road, see my last report.

The length proposed is 36 miles, of which, 11 miles were done in 1854-55, and 1 mile, 22 arpents in 1856. Five miles are in Gosford, and 7 miles, 22 arpents in Rocmont.

The whole extent of 12 miles, 22 arpents, can be used for summer vehicles ; it cost £25 a mile, without the bridges.

Eighteen bridges were built last year, of a total span of 240 feet, and cost £30.

The soil, in the 12th, 13th & 14th miles, except five or six lots, on the banks of the River St. Anne, is not available ; good marketable wood is to be found, such as red and white spruce, pine and birch.

It must be born in mind, that this road leads to the valley of Batiscan, where the soil is excellent.

There are several mill sites in the neighbourhood of this road.

Settlers have taken within the last three years 25 lots in Gosford, 39 in Roemont and 43 in Colbert.

Mr. Cayer superintendent of the works, is of opinion that property has doubled its value in these three years.

It is estimated that the completion of this road would cost £750.

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### COUNTY OF PORTNEUF.

Amount of appropriation for 1856 for the building of a bridge over the River St. Anne, in the Parish of St. Casimir, and for the opening of a road leading to the Townships in rear of St. Casimir.....£750 0 0

These works have been done with the aid of the Municipal Council of St. Casimir.

The Council undertook the building and repairs of the bridge. As soon as the contract between the Council and the Contractor shall have been approved of, a third of the stipulated price (if it do not exceed the amount of appropriation) will be paid to the Municipal Council; another third, when all the necessary materials shall have been deposited at the site of the works, and the last third after the work has been approved by the experts.

There is every reason to believe that considering the amount of the tenders made to the Municipal Council, the building of the bridge will absorb the whole amount of the appropriation, and that it will be necessary to provide other means to complete the road projected in rear of this bridge.

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### COUNTY OF BONAVENTURE.

*Maria, Nouvelle, Ristigouche and Matapedia, Escuminac Shoolbred, and Mann. Roads.*

Superintendent, JOHN FAIR.

Amount of appropriation for 1855 for roads in this County.....£400 0 0

The amount of this appropriation has been distributed as follows :

Maria Road.....	£50	0	0
Nouvelle, (1 Bridge).....	100	0	0
Ristigouche and Matapedia.....	120	0	0
Escuminac and Shoolbred.....	25	0	0
Mann.....	20	0	0

---

£315 0 0

Balance.....	£ 85	0	0
Amount paid.....	362	18	9

The following amounts were disposed of in 1856.

In Maria.....	£49	17	0
Nouvelle (Bridge).....	149	8	0
Ristigouche and Matapedia.....	117	13	0
Escuminac and Shoolbred.....	23	11	0
Mann.....	22	9	9
			£362 18 9
Balance	£ 37	1	3

As shown by these figures, Mr. Fair has exceeded the amount of two of the above appropriations, viz: in the Nouvelle and Mann roads, in the First place..... £49 8 0  
In the second..... 2 9 9

Information derived from reliable sources, has shown that for many reasons it was urgently necessary to complete the construction of the bridge over the river, and that there were no funds disposable, except the amount appropriated, for "Roads generally in the County of Bonaventure," and Mr. Fair having incurred additional expenses to complete this construction, it was deemed but justice to pay him the two balances of £49 8s. and £2 9s. 9d. the latter sum for reasons nearly similar.

The proposed length of these roads is in Maria from the 2d to 7th Concessions.

In the Township Nouvelle 12 miles; in Escuminac, 5 miles; in Mann, 7 miles, and in the Townships of Ristigouche and Matapedia 7½ miles.

The starting point of these roads is, in Maria, at the depth of the lots 42 and 43 in the first range.

In the Township Nouvelle, rear the Escuminac bridge, on the east side of the line of the High road, in the Township of Mann at 30 chains from the bridge of the River du Loup, on the west side of the High road, in the Township of Ristigouche, in rear of the low lands, at 30 chains from James Sillar, on the High road in the Township of Matapedia, at three miles from the River Matapedia.

All that has been opened of these roads is available for summer vehicles, there are about six miles open.

The land near these roads is good, and covered with birch, maple and pine.

The road in Mann will, it is said, pass through an area of 50 square miles, highly adapted for cultivation.

The road in Nouvelle will pass through some excellent lands well adapted for settlement.

Good land is also found on both banks of the River Escuminac, and also between the Rivers Escuminac & Nouvelle.

In the Township of Mann, in rear of Battery Point, is also good land.

There are some flourishing settlements on the Rivière du Loup, which will probably extend to a distance of seven miles in the Townships of Ristigouche and Matapedia, the interior of which is very favorable for colonisation.

The soil is of the best quality, well watered, and abounding in limestone.

On the New Richmond River are extensive slate quarries, and also, as stated by Mr. Fair, a white substance used for white-washing and which makes good putty; marl is also found.

The additional sums required to complete these roads are:

For Maria.....	£65	0	0
“ Nouvelle.....	160	0	0
“ Ristigouche and Matapedia.....	310	0	0
“ Escuminac and Shoolbred.....	64	0	0
“ Mann.....	70	0	0

The number of settlers who have established themselves in these different localities has increased a third or a half within three years.

Mr. Fair is of opinion that the vast amount of land, held by the Gaspé Company, has proved very prejudicial to colonisation, in Hamilton and Cox. The inhabitants are for the most part Acadian French, who have large families, and cannot get lands in the back settlements.

There are now building in Carlton a handsome church, one in Maria, one in Bonaventure, township of Hamilton, and two in the township of Nouvelle.

A sum of £669 would be required to complete the roads.

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### COUNTY OF BONAVENTURE.

Amount of the appropriation of 1856, for roads in  
this County..... £400 0 0

This sum has been divided in the County of Bonaventure as follows, in Richmond £150, in Hamilton £120 and in Cox £130.

A correspondence has been opened between these different Local Municipalities, and this Office, for the purpose of determining in a more perfect manner, how and where it would be most advantageous to apply these last sums appropriated to each of these Municipalities.

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 COUNTY OF GASPE.

Roads from the Peninsula to Griffin's Bay, and from the Peninsula to "Grande Grève."

Superintendent—DAVID PHILIPPS.

*1st Road.*

Balance from appropriation of 1855.....	£0 8 9
Amount of appropriation of 1856.....	200 0 0
	-----
Amount paid.....	195 10 0
	-----
Balance.....	4 18 9

*2nd Road.*

From the Peninsula of Grande Grève.

Appropriation.....	£120 0 0
Paid.....	118 11 3
	-----
Balance.....	£1 8 9

These two roads begin at the settlements known as the "Peninsula;" the first terminates on the Banks of the St. Lawrence, on the north side of Griffin's River, its length is eight miles; the second terminates at Grand Grève, and is 12 miles long. The first road is open through its whole length, and 39 arpents have been so far completed this year as to serve for summer vehicles. The second is open to "Seal Rock," in length about 6 miles in the direction of Grand Grève.

Five miles of these roads are passable for winter vehicles. The costs of the road completed has been £87 a mile.

Fifteen bridges, making an amount of bridging of 200 feet, built in 1856.

There are still 12 to construct; Mr. Philipps, says that the land may be called good, the timber is principally white & black birch, spruce, cedar, fir, maple and some pines.

With the exception of five or 6 lots which are only recently occupied, the land traversed by the road from the Peninsula to Griffin's Cove, is uninhabited, but the land on the Grand Grève road is already occupied, and partly under culture.

These two roads will open communications between the different fishing establishments of the coasts of the River St. Lawrence and Gaspé Bay, and also with the central point of business in Gaspé Bay.

For further particulars, see my last year's Report.

No provision has been made for the establishment and legal maintenance of these roads. According to Mr. Philipps, the Municipalities have not been able to organise their Councils, as the holders of lands having no titles do not consider themselves qualified.

Near these roads are several good water powers.

Lime stone is abundant ; Mr. Philipps reports that plumbago is found at Grand Grève.

A Church has been built at Little Gaspé ; there is another in course of erection at Grand Grève, and a third at Griffin's Cove.

It is calculated that £1000 would be needed to complete these two roads, and about £300 to build the bridges.

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### COUNTY OF GASPÉ.

*Road from Point St. Pierre to Chien Blanc.*

Superintendent—JOHN FAUVEL.

Amount of the appropriation of 1856..... £80 0 0

This road has been explored and laid out by Mr. Fauvel during last Autumn, and the works of improvement will be undertaken next spring ; means are being taken to procure the necessary materials for the construction of bridges which are eight in number.

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### COUNTY OF RIMOUSKI.

*Road from Matane to Cap Chat.*

Amount of appropriation of 1856..... £67 0 0

A correspondence was opened with Messrs. J. G. Lespérance and J. B. Lepage, Superintendents of the works done on this road in 1855, with the intention of continuing these works in 1856.

But the season favourable to these works had passed before this correspondence had the desired result.

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### COUNTY OF RIMOUSKI.

*Road to Fleuriau.*

Superintendent, S. H. LEBEL.

Amount of appropriation of 1856..... £150 0 0

Do paid..... 105 0 0

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Balance in hand..... £45 0 0

Mr. Lebel has informed me that in consequence of a severe illness, he was unable to make his final report to me.

Nevertheless, in a preceding letter dated 10th November last this gentleman has rendered me an account of his work up to that day.

There was at that time  $20\frac{1}{2}$  arpents of the road opened, and there also were two bridges built, one of 71 feet and the other of 40 feet span.

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### COUNTY OF RIMOUSKI.

#### *St. Simon Road.*

Superintendent, CHS. FRS. CARON.

Appropriation.....	£150	0	0
Paid.....	137	0	0
Balance.....	£ 13	0	0

This road, the length of which is to be two leagues and a half to reach the Crown Lands, is open from the third and fourth ranges inclusive, for a distance of 68 arpents. The portion opened is in the Seigniory Nicholas Rioux.

The whole of the open road is passable for summer vehicles. The cost is £40 per mile, exclusive of bridges.

According to Mr. Caron's Report, the lands in the vicinity of the road are tolerably good. Five miles of road will, when opened, afford access to the Crown Lands.

There is a large and commodious Flour Mill and a Saw Mill on the 4th Range of St. Simon. There are besides two water powers not taken advantage of in the 5th, 7th and 8th Ranges.

In the vicinity of the road are some good limestone quarries.

Mr. Caron is of opinion that £200 would suffice to complete this road.

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### COUNTY OF TEMISCOUATA.

#### *Whitworth Road.*

Superintendent, N. MIVILLE.

Amount of appropriation, 1856.....	£175	0	0
Paid.....	75	0	0
Balance.....	£100	0	0

The starting point of this road is on lot 13 of the 3rd Range of Whitworth. Two miles and a half have been opened, but not finished. The wood has been cleared out and the largest stones removed.

If this road were extended 10 or 12 miles from its starting point, it would reach the Lake Temiscouata road.

One mile is passable for summer vehicles, and a mile and a half for winter vehicles.

A bridge, 144 feet long, has been built. The land appeared to the Superintendent to be good, and the wood, such as pine, spruce and cedar, in tolerable abundance.

This road will be very useful to colonization and trade if continued to Temiscouata road, as parties from New Brunswick, according to Mr. Miville, come into our parishes to transact business.

There are five or six water powers on this road.

At St. Antonin, at the ascent of the Lake Temiscouata road, a chapel has been built last year.

There is a Priest residing at St. Modeste who officiates at St. Antonin every fortnight.

It is proposed to build a chapel at Viger.

Mr. Miville is of opinion that the value of real estate has increased one third within the last three years in these Townships.

At least £600 would be required to prolong this road to Lake Temiscouata, a distance of 10 or 12 miles.

## COUNTY OF TEMISCOUATA.

### *Viger Road.*

Superintendent L. M. LAPOINTE.

Appropriation for 1856.....	£125	0	0
Paid.....	50	0	0
Balance .....	£75	0	0

The starting point of this road is on the 5th range, at 10 arpents from the line that divides this range from the 6th.

Its proposed length is a little over three miles.

A little more than a mile was opened in 1856.

No bridge has yet been built, and the road can therefore only be used in winter.

This road passes in its whole length through good land, and fine woods, and will lead if prolonged, to some very good lands, situate principally on the 9th 10th 11th and 12th ranges of Viger.

The settlers have already begun to cultivate the lands on the two ranges lying beyond the point where the road, (as projected) will terminate.

“Colonization,” says Mr. Lapointe, has made astonishing progress, during the last three years, especially in the township of Viger, but not quite so much in Whitworth.

The roads opened by Government have given a great impetus to colonization.

The lots are taken on each side of the said road, to a great distance on the 6th 7th 8th and 9th ranges, and many persons are even working on the 10th 11th and 12th ranges of Viger.

It is expected that the site of a church will shortly be chosen in the township of Viger.

It would appear that real estate has doubled in value in Viger, during the last three years.

The completion of this road will require an additional sum of £200.

### COUNTY OF KAMOURASKA.

#### *Pohénégamook road, St. Alexander Branch.*

Suprintendent, JOSEPH L. ROX.

Balance remaining from appropriation of 1854.....	£102	18	3
Appropriation of 1856.....	200	0	0
			3
	£302	18	3
Amount paid.....	302	18	3

The proposed length of this road, including the two branches of St. Alexander and St. Helen, is 29 miles. The works have not been pursued this year, in the St. Helen branch, in that of St. Alexander 3<sup>4</sup> miles have been opened in the Seigniory of Rivière du Loup, and 6 miles in the Township of Parke, six miles and  $\frac{2}{3}$  are passable for summer carriages and 3<sup>4</sup> miles can be used in winter only.

The mean cost of this road was £65 a mile.

Two bridges have been built, two more are to be built, one of which over Rivière du Loup is of great extent.

The St. Alexander branch starts from the north bank of Rivière du Loup, in the fifth concession of the Seigniory of that name, and is completely open from its commencement to its junction with that of St. Helen.

The land through which this branch passes, is mostly good though a little stony. The timber is a mixture of hardwood with cedar and other kinds of soft wood. It is every where good and of great length. The labourers under my orders have almost all marked out sites which they intend taking when this part of the Township is subdivided and offered for sale.

They inform me that these lands are far superior to those now occupied in the last concession of the Seigniories. Several lots have been taken on that part of the road opened last year, and upwards of sixty bushels of seed have been sown there. Still the road has not yet reached the best lands. It is in the vicinity of Lake Pohénégamook that they are found, and to considerable extent, they stretch from west to east on a breadth of about six miles. They are bounded on the south by the Province line, beyond which they reach as far as St. John River.

There is no doubt but that all the good lands as they become accessible, by this road, will be taken up by the youth of this country who no longer find lands in the Seigniories which are all conceded, as I am informed by all the men I have employed.

This part of the county of Kamouraska, as well as the territory beyond the line, is rich in timber suited for the market. The rivers afford great advantages in this respect. Once the road is open to the lake, it will afford the means of conveying all the provisions, hay and oats, which will be used in such large quantities in the shanties. These shanties will be of great use to the new settlements, as they will procure from them all these articles as fast as they produce them.

Colonization is yet in its infancy in our townships, still its progress during the last two years is perceptible. For instance, in the township of Ixworth, in rear of St. Anne de la Pocatière, a pretty church has just been erected. In Woodbridge, near St. Paschal, the lands are selling rapidly. Sowing is carried on in the new clearances which are made in the interior as far as the fourth range. A route was begun two years ago, in this township. It was not of sufficient length, and should have been extended two miles further to make it useful. The clearances extend almost to that distance, and it is here that lands of a superior quality are found.

A saw mill has been erected in the township of Bungay, at a short distance from our road, and it is proposed, as I have already stated, to take the lands in Parke as soon as they are surveyed and put up for sale.

Extract from Mr. Roy's report for 1856.

There are several water powers near this road.

The local municipality has provided for the maintenance of part of this road, in the St. Alexander branch.

The sum of £1400 would be required to complete this road, £775 of which for the St. Helen branch.

## COUNTY OF KAMOURASKA.

### *Mount Carmel Road.*

Superintendent, NICHOLAS BOUCHER.

Balance remaining from the appropriation of 1855...	£ 2 12 10½
Appropriation for 1856.....	200 0 0
	<hr/>
	202 12 10½
Amount paid.....	200 16 9
	<hr/>
Balance.....	1 16 1½
	<hr/>

The starting point of this road is at the extremity of a *route* formerly made by the Government; the length is eleven miles, which were made in the townships of Lasalle and Chapais; four miles and a half were opened in 1856.

All that part of the road opened before the last year, that is to say about 6½ miles, can be traversed by summer vehicles.

For the quality and extent of the adjacent lands, see my Report of 1856.

It would require £200 to complete the works undertaken this year, but if I may venture to give my opinion, I should advise the employment of this sum to open another road on the borders of the lake; it would be neither difficult nor expensive.

It would pass through land nearly level, little rocky and of a superior quality. On reaching the Province line, it would fall into the old shanty road, which I am informed reaches the river St. John, and which would probably be opened to communication by means of a grant which the new settlers who are established on the river, have determined to ask for this purpose, from the Legislature of the State of Maine, of which they are a dependency.

A pretty wooden church is now building in the township of Ixworth, in rear of the parish of St. Anne de la Pocatière.

A great part of the Mount Carmel "route," formerly made by Government, has been confided to the care of the public, by legal authority; the same thing has been done for the "Gouvernement route," in Ixworth.

"Extract from Mr. Boucher's Report."

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### COUNTY OF KAMOURASKA.

*Road in the rear of Ste. Anne de la Pocatière.*

Amount of the appropriation of 1856.....£200 0 0

This road has been explored and laid out by Mr. E. Casgrain Dept. Prov. Surveyor, in accordance with his report dated 20th November last. The works will be commenced next spring.

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### COUNTY OF L'ISLET.

*Elgin Road.*

Superintendent—C. A. VERREAULT.

Balance of appropriation for 1854.....	£196 12 9
Appropriation for 1856.....	250 0 0
	446 12 9
Amount paid.....	£431 13 ½
Balance.....	14 19 8

The proposed length of this road is 26 miles, of which 8½ are complete, of which 3 of the latter were finished in 1856. Its starting point is at the rear of the seigniorie of St. Roch, on lot No. 27, of the first range of the township of Ashford, and its terminus at the province line. It is quite beyond the seigniories and follows the division lines between the

townships of Ashford, Lafontaine and Dionne on the north-west and Fournier, Garneau and Casgrain, on the south-west. The eight miles and a half completed are passable for summer vehicles, and the rest for winter vehicles as far as the province line.

The cost of this road in 1856 was £124 a mile, without the bridges.

Two bridges were built this last year, one over the river *Damnée*, 210 feet long, and the other, over the "*Rivière des Trois Saumons*" 42 feet long with abutments.

Colonization has made rapid progress within the last three years.

Besides the progress mentioned in my report, dated 12 October, 1854 I have the pleasure to inform you that a great part of the lots on the Elgin road, in the townships of Ashford and Fournier, have been taken, and on the largest part clearings are begun, to be ready to sow next spring.

Many have already built small houses in which they are now living. The greater number are waiting for their lots to be sufficiently cleared to settle upon them.

(Extract from Mr. Verreault's report.)

Mr. Verreault in 1855 fixed the sum necessary to finish this road at £3500, from which is to be deducted £250, appropriated to it in 1856.

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### COUNTY OF MONTMAGNY.

#### *Road in rear of St. Pierre.*

Superintendent—ANTOINE TALBOT.

Balance remaining from appropriation of 1855.....	£4	6	6
Appropriation of 1856.....	150	0	0
			£154 6 6
Paid.....	133	0	4½
			£21 6 1½

Five miles of this road are now practicable for wheeled vehicles and 2½ miles for winter vehicles. Two miles have been made fit for summer carriages in 1856.

This road is in Armagh and Montminy. The land it traverses is of good quality and level; as is also that in the neighbourhood, the trees being generally of full growth, and consisting of maple, birch and spruce.

Besides the mills mentioned in the last report, a new saw and grist mill are in course of erection (in the Reserve).

The progress of colonization has been considerable during the last three years, in these localities, and particularly last year (1856); it will be greater still when the road is finished. There is a Chapel on the 3d and 4th Ranges of Montminy. £600 would finish the road.

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 COUNTY OF MONTMAGNY.
*Road in rear of St. Thomas.*

Superintendent EUCHER DION.

Appropriation of 1855.....	£300	0	0
“ 1856.....	150	0	0
			<hr/>
			£450 0 0
Paid.....	235	19	9
			<hr/>
Balance.....	£214	0	3

The starting point of this new *route* is the front road of the 3d range of St Thomas, and its termination the base of the township of Montminy on the 7th lot; length, about 13½ miles.

Six miles have been opened, four are passable for Summer and two for winter vehicles.

The townships of Patton and Montminy into which this road leads, are, according to Mr. Dion's report, well adapted for culture, although the first few miles along the road are rocky and almost barren.

“ At the depth of this township, down to the province line, an immense amount of land is favourable for settlement; this road must be of immense benefit, to the Colonization Society of Quebec especially, which is causing 300 lots to be surveyed in the township of Ashburton, as also to the settlers of Montminy.” (extract from Mr. Dion's report).

The cost of the finished road has been about £75 a mile.

Mr. Dion thinks that £4000, would suffice to carry this road to the Province line, that is to say, to a distance of thirty miles beyond Mr. Le-françois' exploration, and in the locality where the good land above mentioned is to be found.

There are already 100 families in Montminy, and a larger number intend to settle there as soon as the routes are finished.

The site of a church has been selected by Ecclesiastical Authority in 1856.

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 COUNTY OF BELLECHASSE.
*Armagh Road.*

Superintendent, PIERRE DAGNEAULT.

Amount of appropriation of 1856.....	£100	0	0
Amount paid.....	100	0	0

For the description of this road, see last year's Report.

Its proposed length is 8 miles. Six miles and a half in all of this road have been opened, of which 4½ were made in 1856, but of these six miles and a half two only are fit for wheeled vehicles, the other 4½ are only fit for a winter road.

Mr. Dagneault is informed that the lands in the vicinity are of excellent quality, especially in the southern part, and that this road will be very favorable to colonization as soon as they have reached the back lands.

Numbers of emigrants are waiting the opening of this road to take lands. He estimates the amount to complete it at £800 or £1000. But it is probable that in his estimate Mr. D. intended to push the opening beyond the present surveys.

A chapel is now being built in the Township of Mailloux. In the Townships of Armagh, Mailloux and those adjacent, real estate has increased in value  $\frac{1}{3}$  within the last three years.

### COUNTY OF BELLECHASSE.

#### *Buckland Road.*

Superintendent, — ELIE AUDET.

Balance remaining of the appropriation of 1855....	£107	9	3½
Appropriation of 1856.....	250	0	0
			£357 9 3½
Amount paid.....	287	9	3½
			£ 70 0 0
Balance.....	£ 70	0	0

For the beginning and end of this road, vide last report.

In the course of the three last years nine miles of road have been opened, of which six miles and six arpents are now completed.

Of this latter portion, two miles and 22 arpents were finished in 1856.

It is proposed to carry this road as far as River St. John, about 36 miles.

The cost of what has been made is about £160 a mile.

Forty-three bridges, making a length of 475 feet, including the abutments, cost £145. There are still nine to build on the unfinished part of the road. Two of these last bridges are of some extent.

The greater part of the lands on this road are fit for cultivation.

Mr. Audet advocates a change of the direction of the road to north and south.

The hard wood on these lands is abundant.

This road, says Mr. Audet in his admirable report, promises a brilliant future to colonization; the cultivable lands are of great extent, extending southward to the River St. John, about 45 miles on a base of about 90 miles, following the present road, to beyond the mountains, and thence to the River St. John. In this locality are many water powers favorable to the advancement of trade and the encouragement of industry, for instance, the Abenakis, Taschereau and Des Ormes rivers, the Belles Amours Streams; &c., &c., on which are already built some fine saw and flour mills. Limestone has not yet been found, though its existence is probable.

A quarry of yellow and red ochre has been found of good quality. It is to be regretted that more extensive geological explorations have not been made, I have myself met among the mountains a substance resembling iron ore.

The population has increased five-fold in three years, the area now occupied exceeds four square leagues. From 800 to 1000 bushels of seed were sown in the spring, producing a very profitable return, the yield being from 18 to 20 bushels per 100 sheaves, other grains in similar proportion. These seeds received no injury from frost worms or rust as in the old lands.

A chapel 42 feet by 32 and 15 feet in height, has been put up in the Township of Buckland, and will be ready for worship next summer. Another chapel is also to be built next summer in the Township of Mailoux.

Residents and intending residents already require these chapels.

In those ranges traversed by the road property has doubled its value in three years. Uncultivated lands sell at from £50 to £60. There are lands already valued at £200, £250 and £300.

Mr. Audet concludes his answers to my Circular by a number of judicious and valuable remarks which the limits of my Report will not allow me to transcribe.

The construction of a bridge over the "Fourche au nord-ouest," (one of the branches of the *Rivière du Sud*), which would cost about a hundred pounds, is very much wanted for the advancement of colonization in this locality.

£375 would complete this road.

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#### COUNTIES OF LEVIS AND DORCHESTER.

Amount of the appropriation in 1856, to open a road leading from the County of Levis to the County of Dorchester, called St. Isidore road, the interested parties having to bind themselves to supply what might be deficient to complete it.....£250 0 0

This road would seem, from certain information received, to have been opened in all its extent, but the interested parties not having been in regular communication with this office, no part of the above grant was paid.

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#### COUNTY OF DORCHESTER.

Amount of the appropriation of 1856, for the purpose of opening a road from Frampton to Buckland and Ware.....£150 0 0

In the month of August last, Mr. John Dillon, of Frampton East, was appointed to lay out this road. Mr. Dillon's line having met with

opposition from interested persons, the final location of this road was remitted for decision to Messrs. Dillon and Michael Quigley, conjointly. These two gentlemen have not as yet transmitted their report to me.

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COUNTY OF DORCHESTER.

*Côtes à Mimeau, (Frampton Road.)*

Superintendent,—JOHN DUFF.

Appropriation of 1856.....	£50 0 0
Paid .....	49 19 8
	<hr/>
Balance .....	£ 0 0 4

The Frampton road is the only one by which the settlers of Frampton and Cranbourne can reach the Quebec market.

The appropriation of 1856 has been laid out in lowering the hills on this road, which are generally rocky, and in draining a marsh; these improvements have extended over three miles of the road.

The land in Frampton and Cranbourne is generally good. There are two flour mills and four saw mills in Frampton West.

The population of Frampton amounts to about 1300 souls; it has not increased much of late years owing to a large number of families having emigrated to California and Australia.

“However,” says Mr. Duff, “the French Canadian population is rapidly increasing and would increase much faster, if the roads were in a better state.”

The Township of Cranbourne has suffered from the same cause.

There are in Frampton West a Catholic and a Protestant Church, and the same in Cranbourne.

Mr. Duff estimates at £200 the amount necessary to complete the improvements on the Frampton road.

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COUNTY OF BEAUCE.

*Lambton Road.*

Superintendent,—ZEPHIRIN BERTRAND.

Balance remaining from appropriation of 1855.....	£7 8 10½
Appropriation of 1856.....	150 0 0
	<hr/>
	£157 8 10½
Amount paid.....	149 18 7½
	<hr/>
Balance.....	£7 10 3

See my Report of 1856.

The portion of this appropriation paid out, was used to improve the Lambton road, which crosses the townships of Tring, Forsyth and Lambton.

Works of improvement have been performed on different parts of this road in Tring, to the extent of two miles and a half. The Lambton road is passable for summer vehicles, but is not quite finished.

The following information extracted from Mr. Bertrand's Report is of great interest, it shows first the characteristic energy of the French Canadian Colonist, and the march of colonization.

"In order fully to appreciate this statement, it must be borne in mind, that the Lambton road is the only one leading into some of the Townships mentioned by Mr. Bertrand, and that to enter the others, the names of which are little known, the colonist must penetrate the living forest.

The Lambton road is the main artery of the Townships of Tring, Forsyth, Lambton, through which it passes, of the Township of Shenley, Dorset, Aylmer and Gayhurst, which are to the south-east of it, and of that of Price where it ends.

All these Townships are rapidly getting settled, and if the Lambton road through Tring were completed, it would be more quickly effected, for none but French Canadian Colonists would have the courage to form settlements so far in the woods, to reach which they run the risk of breaking their necks.

About one half of the lands in Tring are settled, and as fast as the front roads are opened the lands are occupied ; in Forsyth, Lambton and Price, with the exception of the lands on the Lambton road, the settlements are making but slow progress. Aylmer is three parts settled, the 1st, 2nd, 3d, 4th and 5th ranges are completely occupied, and there is a good beginning of a settlement in the 6th and 7th ranges.

The settlements in Gayhurst are rapidly improving. That of Dorset is only beginning. There are about fifty good settlements in Shenley, which is only partly surveyed ; if the lands in this Township were laid out, it would no doubt be soon settled, as the land is generally good.

I am not aware that there is any Church or Chapel erected, nor any site selected for either one or the other, by the Civil or Ecclesiastical authorities in this Township." (Extract from Mr. Bertrand's Report).

About £800 would be required to complete the road.

COUNTY OF BEAUCE.

Amount of appropriation of 1856, for building a bridge over the River Chaudière at St. François, provided the Municipality would make up the deficiency (if any), and also provide for keeping it in repair.....£200 0 0

Mr. Ambroise Morin, Mayor of the Municipality of St. François, has been duly notified of this appropriation, and informs me in his letter of 2d August last, that he would communicate my letter to the Council of the Parish, who, he was convinced, would avail itself of any aid which the government might afford for the building of a bridge, the want of which had been long felt.

There is every reason to hope that the Municipal Council will adopt proper measures for the building of the bridge.

COUNTY OF MEGANTIC.

*Road from Tring to Nelson.*

Superintendent,—THOS. LLOYD.

Appropriation for 1855.....	£300	0	0
Do. 1856.....	300	0	0
	£600	0	0
Paid.....	439	2	1½
Balance .....	£160	17	10½

This road, called by the settlers Glenlloyd Road, is one of the most important in the Eastern Townships.

It is intended to establish a line of communication of great utility between the Lambton Road and the Quebec and Richmond Railroad.

The excellent report made to me by Mr. Lloyd contains so much useful and exact information that I cannot do better than give it in his own words.

“ Its starting point is from the Railroad bridge over the Becancour River on lot No. 18, 5th range of the Township of Nelson, and its end at the Church of St. Ephrem, on the Lambton Road on the 4th lot of the 9th range of the Township of Tring.

That part of the road open for winter travel amounts to 23 miles and twenty chains ; no part of it has been opened before this year. Its proposed length is 41 miles and seven chains.

The part opened crosses part of the townships of Nelson, Inverness, Leeds and Thetford, to the 4th range of this latter township. There still remain to be opened three miles and 67 chains in Leeds, and 14 miles in the townships of Thetford, Broughton and Tring.

I have (says Mr. Lloyd) completed this *route*, as a winter road, from its starting point, from No. 18 of the 5th range of Nelson, to the Craig's road in Leeds, between the 18th and 19th ranges. From this point to the 12th range of Leeds, the opening has been suspended in consequence of a petition from certain inhabitants asking for a change in its direction between these two points. This request has, however, not been acceded to, and this part of the road has therefore remained closed. From the 12th range of Leeds to the 4th range of Thetford seven miles and a half are open. Seven or eight miles were passable by summer vehicles, but they are divided into several shorter sections by intermediate marshes, and have been so spoiled by heavy wheeled-vehicles passing from the Craig to the Gosford road, that I do not think this part of it will be passable next summer, unless it be renewed, and converted into a summer road ; the other 15 or 16 miles are only passable for the winter, and are of great utility.

The average cost of this road including bridges is £17 17 9 a mile.

The length of the 12 bridges together is 230 feet; they are roughly but solidly built.

Leaving the railroad bridge in Nelson, the road passes for four miles a flat swampy land, the soil of which if drained would be tolerably good; the subsoil being a clayey gravel, covered with black mould. The woods are, white and red spruce, and pine on the high grounds, elm and ash.

In Inverness the land is better drained, and according as the road attains a greater elevation the land improves and becomes excellent, producing heavy crops of grain when well cultivated, and covered with forest trees of full growth, such as maple, birch, spruce &c., as also some few cedars.

The soil in Leeds is similar; every lot crossed by the road is occupied. In Thetford, the woods are of the same kind, but with a larger proportion of maple. The settlers pretend that the land is superior to that of Leeds. Few lots in this township are occupied, and a number of young men, attracted to this neighbourhood by the opening of the road, have determined on settling upon the lands.

The advantages which the Glenlloyd Road offers to settlement and trade are not surpassed in any part of the Province. The land, with the exception of the first four miles in Nelson, is excellent; a large proportion of the land in Thetford, Broughton, Tring and the adjoining townships to the Lambton Road is unoccupied, but will be of easy access when the Glenlloyd Road is finished.

The climate is remarkably healthy; no case of cholera has ever occurred among the resident inhabitants,—although many strangers from Quebec, attacked by this terrible scourge, have come and died here, the malady has never spread.

Splendid water powers are numerous in the immediate vicinity of the road. It is impossible to enumerate all of them in these townships, but the red falls of Becancour, the Palmer falls in Nelson, the Glenlloyd falls on the river Thames (in Inverness), and the rapids on the same river, also in Inverness, exceeding a mile in length, are the most remarkable. Limestone, containing 75 per cent. of lime, is found on the 14th and 15th ranges of Nelson.

Dolomite (Magnesian limestone) is found in Leeds.

The great advantages which this road holds out to settlement consist in the existence of rich mines of magnetic iron, in the 10th range of Leeds, and of rich copper ore in the 13th 14th and 15th ranges of the same township.

An Incorporated Company is now working this latter mine. The ore is extremely rich.

A small number of the miners is at present employed in sinking a shaft in one of the veins. A large quantity of the ore has been extracted and will be sent to England, with the object of obtaining the aid of British Capitalists to work the mines on a larger scale.

The only condition required to secure the success of these mining operations is a good road, by which an easy communication could be had during the summer between the mines and the Railroad. I doubt not but that these mines, if they obtain the encouragement which the making of a good summer road should give them, would procure to the Province a new branch of Industry, and to this County (Megantic) a means of developement,

an increase of population and a source of riches. To insure these advantages the Government should not hesitate for a single moment to establish this communication by a good summer road.

The distance from the Railroad to the mining region is 21 miles. The cost of constructing a good summer road of this extent should not for a single moment be placed in account with the advantages it would procure for colonization and commerce.

The cost of opening the other 17 miles and 67 chains, for a winter road, would be about £18 10s. per mile, that is to say, £333 in all. To complete it as a summer road £125 per mile would be required, including culverts.

A sum of £1,000 should also be added to construct bridges over eight rivers on the line of the road.

The progress of colonization in Nelson is very rapid, but there are still good lots unoccupied. This road will doubtless attract settlers, and all the land fit for cultivation will soon be taken up. The great extent of land purchased by the Copper Mining Company has given a momentary check to colonization in Leeds, as the settlers, who have disposed of their lots, have removed to other places; but the operations of the Company, seconded by the completion of the road made by Government, will soon have applied a remedy to this evil. The population of these Townships will soon be doubled and redoubled by the demand for labour in the mines.

There is also a considerable extent of vacant land in Thetford and Broughton, which will be more accessible when the road is opened.

The value of real estate has doubled in the Townships of Nelson, Inverness and Leeds, these last years, in consequence of the making of the Arthabaska Road and the Grand Trunk; from £4,000 to £5,000 would be required to complete this important thoroughfare."

## COUNTY OF LOTBINIERE.

### *Ste. Croix Road.*

CHS. F. DIONNE,—Superintendent.

Remaining balance of the appropriation of 1855....	£8 19	<sup>v</sup> 9½
Amount of appropriation of 1856.....	200 0	0
		<hr/>
	£208 19	9½
Amount paid.....	208 19	9½

For the description of this road, see my last report.

According to Mr. Dionne's report, there would be yet 78 arpents of road to be made in a swamp to complete this communication from the River St. Lawrence to Methot's Mill, to Gosford road and to Leeds.

This road requires still a great deal of improvement, even in the part which has been opened.

Owing to serious illness in Mr. Dionne's family he could not answer my Circular, so that it is impossible for me to give more information regarding this road.

## COUNTY OF CHAMPLAIN.

*Grand Piles Road.*

Superintendent,—LOUIS ARCAND.

Balance remaining on the appropriation of 1855....	£16	18	8½
Amount of 1856 appropriation.....	400	0	0
	<hr/>		
	£416	18	8½
Amount paid.....	416	18	8½

The point of departure of this road is in the new parish of St. Maurice at 2¼ leagues (and not at 2½ as stated in my last year's report) to the north-west of the St. Lawrence, at lot 21 in the 6th range of St. Margaret near the new Radnor Forges.

Seventy-five arpents of this road have been completed in 1856 by Mr. Arcand. Ninety-seven arpents can now be used by summer vehicles. The cost of the road completed is about £150 per mile without the bridges.

Eleven bridges were built in 1856 at an expense of £66.

With the exception of a bog, where black mould of an excellent quality is found, the land which is crossed by that road is, from information I have received, well adapted to agricultural purposes. That bog is about four miles long, but is broken by several hills, on which is found red and white pine, also tamarac. Outside that bog, timber of all kinds and quantities is found.

Mr. Arcand, who has extensive local knowledge and appears to be a judge of the soil which has come under his observation, pretends that this road will open to colonization a rich agricultural country, including the township of Radnor, part of the two seigniories of Cap de la Magdeleine and Batiscan, both belonging to Government, and a fine valley extending from Lake Kakabouka (or *Rivière des Envies*) in the Seignior of Batiscan, to Lake Long and Mekinac, crossing the Seigniories of St. Ann and Grondines."

The new Radnor Forges are built at the point of departure of this road where there are a grist and a saw mill. The water with which these are worked passes through a canal cut in a bed of limestone more than a mile long and varying from 15 to 30 feet in height.

In several places along this line of road iron ore is found in sufficient quantity to supply the new forges during many years to come.

"This road," says Mr. Arcand, "once extended to the Piles will facilitate by the evenness of its grade the carriage of goods between Three-Rivers and the St. Maurice."

The value of real estate has nearly doubled since five or six years in the parish of St. Maurice.

To complete this road £1500 or £1800 are required.

## COUNTY OF ST. MAURICE.

*Caxton Road (Sections situated in that County.)*

Superintendent,—LUC GÉLINAS.

Balance remaining on the appropriation of 1855...	£123	2	0
Part of the appropriation of 1856, for the Caxton road.	170	6	1½
			£293 8 1½
Amount paid.....	286	18	3
			£6 9 10½
Balance remaining.....	£6	9	10½

For the designation of this road see my last report.

The opening and improving of that part of the road which lies in the county of St. Maurice has been under the superintendence of Mr. Gélinas.

That part of the road, which is seven miles and ten arpents long, has been nearly completed in 1856, and can be used by summer vehicles, with the exception of forty-three arpents, from the north-east side of Rivière du Loup, which can only be travelled over by winter vehicles.

The cost of this road has been from £60 to £65 per mile.

The bridge over river Machiche and the hills leading to it, which are very high and steep, has been the subject of the special attention of Messrs. P. C. Rivard, Luc Gélinas and others, and although large sums have been expended in the improvement of these hills, which are now passable, they are still very difficult.

The irregularities of the ground adjoining these hills are such, particularly on the south-east of the river, that the waters can only be let off through the hills themselves. The turning off of the waters is practicable, but would require pecuniary means much beyond those which can be put at the disposition of the superintendent of works.

Besides the improvement of that part of the Caxton Road, Mr. Gélinas has also under his superintendence the construction of a branch road of ten arpents long which has been opened to communicate from the 2d & 3d concessions of Caxton to the main road.

The land through which this part of the road passes is generally level and fit for agriculture, with the exception of the portion near Rivière du Loup, which is rocky and swampy. The forty-two arpents of road aforementioned which are yet to be made will be the most expensive of the whole road."

"The Townships of Shawenegan and St. Maurice are making such rapid progress that the Government has felt it necessary to open another Township for the numerous settlers who are directing their footsteps towards that promising land."

"Chapels have been built in these two Townships since the last two years.

"Landed property has trebled in value during the last two years."  
(*Extract from Mr. Gélinas' Report.*)

Three hundred pounds are asked for to complete this part of the Caxton road.

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 COUNTY OF MASKINONGE.

*Caxton Road. (Section situated in that County.)*

Superintendent,—P. C. RIVARD.

Part of the appropriation of 1856 for the Caxton Road.....	£129 13 10½
Amount paid.....	129 13 10½

For the description of this road, see report for 1856.

The whole of that part of Caxton road can be used by summer vehicles. Three miles and seven arpents were completed in 1856. It cost £60 per mile without the bridges.

A bridge of 36 feet covering has cost £7 10s.

This road opens most useful means of communication between several parishes and townships and the town of Three-Rivers.

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 COUNTY OF MASKINONGE.

*Hunterstown Road.*

Superintendent,—P. C. RIVARD.

Balance remaining on 1855 appropriation.....	£7 14 3½
Amount paid.....	7 14 3½

Four and a half miles of road have been completed in 1854. In 1855 two miles were opened and seven arpents completed; in 1856 half a mile was opened. The whole of this road can be used by summer vehicles. It is wholly in Hunterstown. There are yet two or three bridges to be made which will cost about £7 10s. each.

The soil in Hunterstown is adapted for agriculture. Hardwood and swamp lands are to be found. Mr. Rivard states that there exists in that township Iron Ore which appears to be in considerable quantity. Colonization has made considerable progress in Hunterstown during the last three years. Over forty settlers have taken up lands and made large clearings and cropped them. To give an idea of the increase in the value of property in Hunterstown, I would mention the following facts related by Mr. Rivard in a letter dated 20th July last :

“In 1852 a man purchased a lot for six dollars, this year he sold it for 250 dollars. Another sold for £40 a lot which cost him 15 dollars. I myself, adds Mr. Rivard, purchased in 1853 for £23 12s. 6d., a lot, which last spring I sold for £204 3s 8d.”

These facts afford important information.

£250 would be sufficient to complete this road.

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 COUNTY OF BERTHIER.
*Brandon Road.*

AMABLE JETTÉ,—Superintendent.

Remaining balance of the appropriation of 1855....	£21 18 11½
Amount paid.....	21 18 11½

A Causeway of 472 feet has been constructed on this road in 1856 ; with this causeway the road is practicable in almost all its length. Nevertheless, this road will require draining in many places, and a few small bridges to make it passable every where, and in all seasons.

A sum of about 10 or 12 pounds would be sufficient to make these improvements.

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 COUNTIES OF BERTHIER AND JOLIETTE.
*Road from the township of Brandon to the township of Joliette.*

Amount of the appropriation of 1855, to aid the settlers of the township of Joliette, to open a road leading to Brandon road.....	£75 0 0
Amount appropriated in 1856, to continue Brandon road to the township of Joliette.....	£200 0 0

The first of these appropriations not being sufficient to open the road, and the line at first proposed not being, after a new examination, found suitable, the interested parties begged that the opening of this road should be delayed till more ample information would be obtained.

After the grant of 1856 a survey was made, and the road finally traced by Messieurs Amable Jetté and J. A. Leprohon.

The opening of this road will be begun next spring.

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 COUNTY OF JOLIETTE.
*Two Roads in Cathcart.*

L. DESAULNIER,—Superintendent.

Remaining balance of the appropriation of 1855....	£15 0 0
Amount paid.....	15 0 0

See my Report of last year, concerning the description of these two roads and the quality of the adjacent lands.

Their joint length is 10½ miles ; one mile and half a chain were made in 1856. Summer vehicles may be used on the whole length of these roads.

The part made last year (one mile and half a chain), with the construction of 5 bridges, of from 12 to 56 feet of bridging, cost only £26 2 6.

The value of real estate in this township has increased above one-third since the last three years. There remains yet a bridge to be made on the river L'Assomption, which is urgently required, and the probable cost of which would be £80 0 0.

## COUNTY OF MONTCALM.

### *Chertsey Road.*

PETER S. KELLY,—Superintendent.

Amount appropriated in 1856.....	£200 0 0
Amount paid.....	198 14 10½
Remaining balance.....	£1 5 1½

See my report of last year.

Four miles have been opened this year, which, added to what was previously made, gives an extent of 12½ miles.

This road, entirely in the Township of Chertsey, terminates at No. 2 of the 10th range. It is passable for summer vehicles as far as this last point.

The average cost of each mile, exclusive of the bridges, is £40 0 0.

A bridge has been constructed upon Lafontaine river, 230 feet in length, which cost £23 4 3½.

Mr. S. Kelly, after having referred me to his report, communicated to me interesting information that he has since been able to procure on the territory situated in the rear ranges of Chertsey and further back.

This information he obtained from an Indian and from a French Canadian, both hunters, who have frequently been hunting very far back of Chertsey, and who related to him that there was a fine extent of land in that direction; that beautiful lakes filled with salmon trout are to be found—that game of every description, and also moose and deer were found in great numbers in that locality; that there was no obstacle to the opening of a road from Chertsey to that territory. There are now three saw mills in Chertsey, and a good grist mill was built last year upon Lafontaine river.

Colonization has much progressed in Chertsey and adjacent townships; especially in Chertsey, a great many Canadian families have settled within two years; and numerous houses have been built in the vicinity of this road.

The grist mill is in the Village of Chertsey, where a Post Office has been established, to which the mails are carried from Rawdon every Saturday. Such is the progress of this quite new settlement in Chertsey, where, says Mr. S. Kelly, no man would have resided four years ago, even with the gift of five hundred acres of land near the village.

It is needless to say that this satisfactory result is owing in a great measure to the opening of Chertsey road.

The chapel built in Chertsey is already too small; the building of a new one, in a more central locality than the present, is in contemplation.

As to the bridge across the River Lacouareau, which forms part of this road, see the following *item*.

£100 or £125, would be required to complete this road.

### COUNTY OF MONTCALM.

#### *Chertsey Road, Bridge on the River Lacouareau.*

Superintendent,—J. L. M. MARTIN.

Balance of the appropriation of 1854 .....	£203	9	2½
Amount paid .....	50	0	0
	<hr/>		
Balance remaining .....	£153	9	2½

This bridge forming part of Chertsey road, having been almost entirely destroyed (*vide* my last report), considering the progress of colonization in Chertsey, it is of urgent necessity that another be made. Mr. J. L. M. Martin, whose ability for this kind of work is acknowledged and incontestable, is entrusted with the construction of this bridge, and will indubitably conduct the undertaking to a satisfactory completion.

He is at present engaged in procuring the necessary materials.

### COUNTY OF MONTCALM.

#### *Kilkenny Road.*

Superintendent,—LOUIS DUFRESNE.

Remaining balance of the appropriation of 1854...	£	2	7	7½
Amount of the appropriation of 1856.....	100	0	0	
	<hr/>			
Amount paid.....	£102	7	7½	
	100	0	0	
	<hr/>			
Balance remaining.....	£	2	7	7½

This road has for a starting point the division line between the 5th & 6th ranges, on lot No. 19, and terminates at the 10th range of Kilkenny. The projected length of this road is 7 miles, 4½ of which were opened in 1856, 3 miles have been completed, and can be used for summer vehicles. 5 Bridges, making altogether 126 feet of bridging, have cost together about £25. There are still two to make.

Mr. Joseph Dufresne, M. P. P., a devoted friend to colonization, undertook to make himself the necessary exploration, and to lay out and determine definitively the location of this road. That operation, which I must

not omit to say, this gentleman had the liberality to perform gratuitously, was productive of a satisfactory and economical result in the making of the road.

The following remarks, extracted from the excellent report of his operations which this gentleman has been pleased to furnish me with, show in an evident manner the advantages which colonization must derive from the making and even from the prolongation of this road.

“The soil along the whole of this line, which is of loam, appeared to me to be fit for agricultural settlements. There are no swamps nor marshes, nor steep mountains. The stones which are met with being for the most part capable of removal with the pick and lever without blasting. And with the exception of a part in the 6th range, timbered with hemlock, spruce, and some other soft woods, the remainder is in hard woodland, of which maple predominates.

There is only one water power near this line in the land reserved for a village, and lately surveyed by order of the Government. This road ought to facilitate at once the sale and occupation of this village.

This township is surveyed. This road ought to be continued to Wexford, in the rear of Kilkenny, where there is a good deal of fine unoccupied land, well adapted to form agricultural settlements.

Kilkenny, in the vicinity of this road, is for the most part still uninhabited, and belongs to Government, having formerly been granted to militia-men who never occupied their land, and who for the most part took scrip instead.

This road ought to facilitate the sale of vacant land for more than three times the sum it will cost.”

From £75 to £100 would be required to finish this road, and to prolong it to Wexford.

## COUNTY OF TERREBONNE.

### *Lac à la Truite Road.*

Superintendent,—DE LA ROCQUE.

Balance of the appropriation of 1854.....	£109	0	0
Amount paid.....	43	13	10½
Balance remaining.....	£55	6	1½

For the description of this road, see my last report.

The length of this road opened up to this day is 8 miles, 5 of which are partly finished, and the other three miles fit for winter vehicles only.

The cost *per* mile has been from £80 to £90. Thirty eight *arpents* of this road were made in 1856, capable of being used for summer vehicles.

I cannot establish the extent of this road practicable for summer vehicles, but it is opened as a winter road in all its length, less 7 or 8 *arpens*.

A bridge was constructed in 1856, on the Decharge and near Lake des Sables, and cost £18. Another remains to be made on the same river, 20 arpents from the first.

The land over which this road passes in Beresford, is of good yellow soil on the heights, and sandy and sometimes rocky in the swamps.

The other lands, further distant, to which this road may lead, seem to be similar to those of Beresford.

An additional sum of £150 might suffice to complete this road.

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### COUNTY OF VAUDREUIL.

Amount of the appropriation of 1856, to open a road  
between the Townships of Newton and Hawkes-  
bury.....£150 0 0

The amount of this appropriation will be made use of to improve and continue a road verbalized by Municipal authority. The works will be performed with the concurrence of the Local authorities, and will be commenced the moment the season permits.

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### COUNTY OF ARGENTEUIL.

*Road towards Howard, in rear of Lachute.*

ANDREW BOA,—Superintendent.

Amount of the appropriation of 1854.....	£100	0	0
Amount paid.....	35	0	0
	<hr/>		
	£65	0	0

This road, crossing several Municipalities, ought to be improved with the concurrence of the interested Municipal Councils. No decisive action having been adopted by these Councils, Mr. Boa has returned me the money which was advanced to him.

For more ample information, see my report of 1856.

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### COUNTY OF ARGENTEUIL.

*Wentworth Road.*

ANDREW BOA,—Superintendent.

Amount of appropriation of 1855.....	£100	0	0
Do paid.....	85	0	0
	<hr/>		
Balance remaining.....	£15	0	0

This road commences at the front of the 1st range of Wentworth, about the centre of lot No. 21, and runs north to the front of the 9th range, a little to the East of Lake Inchbrackie.

This road was opened in 1854, with the exception of the portion between the front of the 1st range and that of the 2d range, and it is this part which has been opened lately, viz: in 1856. In this last section of road  $1\frac{1}{2}$  miles have been completed, and 1 mile and 13 chains have been partly finished in the road opened in 1854.

A bridge of 41 feet was constructed in 1856.

There are three excellent water powers in the Township of Wentworth, near the road.

Limestone is found in abundance in Chatham and the neighboring Townships. Plumbago is also found in Chatham and Grenville.

“On Wentworth road the soil for the first mile and a half is good; the ground for the next five miles is very uneven and rocky; the remainder is generally good, less rocky, and has a more even surface. The timber is spruce, hemlock, cedar, beech, birch and maple.

The spruce and cedar are large, and of an excellent quality. The hard wood is very fit for the manufacture of potash. As to the lots in rear of the locality where I terminated this road, all I can say is that for a considerable distance the land appeared more even &c. &c. &c.” (*Extract from Mr. A. Boa's Report.*)

For further information see *item* headed “Wentworth and Harrington road.”

One hundred pounds would be about sufficient to finish Wentworth Road.

## COUNTY OF ARGENTEUIL.

*Road in rear of Dalesville, from Chatham to Wentworth, and Harrington.*

Superintendent,—ANDREW BOA.

Amount of the appropriation of 1856.....	£50	0	0
Do paid.....	50	0	0

These two roads were partly opened and repaired in 1856.

The first road from Chatham to Wentworth, at the front of the 10th range of Chatham, in the line between lots Nos. 22 and 23, runs to the north east to lot No. 21 of the 1st range of Wentworth, where it joins the Wentworth road.

The second road, from Chatham to Harrington, commences at the front of the 10th range of Chatham on lot No. 27; runs towards the north to about the centre of the 11th range, and afterwards takes a north-westerly direction across the last range of Grenville, and the 1st range of Harrington, and terminates on lot No. 6 of the 2nd range of Harrington, where it joins the road which crosses Harrington and Grenville.

The length of the first road is  $3\frac{1}{4}$  miles, it is opened in its whole extent, and can be used for summer vehicles.

The length of the second is 6 miles and 57 chains. It is also entirely open, but only practicable for summer vehicles to a point on lot No. 2 of the 2nd range of Grenville.

Four bridges, comprising together 42 feet of bridging, were constructed in 1856.

To finish the second road viz: the one from Chatham to Harrington, an additional sum of £80 would be required, and to continue it across Harrington and in the direction of Arundel £325 would be wanted.

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### COUNTY OF ARGENTEUIL.

#### *Crooks's mill Road.*

Superintendent—HENRY MILDWAY.

Amount of the appropriation of 1856, to improve the road from Grenville to Montcalm, in rear of Crooks's Mill.....£100 0 0

The object of this appropriation is to improve the most dangerous and impracticable parts of this road.

Mr. Henry Mildway was named Superintendent of these works. The repairs most required having to be made in a swamp of considerable extent, and the season in which they could be undertaken being much advanced and very rainy, it was thought best upon the suggestions of the Superintendent, (a competent judge of the locality,) to delay this work till next summer, at which season the swamp will have become drier and consequently more accessible.

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### COUNTY OF ARGENTEUIL.

#### *Bridge over the River Rouge, near Grenville.*

Amount of the appropriation of 1856, to construct a bridge on the River Rouge, in the Township of Grenville; the municipality being obliged to provide any deficit which might be found between the sum appropriated, as above, and the price of the bridge, and also to provide for keeping it in repair.....£1000 0 0

This bridge having to be constructed with the concurrence of the Municipality of Grenville and on the above mentioned conditions, it was thought right to give the Municipality an opportunity of giving an opinion on the site of the bridge and the quality of the work and materials to be employed in its construction.

In consequence Mr. J. L. Martin, of St. Jacques, and Mr. John Hay, were named *Experts*, the first on the part of the Government, the second, on the part of the Municipality, to proceed to make the specifications, valuations and plan relating to the construction of this Bridge. These two gentlemen have agreed together and made a report, in which they have set down the cost of this work at £975. This report has been transmitted to the Municipal authorities of Grenville, and there is every reason to believe that it will be adopted, and that the greatest diligence will be used to have the necessary materials on the spot in proper time, in order to profit by the approaching season to construct this bridge.

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COUNTY OF OTTAWA.

*Buckingham Road*

HUGH GORMAN—Superintendent.

Balance remaining of the appropriation of 1854...	£170	0	0
Amount paid in 1855.....	170	0	0

Upon this balance of £170, paid to Mr Gorman in 1855, there remained in his hands a sum of £11, which he laid out in 1856, and with this sum, Mr. Gorman says, he was enabled to open the road to within 4 miles of the mouth of the *Ruisseau des Prêtres*. Mr. Gorman says he has nothing to add to his preceding report, the land continuing to be of an excellent quality, and much sought after by the settlers.

About £250 would be required to complete this road.

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COUNTY OF OTTAWA.

*Road from Lochaber to Derry.*

JOHN CAMERON, Explorer.

Balance remaining of the appropriation of 1854.....	£130	0	0
Amount paid the 23rd January last.....	130	0	0

See in my Reports of 1855 and 1856, how £117, forming part of this Balance, was disposed of.

As to the remaining sum of £13, it was appropriated, by resolution of the Municipal Council of Lochaber, dated the 6th October, 1856, to improve another road crossing Brodie's Brook, which road is called McDonald's road.

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## COUNTY OF OTTAWA.

*Rivière du Désert Road.*

PATRICK FARRELL—Superintendent.

Amount of appropriation of 1854.....£900 0 0

This road, the location of which, as you have already been informed, has been the subject of much discussion, and even many explorations, was at length fixed by Mr. J. J. Roney, Dept. Prov. Sur. in October last.

Conflicting pretensions had arisen with regard to the point on the Ottawa from whence this road should commence, some insisting on Aylmer, others on the Town of Ottawa as the starting point, it was decided that under these circumstances the work should be begun some miles from Ottawa, at Brook's Stream, between lots Nos. 35 and 36, 2nd range of Low.

This mode of proceeding was deemed the most proper, to await without losing time the final decision respecting the point of departure, because it offered this advantage, that means of communication already existed from Low to within nine miles of Ottawa, and that from this latter point this communication becoming separated into two branches, one conducting to Aylmer, the other to the town of Ottawa, the part of the road opened in the direction of the *Rivière Désert* would be found in communication with roads already practicable on the borders of the Ottawa.

The length of this road from the borders of the Ottawa to its termination at the *Rivière Désert*, is about 60 miles.

Mr. Patrick Farrell, superintendent for the opening of this road, could not commence the work in consequence of the severe frost of last fall, but he will begin operations the first favorable days of the approaching spring.

This road will be one of the most important for colonization. It traverses Hull, Masham, Low, Aylwin, Wright, Bouchette, and a part of Maniwaki. From Low to the *Rivière du Désert*, two thirds of the distance, (about 50 to 55 miles) does not offer any great difficulties to the making of the road, but the other third presents a little more, because the land met with is more mountainous and rocky, with ravines and brooks.

The Reverend Fathers Oblats (*Pères Oblats*,) have formed a settlement at the mouth of the *Rivière du Désert*, where they have erected a chapel. Priests of their order, at the cost of unusual privations and fatigue, serve this mission, so remote and difficult of access. Not content with providing for the religious requirements of the inhabitants of this isolated Colony, these Reverend Fathers have thought that they should also contribute to their temporal wants by constructing for their use a flour mill.

The Reverend Father Andrieux, one of the missionaries who officiates at this establishment, closes with the following remarks, a very interesting letter which he did me the honor to address to me in September last.

"I need not speak of the advantages which will result to the inhabitants of these places, who cannot procure anything during the whole summer, without being obliged to risk themselves on the numerous rapids of the Gatineau. There are still many persons who are only waiting for this road, to settle upon the lots which are found in great number and of good quality in the Townships of Egan, Aumoud, Bensington, Bouchette and others.

Moreover, I do not doubt but that another road at a later day will be opened above the *Rivière du Désert* between the Gatineau and the *Rivière du Lièvre*, for I know that at that height, and even further, there are immense quantities of excellent land for cultivation.

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COUNTY OF ARTHABASKA.

*Aston Road.*

JOSEPH PRINCE—Superintendent.

Balance remaining of the appropriation of 1855....	£25 17 6
Amount of the appropriation of 1856.....	150 0 0
	£175 17 6
Amount paid.....	£175 17 6

For description of the road and other information,, see my report of 1856.

In consequence of an omission in Mr. Prince's Report, purely unintentional on his part, it is impossible for me to give the exact extent of the road opened or completed, but a portion of the appropriated fund has been expended for *water courses* urgently required to drain the road.

To the information found in my preceding Report, I have to add that the site for a church was fixed upon in the 8th range of Aston, by the Ecclesiastical Authorities, in 1856; that a large number of lots have been acquired in the township of Aston and augmentation by young persons who have already commenced clearing. There is every reason to expect that these new colonies will rapidly progress. I am informed by Mr. Prince that a settler who has been two years in Aston reaped, in 1856, eighteen hundred sheaves of grain, a large quantity of peas, 300 bushels of potatoes, and 200 bushels of turnips.

The maintenance of the road opened by Mr. Prince has been provided for by the Municipal authorities. The following extract from that gentleman's report will clearly shew the zeal and energy of the settlers, and the progress to be expected from the encouragement given to them by the Government.

"I do not think it out of place to mention here the zeal and willingness of the inhabitants of Bulstrode and some others, who, although in small numbers, have opened, across land belonging to large proprietors, a road of at least five miles in length, which can be used for winter vehicles; and which is in continuation of the one we have opened to the chapel at Bulstrode, where there is a road to reach St. Christophe, the starting point of another road lately opened leading to Lake Aylmer. There has also been opened in like manner a branch road of about six miles in length by which communication can be had at all seasons with Bulstrode chapel, at the village of Stanfold, also another branch road leading to the township of Warwick."

This shows in an evident manner the advantage and usefulness of Aston road, since without awaiting the action of the legal authorities or the assistance of Government, these good people, notwithstanding their slender means, do not hesitate to impose the greatest sacrifices upon themselves in order to give the road an outlet in every direction.<sup>4</sup>

Mr. Prince sets down at £60 the sum required to complete this road.

COUNTY OF ARTHABASKA.

Maddington Road.

Superintendent—VENANT ST. GERMAIN.

Amount of the appropriation of 1856.....	£150	0	0
Amount paid.....	129	2	4½
Balance remaining .....	£ 20	17	7½

This road, which begins at the division line between the Township of Maddington, and the *Fiefs* Cournoyer and Dutord, terminates at the settlements on the River Bécancour.

It is 12 miles long, and was opened in 1854 by the Reverend Mr. Chabot, but no part of it had been completed.

The portion next the settlements on the River Bécancour especially, was impassable for summer vehicles.

In the course of last summer it was repaired along its entire length (12 miles,) and six bridges were constructed.

It is now practicable for summer vehicles, although not yet finished, along its whole length. It should be widened in certain places, especially in some swamps.

This road will offer to a considerable portion of the Inhabitants of the Eastern Townships, a direct and easy communication with the Town of Three Rivers. It will also procure for young people in the adjoining Parishes the advantage of being enabled to form settlements at a short distance from their parents.

In the immediate vicinity of this road there are considerable water powers, which might be worked with little cost. One of these water powers, which I had occasion to see, is really important from its extraordinary power and the facility with which it could be worked. This remarkable fall, which belongs to Mr. V. St. Germain, is situated but eight leagues from the St. Lawrence. When circumstances will permit or encourage different kinds of manufactures, the water fall at Maddington will have acquired an inappreciable value.

“ I beg you will allow me ” says Mr. St. Germain, “ to inform you that since I have resided in this Township I have endeavoured to learn the wants of the settlers in general, and the means to forward and favor colonization, and also to stop emigration, and I am now convinced that the most efficient way would be to amend the Municipal Consolidated Loan Fund Law, in such a manner that the local Township Municipalities be autho-

rized to borrow from that Fund, for the purpose of clearing the lands. This could be done by mortgaging the land.”

A land owner in Maddington made an offer of 50 acres of ground to the Ecclesiastical authorities, to favor the erection of a new Chapel, which offer was accepted.

The length and variety of the timber found on this road is a proof that the soil is good, and it appears that a large part of the Township of Maddington still belongs to the Government.

About £200 would be required to complete this road.

## COUNTIES OF ARTHABASKA AND WOLFE.

*Chester and Ham.*

P. N. PACAUD and J. T. LEBEL—Superintendents.

Balance remaining of the appropriation of 1855...	£ 196	6	4½
Amount of the appropriation of 1856.....	2000	0	0
Both being assigned for the construction of roads in the Eastern townships generally, and forming together.....	2196	6	4½
Amount paid to the above named Superintendents.	1488	16	9½
Balance remaining.....	£ 707	9	7

N. B. From this balance there will have to be deducted the amount paid to Messrs. Delisle and Wait, for the St. Francis road.

For a description of this road and other information, see my preceding reports.

Eight and a half miles of this road, that is to say: all that remained to be made to open an uninterrupted communication between Craig and Gosford roads, were finished in the course of last fall. There remain however in those 8½ miles, some improvements to be made, which could not be completed owing to the state of the season; they are very inconsiderable. 75 culverts and four bridges, (the latter forming altogether an extent of 43 feet of bridging,) have been made.

A portion of road opened during the preceding years, ought necessarily to be widened, as I have already observed in my last report, and it is very desirable that this be done as soon as the season will permit, for in some places it would be impossible for two wheel-vehicles to pass each other.

Messrs: Pacaud & Lebel estimate the improvements to be made at £500.

The information which these two gentlemen have given me respecting the land and timber, and the industry and progress of colonization in the Townships crossed by this road, and in those to which it leads, is so full of interest, and is accompanied by observations so interesting and encouraging to settlers that I think it my duty to make it public.

“ This road passes through an extensive territory which is very fertile and watered by numerous streams. The land is broken, presenting some charming spots, varied and picturesque.

Standing on one of the heights, whichever way one turns, hundreds of little columns of smoke are seen to rise from this vast forest, and indicate the presence of as many settlers labouring to clear the new settlements; activity and labour is everywhere to be found, on all sides are heard the strokes of the axe felling the forest. There are few barren lands, the greater part are very fertile and fit for all kind of cultivation, and the harvests which we saw presented a vigorous and abundant vegetation, unsurpassed by any other place in the Province. For agricultural purposes, the richness of the soil appears inexhaustible, and generally speaking this part of the townships seems to have been the most richly gifted by nature.

The timber is excellent, Maple, Oak, Elm, Ash and Basswood trees predominate; their height, size and beauty not only prove the fertility of the soil, but form a natural source of riches, which the farmer can dispose of with profit for commercial and industrial purposes.

In order to prove to you what can be derived from the forest, for the manufacture of Alkalis, we have only to state, that there was manufactured this year, in the Township of Arthabaska, only to the amount of ten thousand pounds currency of potash. If you calculate from the population how much each individual must have received, you will obtain a result which will surprise you, and which can compete with the most favoured Township of Upper Canada. We have pleasure in stating here that the Canadian as a settler, is steady, patient, and intelligent, and can enter into competition with any one without losing ground. If Arthabaska produces what may appear exaggerated results, they are caused by the stimulus to labour given to its population by the enterprising men of the locality. Everywhere the same result can be procured, and upon this road even more than at Arthabaska, altho' the greater part of the fixed population has been employed in its construction—notwithstanding this, a single pearlsh factory (that of Messrs. Goodhue and Emerson,) manufactured this year, seven thousand five hundred dollars worth of pearlsh; and this is but a beginning.

We cannot pass over in silence the numerous fine water powers found in this territory, both for the extensive and smaller branches of industry, for large saw mills, as well as for small ones. Thus the settler will find every thing in abundance; at his feet a rich soil, over his head a forest capable of providing for all his wants, and even for his luxuries.

If this country were well known *the western prairies would lose their attractions and no longer seduce the Canadian youth, who leaves the substance to follow the shadow and oftentimes misery.*

It is impossible for us to enumerate with precision the number of families settled upon this road and the vicinity, these two years, nevertheless, without exaggeration they can be put down at two hundred and fifty.

If such a result can be considered satisfactory, what would it have been had it been possible to have the lots on this road surveyed, since in that case we should have had to add one hundred families more.

Since the value of property in those several townships has increased, the cupidity of certain large land owners has awakened the distrust of the settlers. A great number of the latter will no longer expose themselves to be again ejected. They visit these fine lands, make the most minute researches to discover some trace of a survey, and do not find any,—imagining therefore, that they cannot find in their native country, any land on which

they can turn to account, (for themselves and families,) their remaining strength and health, they take passage in one of the railroads and twenty four hours afterwards the United States reckon them among the number of their citizens.

COUNTY OF WOLFE.

*Road from Weedon to Garthby.*

Superintendents, } G. E. COTE.  
 } M. GAUDET.

Balance remaining of appropriation of 1855.....	£9 12 6
Amount appropriated in 1856.....	300 0 0
	£309 12 6
Amount paid.....	250 0 3
	£59 12 3

This road, of 4½ miles in length, (see my last report) was opened for a winter road in 1855.

Two miles and a half were completed in 1856, and two bridges, one of which is 36 feet, and the other 240 feet, were also constructed in 1856, and cost together £30. There remains yet one to be made.

The completed part cost about £85 *per* mile. This road is the only means of communication between Weedon and Garthby, where is situated on the border, of Lake Aylmer, the Office of Mr. J. T. Lebel, Agent for the Government Lands. It is also of great use for the conveyance of provisions required for the large shanties on the borders of Lakes Aylmer and St. Francis. It was also urgently required to enable the parishioners of Weedon to meet for religious purposes.

There is a water-power near this road ; and a church, a saw-mill, and a grist-mill have already been built in Weedon.

The land in this township is generally good, a flourishing settlement has been formed which will very soon have a resident clergyman.

The population since three years has augmented about one third, and the value of property has also much increased.

It is estimated that £100 would be necessary to complete this road.

COUNTIES OF WOLFE AND COMPTON.

*Megantic Road.*

BERNARD GARNEAU and J. BTE. COULOMBE, Superintendents.

Balance remaining of the appropriation of 1855....	£150 8 2½
Amount of the appropriation of 1856.....	500 0 0
	£650 8 2½
Amount paid.....	585 0 0
	£ 65 8 2½

For a description of this road, see my last report.

The length of this road, which ends at Lake Mégantic, in the township of Whitton, is 37 miles, 31 of which are practicable for summer vehicles and a further half mile for winter ones only.

Four and a half miles were opened during the past year at a cost of £145 per mile. A bridge of 28 feet in length over the river LeBel was completed. 32 other small ones have likewise been constructed.

The land near these last four miles is partly covered with soft wood, but on the adjacent lands on both sides of the road, hard wood is found. The soil is of a superior quality, and very fit for cultivation.

There is an excellent water-power on the river Garneau.

"Colonization" say Messrs. Garneau & Coulombe, "has made rapid progress in the Townships of Stratford and Winslow. During the last three years more than 130 families have settled therein."

"There is no doubt," they add, "that the Megantic road being once completed, it will become bordered with industrious settlers who will turn to account the fine lands in the vicinity of the lake, a large number of Scotch and Canadian families are only waiting the opening of the road to establish themselves near Lake Megantic. Several persons commenced last summer to open out lots, and a great number of others have visited the land and intend establishing themselves upon it as soon as the road is opened. Messieurs Garneau & Coulombe think that these lots near Lake Megantic, are destined to form, in a few years, an important centre of colonization and business."

A fine Chapel was erected in Stratford in 1856.

An excellent grist mill and two saw mills, besides a large number of houses and barns have lately been constructed in Stratford.

To the preceding details I must make known the information given to me by Messrs. J. Bte. Delisle and Abraham Wait, superintendents of the works in the St. Francis road.

"It is of urgent necessity "they say" that the Megantic road be completely opened next summer, as about 20 families have already taken lots, and some of these settlers have cleared 5 or 6 acres of land."

Several have reaped excellent harvests of oats, barley and potatoes. A number of persons intend placing their families there next spring.

There is, it appears, an extent of excellent land between Lake Megantic and the British American land Company's territory in the Townships of Whitton and Hampden.

The superintendents think that about £1,300 would be required to complete this road to the river Chaudière the discharge of Lake Megantic.

## COUNTY OF COMPTON.

*St. Francis Road.*

Superintendents—J. BIE. DELISLE AND ABRAHAM WAIT.

Balance remaining (as appears under the heading of Chester and Ham roads) from the different appro- priations set apart for the opening of roads gene- rally in the Eastern Townships.....	£707	9	7
Amount paid the above named Superintendents for the St. Francis road .....	376	4	0
Remaining balance.....	£331	5	7

For description of road, see my last report.

Of this road 16 miles were opened in 1854 and 1855, and 2½ in 1856. The whole length of St. Francis road is now practicable for summer vehicles, less half a mile which is only passable for winter ones.

The average cost of that made last year was £150 per mile, exclusive of the bridges.

The soil in the vicinity of the road is good, being a mixture of clay and gravel. It is considered fit to raise wheat and other grain. It is however rocky. The timber near the road is maple, birch and spruce. In the concessions situated further back, the soil is lighter and less rocky.

The lands to which this road leads are in general of an excellent quality, and the timber is fit for the manufacture of potash.

Messrs. Delisle and Wait say, "That with these advantages they have no doubt the settlers will continue to increase in these townships as much as they have done these last years, and that this locality will become a very important portion of the eastern townships"

This road is one of the most important for colonization and commerce. It offers an easy means of communication to the inhabitants of the River Chaudière, by its junction with Lambton road which crosses the flourishing settlements of Lambton, Forsyth and Tring, thereby facilitating access to the townships situated around Lakes St. Francis, Aylmer and Megantic, where settlements formed by Scotch and by French Canadians, living together in the greatest harmony, have spread with as much rapidity as importance.

This road joins the one which leads across Lingwick, Bury and Eaton, to the Grand Trunk road at Lennoxville.

There are several water powers in the vicinity of this road, on the River Felton and its tributaries, on one of which latter a mill has been constructed.

At the dépôt (also called Stornoway), there is a Post Office.

In the Township of Stratford, the place of residence of Mr. Delisle, colonization has progressed 50 per cent. since the last three years and 100 per cent. in the townships of Winslow and Whitton." (Extract from Messrs. Delisle and Wait's Report.)

There is a chapel in course of erection in the Eastern part of Winslow, and in Stratford another was constructed last year.

From £250 to £300 will be required to complete what could not be finished last fall, and to make certain repairs urgently required along that part of the road which was constructed in 1854.

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 COUNTY OF SHEFFORD.
*Road in North Stukeley.*

M. A. BESSETTE—Superintendent.

Amount appropriated in 1855.....	£200	0	0
Amount paid.....	200	0	0

The sum above mentioned was made use of to repair, open, or complete nine different roads in North Stukeley; these roads form together a length of about 10 miles.

In a very able report made by Mr Bessette, this gentleman remarks that the road begun by Mr. George Bonallie, if completed, would be of great use for colonisation.

This road described in my report of 1855, under the name of Orford road, commences at the post which divides Nos. 4 & 5 of the 18th range of the township of Orford, skirts the division line between Orford and Stukely, between Ely and the augmentation of Brompton, and ends at No. 11. first range of Ely. This road (Orford) is 5 miles long, 4 miles may be used for summer carriages and the 5th mile for winter vehicles only, but it needs repair in all its extent. It is the only road that the settlers of Brompton have to go to the mill and to church. It passes across the finest lands of the vicinity.

“The Settlers” says Mr. Bessette, “suffer a good deal from the actual state of the roads, not being able to travel except with oxen and even then with difficulty.

A great part of the land which crosses this road belongs to Government, and about thirty families have already settled on it.”

Mr. Bessette affirms that the soil of all the western part of the Township of Brompton, and the adjoining part of the Township of Orford, is good.

This Gentleman informs me moreover that at a short distance from the actual settlement of Brompton, towards the interior of this township, there is a fine quarry of Serpentine.

There are also in the vicinity of this road (Oxford) good water powers. Four hundred pounds would be sufficient to complete this road.

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 COUNTIES OF SHEFFORD, DRUMMOND AND BAGOT.

Amount appropriated in 1855, to assist in opening a road from Durham station to the Melbourne road, in Ely....	£200	0	0
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This road, which is to be made with the co-operation of the Municipal Councils of the different localities, Ely, in the county of Shefford, Durham, in the county of Drummond, and Acton, in the county of Bagot, within the limits of which it will pass, was traced by Mr. P. R. Blanchard, Deputy Provincial Surveyor, as appears by his report, of the 10th Oct. 1855; and although I have applied to these different municipal councils, with the view

to prevail on them to adopt the necessary proceedings to legalise this road and to provide for its entire completion, and keeping it up for the future, nothing, as yet, has been done.

*Summary of the report and general considerations on the colonization works of the year 1856.*

OFFICE OF THE INSPECTOR OF AGENCIES,

*St. Hyacinthe 10th March 1857.*

Sir,

The account which I had the honor of transmitting on the 3rd February last reached only to the end of the fiscal year, viz: to 31st December 1856, comprising only the sums paid by me to that date, and forming an aggregate amount of £8999 19s. 1d.

In my report of this day I account for the sums paid by me to the present date for works performed, with one single exception, in 1855.

This exception relates to the sum of £50 paid to Mr. J. L. M. Martin, to procure during this season the timber necessary for the construction of the Lacouareau bridge.

The sums paid since my report of the 22d February 1856, to the present date, amount to £9621 7s. 5d.

I thought it advisable to give a statement of these last sums, as they afford a more correct account of the expenditure made during last year; whilst that ending on 31st December 1856, shews only the sums paid up to that date, and represents but a part of the works made during that year.

To arrive at the average cost of each mile of road, the following sums had to be deducted from the total amount paid to this day, viz

For the Rivière à Mars and Rivière du Moulin Bridges, in the County of Chicoutimi, £500

Amount paid over to the municipality of Lochaber.....	£130	0	0
Do paid to J. S. M. Martin, for Lacouareau bridge to procure the necessary timber.....	50	0	0
Do of unexpended balances remaining in the hands of the overseers, or deposited to my credit in the banks.....	162	4	6
		<u>4</u>	<u>6</u>
	£842	4	6

Which reduces to £8779 2 11 the amount paid and expended in 1856 for roads and bridges in general (the Rivière à Mars and Rivière du Moulin bridges excepted, as stated above.)

There remains unpaid a few contingent accounts presented by the overseers, but their amount is trifling and of little consequence when subdivided on each mile of road made.

One hundred and seventy-nine miles of road were opened in 1856.

Of these 179 miles, 124 were completed as summer carriage roads; 43 out of these 124 had however been opened in 1855. The other 55 were merely opened.

These 179 miles cost on an average about £49 per mile, including bridges.

I must not omit to mention that the extraordinary and nearly unceasing rains of last falls have, as in 1855, delayed the prosecution of the works and enhanced the cost of those which were executed.

Bridges measuring in the aggregate 4670 feet were built. Among those the *Rivière à Mars* and the *Rivière du Moulin* bridges in the County of Chicoutimi, which absorbed the sum of £500 on the year's expenditure, are not taken into account.

I have no means of ascertaining the progress of colonization, altho' it was very considerable last year. A proof of this is the fact that the ecclesiastical authorities have last year provided for the erection of 22 Churches in the neighbourhood of the roads lately opened, and that most of these Churches are now in the course of construction.

It is to be remarked that among the new settlers a good number possess sufficient pecuniary means to forward these projects of settlement.

I think it my duty to recommend once more the propriety of legalising the roads which the Government is opening. I am more than ever convinced that great advantages would arise to colonization from the adoption of such a proceeding, and that without it before two years the roads which are now completed will have become impassable.

In recommending the legalising of these roads, I am far from advising their being put under the control of Municipal authority. To this day the Municipal Councils have shewn little disposition to aid the opening or keeping in repair of these roads. To obviate the want of action on the part of the Municipal Councils, in as far at least as the colonization roads are concerned, it is of the most imperious necessity that the Legislature should create a new authority more prompt and more effectual.

I would recommend that an officer be vested (in regard to the colonization roads,) with the same powers which were formerly possessed by the District Grands Voyers; the homologation of their Procès-Verbal should however be more summary. One of the advantages which would accrue from the legalising of these roads (particularly in the Eastern Townships,) would be to force a considerable number of large proprietors who benefit largely in the increased value of their lands by the opening of these communications, to contribute towards the construction of them. Provision could in the same way be made for the keeping in repair of these roads, which of course can only be done by those who are most interested, and which will not fail to be done if power and means of execution be granted to them.

Money alone cannot at once make a good road; land recently opened requires time to undergo the necessary changes to give it a comparatively more solid consistence and a more even surface; these two agents combined are even insufficient in ordinary soil if left to itself and no repairs made.

I have already made it known that, for the want of these repairs, roads made within the last two years require immediate attention. And owing to the local authorities not having provided for the keeping in repair of these roads it has become necessary to expend for that object, in certain localities, part of the colonization funds to the injury of other places which could otherwise have been opened.

I beg to call your attention to various obstacles which have had to be overcome by several of the superintendents employed on the works. In my report of 1856, I have already had the honor to point out certain facts connected with those obstacles. In the case of the road from Ely to the Railroad in Durham, and that of the road in Howard, (in rear of Lachute) where recourse had to be had to Municipal aid, on account of the insufficiency of the appropriations made, the money granted has not yet been expended owing to the Municipalities (which number three in each case) not having been able to come to an understanding on the direction to be followed by the roads in question.

In certain cases proprietors have objected to the opening of roads on their land as in the case of the road from St. Helen to Lake Pohénégamook.

This very day one of the superintendents employed on the works is threatened with a suit for taking a few loads of sand on the land of an individual to repair the road in front of that very man's land.

The necessity of legislative enactment to obviate these inconveniences is more than apparent.

Since the spring of 1854 755½ miles of new road have been opened, and 224½ miles of old road repaired.

It would be advantageous to prolong several of these roads. From the information which I have received, and which may be found under the heads of the various roads to which they relate, the continuation of some of these roads would open to colonization, to the north and south of the St. Lawrence, a vast extent of highly valuable land.

THE FOLLOWING is a list of the roads begun or projected, which it is desirable to complete or prolong, and of the sums required for these objects.

	£.	s.	d.
Roads in Gaspé.....	1,300	0	0
Rocmont Road.....	750	0	0
Whitworth ".....	600	0	0
Kinogami ".....	3,000	0	0
Roads from Lambton to Quebec & Richmond Rail Road....	4,500	0	0
Road in rear of St. Thomas.....	4,000	0	0
Brandon Road.....	12	0	0
Hunterstown Road.....	250	0	0
Cathcart ".....	530	0	0
Road in rear of St. Pierre.....	600	0	0
Poménégamook Road.....	1,405	0	0
Bélair Road.....	50	0	0
Beresford ".....	750	0	0
Mont Carmel Road.....	200	0	0
Alton ".....	400	0	0
Elgin ".....	3,250	0	0
Road in rear of St. Simon.....	200	0	0
Armagh Road.....	900	0	0
Kilkenny Road.....	100	0	0
Megantic Road.....	1,300	0	0
Maddington ".....	200	0	0

Amount carried forward.....

Amount brought forward.....				
Frampton Road.....		200	0	0
Buckland " .....		375	0	0
Orford " .....		400	0	0
Weedon & Garthby Road.....		100	0	0
Lambton Road.....		800	0	0
St. Francis Road.....		300	0	0
Road of Maria.....		65	0	0
Bridge in Nouvelle.....		160	0	0
Escuminac Road.....		64	0	0
Mann " .....		70	0	0
Buckingham " .....		250	0	0
Aston " .....		60	0	0
Chertsey " .....		125	0	0
Grandes Piles Road.....	1,650	0	0	0
Caxton Road, (Co. St. Maurice).....		300	0	0
Road in rear of Dalesville.....		80	0	0
Harrington Road.....		325	0	0
Wentworth " .....		100	0	0
Viger " .....		200	0	0
Chester and Ham Road.....		500	0	0
St. Féréol " .....		600	0	0
		<b>£30,421</b>	<b>0</b>	<b>0</b>

THE FOLLOWING roads have also been earnestly asked for :

Howard Road,  
Wexford Road,  
Matane to Cap Chat Road,  
Caxton Road, (Co. Maskinongé.)  
Fleuriau Road,  
Ste. Croix Road,  
In rear of St. Casimir Road,  
Laval Road,  
Somerset & Halifax Road,  
St. André Avelin, Ripon and Hartwell Road,  
Templeton Road,  
Bristol and Thorne Road,  
Woodbridge Road,  
Rinouski Road.

Having no estimate of the probable cost of the construction of these roads, I think it right to classify them with the roads which the government after making exploration will open, and I think that for these two last mentioned classes a sum of £12500 should be appropriated, forming with the sum already mentioned a total of £42,921, to be expended in the course of the present year.

Large though this appropriation may appear for a single year it is far however from being over what is really required for colonization purposes. It is even more than probable that to retain in the country that portion of our population which lives by its daily labor, and often emigrates in search of it, a much larger sum would be necessary. But if

effectual provision were made for the regular keeping in repair of the roads in the Townships, an increase of work would follow as a consequence which would give employment to settlers (particularly to those who reside in the Eastern Townships) at times when their wants are the most pressing and when their agricultural avocations leave them a few weeks at their disposal. I would again point out that in the Eastern Townships the greatest portion of the cost of keeping the roads in repair would fall upon a considerable number of large proprietors who already have reaped immense benefits from the colonization works. In compelling them to contribute to the opening and keeping of the roads in repair, it would only subject them to an obligation which is strictly equitable. In thus fulfilling a duty they would by necessary expenditure contribute to the introduction into the Townships of a considerable amount of capital, which in agricultural settlements is always scarce.

There is no doubt that free grants of land on the roads opened by Government, would induce a large number of farmers to form new settlements. The Parish of St. Hypolite de Wotton is an evident proof of this, since in the course of less than six years, it has become numerous and flourishing in the very midst of the forest. But this means alone is not sufficient for effectually keeping in repair a long road, cut up by hills and swamps, which the settler will certainly not inhabit so long as he can find a more advantageous spot.

It is not however always on Crown Lands that Government has caused roads to be constructed, it often happens that they are opened on private lands, and in this case also no provisions are made for their being kept in repair. Besides in many cases the roads do not cross the lots at right angles, and it would be unjust to pretend that a proprietor ought alone to keep in repair a road equivalent to a communication from one concession to another, because that road crosses his land.

It is only in establishing who are the proprietors who profit most from a road, and in what proportion they ought to contribute towards its repairs, that any sure and practical result can be arrived at.

It is certain that the want of employment for mechanics and laborers, and of an adequate remuneration for their labor has been the cause of the unfortunate emigration from Lower Canada. This cause no longer exists to the same degree at the present time. Laborers find ample employment near our large cities, but in those parts where population is less numerous and poorer, the husbandman who cannot support himself by his farm and who requires to work elsewhere, does not always find employment in his own parish or township. Necessity compels him to look beyond his own country.

In a country like ours, inundated with the products of foreign manufactures, where domestic and national manufactures receive no encouragement by law, is it to be wondered that the demand for labor is scarce, and that the remuneration for that labor is less than what the manufacturers, our neighbours, give to those they employ. Can it be a matter of surprise, that capital cannot accumulate in the country?

If circumstances are such as to leave no room to hope that for a long time to come the number of our manufactures will be sufficient to retain in the country the laboring class which, here as in all other countries, ever seeks after employment, but can never create any, it is evident that the only

means of putting a stop to emigration is to give to agriculture all the extension of which it is susceptible.

Fortunately this kind of industry can afford employment for all; and inasmuch as it is our only resource, it is our duty to give to it all the attention and solicitude which our position and its importance require.

Land is not wanting. To the north and south of the St. Lawrence extensive valleys are found, the soil of which is of the best quality and capable of rewarding largely the tiller of it. The experience of the last three years has proved that good soil, to which access is rendered possible by a road, never wants hands to clear it.

It has already been suggested that part of the Municipal Loan Funds might be advantageously employed in clearing up lands. This incentive would prove of the first importance.

In a recent meeting at the County of Temiscouata at which the subject of colonization was discussed, that course was highly approved of; and I know that in other places, well informed men having considerable interest in the settlement of the townships are in favor of it. To the man who is conversant with the means of the poor settler and the obstacles which he has to overcome before he can create a home for himself in the midst of the forest, can entertain no doubt as to the amount of benefit which a loan of £15 to £20 would confer upon him.

With regard to the conditions imposed in land grants, I beg leave to observe that several are looked upon, and I think with reason, as burthen-some and calculated to prevent a great many taking lands in the townships.

The obligation imposed upon the settlers of building a house 26 by 18 ft, of occupying the land immediately and without interruption, of clearing 5 acres per 100 every year, requires pecuniary means seldom within the reach of the young settler, or of the father of a family having several sons whom he is desirous of providing for. It would seem to me sufficient that the Crown, till the issue of the patent, should retain the right of resuming the land in every case where the occupant neglects to perform the public services imposed upon his location. If settlers could purchase land without being obliged to reside on it, many of those who go to the United States would become proprietors before their departure and return every year to expend thereon their earnings.

The desire of possession so natural to man would prove a most powerful inducement for the greater number to return to the Country.

The reserve of the serviceable timber which is afterwards sold to speculators at a nominal price is also very disagreeable to settlers, and is the main cause of the destruction of an article of interior trade and rural economy which is becoming very scarce and precious in many of the Eastern Townships. Settlers rather than see it carried off by speculators are induced to destroy it for a trifle.

I have the Honor to be, Sir,  
Your obedient Servant,

T. BOUTILLIER  
Insp. of Agencies.

The Honorable JOSEPH CAUCHON,  
Commissioner of Crown Lands,  
&c., &c., &c.,  
6 Toronto.

## APPENDIX N.

## ACCOUNTANT'S BRANCH.

The duties of the Accountant's Branch of the Crown Lands Department consist in keeping the books of the Department by double entry; furnishing abstracts of the public accounts to the Auditor General every quarter; examining the monthly returns of the Agents for the sale of public lands in Canada, and answering their letters.

Making out the accounts current of the Crown Lands Agents for Canada West and East.

Entering and indexing new sales of lots in Canada West in the sales books, and the instalments as they are returned.

Referring lots for patent in Canada West. Furnishing the Registrar and Treasurer of each County in Canada West with a list of new sales every year.

Furnishing returns and reports to the Legislative Assembly in connection with the Clergy, School and Crown Lands in Canada West.

Drawing Checks for the Signature of the Commissioner in payment of the general disbursements of the Department, the Newspaper accounts for advertising, Agents' Salaries, Clerks' Salaries, Surveyors East and West, &c., &c.

## CORRESPONDENCE, WEST.

**J. C. TARBUTT, 1st Clerk**,—Is in charge of all lands open for sale in Upper Canada—answers enquiries and conducts the correspondence connected therewith, whether with the agents of the Department or the public. Investigates disputes, reporting thereon to the Government, if necessary, and, on applications to purchase Clergy Reserves, examining the titles upon which claims to lots held under leases are based. Superintends the registration of Assignments from purchasers of land recorded under the provisions of the Land Act, and the locating of the Free Grants on the several lines of road in Upper Canada.

**A. J. TAYLOR, 2nd Clerk**,—Examines and records assignments, and assists Mr. Tarbutt in the general business of the office.

**C. GAMON, Temporary Clerk**,—Assists in the general business of the office.

## Sales and Correspondence—Lower Canada.

Names.	Office.	Duties of each Officer.
W. F. Collins.....	Salesman and Corresponding Clerk.	Conduct'g the business of the Branch—General Correspondence—Reporting on applications to purchase Crown and Clergy lands—On conflicting Claims—Applications for Patents for Free Grants—Claims of Military, Militia & other Locatees—Applications for indemnity—Examining Agents' Returns—Posting instalments to sales books—Applying moneys received on account of lands—Preparing journal entries growing out of Agents' Returns and other transactions—Checking References for Patent—Preparing Statements required by law, by the Legislature and its Committees, and by Heads of Departments—Answering verbal enquiries, &c., &c.
Thomas Hammond.	Clerk.....	Registering Letters received—Copying Reports, Orders in Council, and English Correspondence—Indexing Letter, Report and Registry Books—Docketing Orders in Council and Adjudications—Noting action on Letters received—Copying rough Drafts.
V. E. Tessier.....	Clerk.....	Assisting in French Correspondence—Registering Assignments—Examining Claims—Examining and entering Free Grant locations—Assisting in preparing Statements—Noting Letters, Orders in Council, and Adjudications in Land Rolls or Sales Books—Making searches, &c.
T. Cherrier.....	Clerk.....	Entering Agents' Returns—Writing and recording References for Patent—Entering Letters to Agents—Indexing Sales Books—Entering sale numbers in Land Rolls—Filing of Agents' Letters and Papers.
F. D. Dugal.....	Extra Clerk.....	Copy'g Specifications for Agents, and entering them in Land Rolls and Patent Books—Assist'g in preparing Returns under Act 16 Vict. c. 159—Recording said Returns—Copying French Correspondence—Assisting in preparing and copying statements—Copying rough Drafts—Filing general Letters, &c.

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MEMORANDUM shewing the duties performed in the late Surveyor General's Branch of the Crown Land Department.

**WILLIAM SPRAGGE.**—General Superintendence of the Branch of the Land Department, formerly the Surveyor General's Department for Upper Canada, preparing reports for the information of the Government and Executive Council and the Heir and Devisee Commission, conducting correspondence with other Departments and portions of the general correspondence. Managing Mining correspondence and locations, hearing and attending to personal applications relating to land claims.

**THOMAS HECTOR.**—Reporting upon petitions ; correspondence and answering verbal applications.

**FREDERICK A. HALL.**—Registering and entering orders in Council, petitions, reports and letters and papers connected with Mining affairs, making transfers for sale, and copies of record, and replying to inquiries, &c.

Reports, Letters, &c., copied, 1902 folio pages.

Matters relative to which no copies are made.

Entries in the various voluminous records of the branch, transcripts from documents for evidence and information to applicants, and Memoranda, &c.

## Upper Canada Surveying Branch.

Names.	Nature of Appointment.	Duties of each Officer.
Andrew Russell. . . .	Senior Surveyor and Draftsman.	Conducting the business of the Upper Canada Branch of the Department relating to Surveys and Surveyors, such as projecting Surveys of Public Lands—Drawing out instructions to Land Surveyors for their performance—Examining and reporting on Surveyors' Plans, field books, diaries and accounts—Reporting on Petitions, and answering Letters respecting Surveys—Examining Candidates for admission as Provincial Land Surveyors—Copying and compiling Plans for District Agents, Municipal Councils, and the Public generally—Arranging and preserving the original Plans, Field Books, Diaries and Reports of Surveys of the Towns and Townships in Upper Canada, and showing them to persons calling at the office for information, and answering verbal questions respecting Surveys.
Thomas Devine. . . .	Assistant Surveyor and Draftsman.	Assisting in the above mentioned duties, but chiefly in copying and compiling Plans.
James W. Bridgland	Assistant Surveyor and Draftsman.	Assisting in the above mentioned duties, but chiefly in copying and compiling Plans.
Henry John Jones. . .	Patent Clerk. . . . .	Preparing descriptions for Letters Patent and entering them, and compiling Returns for the Legislature.
Joseph Prendergast.	Clerk. . . . .	Entering Correspondence—Returns—Copy'g Instructions, Descriptions, Field Notes, &c.—Registering all Documents received—Indexing all Letters, and noting action, &c., &c., &c.
Frederick Bannister.	Extra Clerk. . . . .	Copying Field Notes during part of 1856.
W. F. Whitcher. . . .	(Restored) . . . . .	Copying Field Notes during part of 1856.

GENERAL STATEMENT of the work and duties performed in the Surveying Branch, Canada East, of the Crown Land Department during the year 1856.

### SURVEYING DEPARTMENT.

JOSEPH BOUCHETTE, Senior Surveyor and Draughtsman, and holding the commission under the Great Seal of Deputy Surveyor General of Lands for Lower Canada, dated June, 1827.

### HEADS OF DUTIES.

1. Originating instructions for the survey and laying out of the public lands, and defining the boundaries between Crown property and the seigniors under authority of Council, for signature by the commissioner.
2. Correspondence in the English and French languages on all matters connected with surveys generally, and subjects relating to colonization.
3. Preparing reports to Council, on petitions for surveys, desired for purposes of settlement; and also on matters of conflicting claims relative to boundary of lands held by patentees or seigniors.
4. Examination of surveyors' returns of survey performed under the instructions from Crown Land Department, examination of their accounts before being submitted for approval by the Commissioner, and examination and report upon the quarterly accounts of the Board of Examiners for Lower Canada.
5. Originating descriptions of beach and water lots on Surveyors' *Proces-Verbaux* of survey for issue of Letters Patent.
6. Inspection of all plans, descriptions and specifications and entries of reports and correspondence before being submitted for signature.
7. Originating instructions for surveys within Jesuits' Estates and Domain property of the Crown, and reporting upon accounts.
8. General supervision of the work done or in progress in this branch of the Department in charge of the undersigned.

### REMARKS.

The nature and extent of the duties above enumerated may be established upon inspection of the statement of labour performed in this branch of the public service given under each department of duty into which it is practically classed, namely: the describing, drawing and copying departments, other and no less important duties devolved upon the undersigned in the construction of the sectional plans of Lower Canada, compiled from time to time from the actual surveys in that section of the Province indispensably necessary for the proper organization of the waste lands in progress of colonization into townships; besides which supplying ready information on matters of reference from the other branches of the Department, and preserving a system of order of the rapidly accumulating records of the surveying branch of the Crown Land Department.

## DESCRIBING DEPARTMENT

E. T. FLETCHER, Surveyor and Draughtsman.

## D U T I E S .

Preparation of descriptions for land patents ; descriptions for erection of townships by letters patent, and of villages, parishes and municipalities to be similarly erected by proclamation ; specifications of all lands surveyed and to be advertised for sale, preparation of statistical statements, schedules of surveys, and land returns, keeping ledger of surveyors' accounts, and registration of all references received, with synopsis of action thereon. Examination of surveyors, township *procès-verbaux*, occasional correspondence respecting conflicting boundaries.

## R E M A R K S .

The work done under those several heads of duties is shewn in detail as follows :

	PAGES.
	Atlas & Demy.
Description of 204 land patents, C $\frac{1}{2}$ folio.....	52
Description of parishes, villages and municipalities..	27 39
Description of 3 townships.....	7
Preparation of 20 specifications.....	50
Preparation of returns and schedules.....	10
Keeping ledger.....	57
Keeping register.....	56
Total .....	<u>271</u>

(*Apart from Official Correspondence.*)

## DRAWING DEPARTMENT.

Draughtsmen : G. G. Dunlevie, J. F. Bouchette and E. Caizac, (lately demised.)

Drawn and prepared 303 plans, apart from the engrossing of 311 Gaspé patents, designated on the plans of the townships in the counties of Gaspé and Bonaventure. Framing a general index of the plans in the various compartments of the office records, become necessary on the removal to Toronto—while it is proper to remark that Mr. Caizac's state of ill health called him away for about three months in the year 1856.

## R E M A R K S .

Part of this work consists of the construction of a map of Lower Canada, on a scale of 8 miles to one inch, called for by the Attorney General, intended to exhibit the municipal divisions of townships and parishes under the late Representation Act, within the counties of L. C. ; also a map of the Province shewing the lines of Railways, &c. ; compilation

of the surveys of townships in the counties of Ottawa, Pontiac; the remainder of copies of plans of townships for the municipalities, Crown Land Agents and the corresponding branch; also to accompany instructions for surveys.

Plans of the disputed boundaries of Upton, Grantham, Acton and Milton; plans of beach and water lots on paper and parchment; copies of plans of civilly erected parishes; of part of the Jesuits' and Crown domain in Lower Canada.

### COPYING DEPARTMENT.

Mr. Chassé, who succeeded Mr. Raymond, in April last.

#### DUTIES.

Copying, atlas and demy, 1106 pages.

#### REMARKS.

This work consists of copies of correspondence, &c., and entries thereof in both languages.....	Nos. 364
Copy and entries of instructions to surveyors.....	17
Copy and entry of reports of Council.....	20
Entries of orders in Council.....	42
Entries of returns of surveys.....	77
<i>Proces-Verbaux</i> of Seigniories.....	12
Entry of Gaspé descriptions from letters patent.....	251
Entry of descriptions of parishes and reports of the commissioners .....	27
Entry and copy of descriptions of beach and water lots...	5
Entry for erection by proclamation.....	3
Specification for land Sales.....	20
Copy of index of referred letters, &c., since 1851.....	202 pages.
Copy of reports on boundary matters.....	11

In addition to the above, the filing of the reports and indexing the field books of surveyors by the senior officer form part of the *routine* duty of the copying clerk.

J. BTE.

## JESUITS' ESTATES and Crown Domain Branch, Crown Lands Department.

Name.	Office.	Duties.
Fredk. T. Judah ...	1st Clerk .....	General correspondence in both languages, and Reports to Council, on all matters connected with the Jesuits' Estates, the Crown Domain, and Seignior of Lauzon—Preparing the several quarterly accounts of these properties, and of the different Agents; also, the annual statements required by Acts of Parliament, and returns asked for by the Legislature and Public Departments—Replying to personal applications and enquiries.
Louis R. Fortier ...	2nd Clerk.....	Endorsing and registering letters and Orders in Council received—Entering letters, and Reports to Council—Indexing Register, Letter, Report, and Order in Council Books—Entering Agents' returns—Noting action on applications, &c., and entering same in Register—Entering payments in account Books—Engrossing Letters Patent for beach and deep water lots.

## WOODS AND FORESTS' BRANCH.

## CROWN LANDS DEPARTMENT.

RETURN of Officers employed in this Branch, with an Abstract of their Duties.

Name.	Office.	Abstract of Duties.
Wm. McD. Dawson.	Head of Branch	The duties of this Branch consist in the general management of the Woods and Forests; the granting of Licenses to cut timber; the collection of the revenue from timber cut; the management of Government slides and booms (when completed by the Department of Public Works); the superintendence of the Supervisor of Cullers' Department; the surveys of rivers, &c., in the remote timber territories; and the general control of the trade as affected by Government; with the keeping of accounts, framing of regulations, general correspondence, copying and compiling of maps, &c., incidental to those services.
P. M. Partridge..	Accountant and Bookkeeper.	
L. A. Robitaille....	Clerk.	
S. P. Bauset.....	Draughtsman.	

CROWN LANDS

Comparative Statement of Letters, &c., received

YEARS.	Western Branches.					Eastern Branches.				
	Correspondence. Mr. Tarbutt.	Late Surveyor General's. Mr. Spragge.	Surveyors. Mr. Russell.	Accountants. Mr. Ford.	Total.	Correspondence. Mr. Collins.	Crown Domain, &c. Mr. Judah.	Surveyors. Mr. Bouchette.	Accountants. Mr. Collins (thro' Mr. Ford).	Total.
1856 .....	3602	2192	701	1538	8023	1464	735	338	231	2768
1855 .....	3451	1072	606	619	5748	1151	867	323	170	2511
Increase .....	151	1120	95	919	2285	313		15	61	257
Decrease .....							132			

NOTE.—Opinions of Attorney General East..... 46  
 Do. do. West..... 26  
 Letters received through Provincial Secretary..... 434  
 Do. direct through Governor General..... 114  
 Do. returned through Postmaster General—not called for..... 51

January 2nd, 1857.

The Honorable  
 Commissioner of Crown Lands.

DEPARTMENT.

and Registered in the Years 1855 and 1856.

Province at large.			Commissioner on Road Matters, &c.	Grand Total.	Names Indexed.	Enclosures.	Orders in Council.			
Woods and Forests. Mr. Dawson.	Transferred to other Departments.	Total.					East.	West.	Miscellaneous.	Total.
971	32	1003	454	12258	16500	22000	74	137	39	250
503	43	546	362	9167	12300	17400				
468		457	92	3091	4200	4600	O. C. for Western Branch not received from the be- ginning of the year.			
	11									

January	833
February	1102
March	1302
April	1297
May	1110
June	824
July	943
August	757
September	986
October	1109
November	904
December	1091
Total	12258

Respectfully Submitted,  
 (Signed,)

JOHN MORPHY.

## CROWN LAND DEPARTMENT.

## STATEMENT of Office work for the year 1856.

Plans compiled and copied.....	1141
Instructions for Surveys prepared.....	85
Plans, field notes, diaries, reports and accounts and pay lists of Surveys of the public lands audited and examined.....	344
Plans and reports of private surveys examined and areas calcu- lated.....	63
Railway plans and books of reference examined and areas calcu- lated.....	40
Candidates for admission as Provincial Land Surveyors examined	20
References for Letters Patent prepared.....	2688
Descriptions for Letters Patent prepared.....	4304
Land Patents engrossed, examined and entered in the several books of record.....	4413
Erections of Parishes in Lower Canada.....	27
Erections of Townships in Lower Canada.....	3
<i>Procès-Verbaux</i> of boundaries between the Crown Lands and Seigniories.....	12
Specifications of lots in Towns and Townships for sale.....	46
Assignments examined and entered.....	1025
Agents' returns examined.....	1173
Accounts current.....	78
Statement of amounts available for public improvements under 16 Vic. Cap. 159, Sec. 14.....	42
Statements for the Legislature and Blue Book.....	78
Reports for Council, &c.....	1589
Letters written.....	6850
Pages of field notes, reports, letters &c., copied.....	6716
Pages of reports, land rolls, assignments &c., entered.....	2223
Schedules of Crown, Clergy and School lands furnished to timber agents.....	741
Statements required by the 16 Vic. Cap. 159, Sec. 24.....	127

The foregoing statement contains only a partial exhibit of the amount of office work done during the year, as much of it cannot be definitely specified, and much time is spent in examinations and investigations, and also in giving verbal replies to personal applicants. One officer alone gave 9000 verbal replies during the year, of which he kept written memorandum of the questions and the answers. The other officers did not keep a record of their verbal replies.

JOSEPH CAUCHON.

Commissioner of Crown Lands.

Crown Lands Department,  
Toronto, 30th January, 1857.

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 APPENDIX O.
 

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## STATEMENT OF EXTRA DUTIES.

## CROWN LANDS DEPARTMENT—CANADA.

Remarks are often made on the great cost of the survey, management and sale of the Public Lands by the Crown Lands Department, and very unfair comparisons instituted between it and the Canada Company and other land Corporations whose duties are limited to the sale of lands.

In the Crown Lands Department the survey and sale of the lands have formed and still form comparatively a small portion of the duties, as will appear from the following statement of extra duties, which either result from the Department being an Office of Record of surveys and grants, or have been imposed on it by legislative enactment.

1. Investigating and reporting on Military, Militia, U. E. land claims and free grants, and conflicting claims of Squatters.

2. Answering personal applications respecting grants, grantees, &c., &c.

3. Preparing annual returns of all the lands described for patent for the District (now County) Treasurers. A very labourious and responsible duty, as an error in the return might occasion the illegal sale of land for taxes.

4. The registration of assignments of claims to Crown, Clergy and School lands.

5. The issue of land scrip, which very much increased the duties and responsibilities of the department, and at the same time very much reduced the amount of monies received.

6. Preparing copies of the original plans of the Towns and Townships in Upper Canada, for the Municipal Councils.

7. Preparing copies of the plans of the Towns and Townships in Upper and Lower Canada for the District Agents.

8. Preparing copies of the plans of all the Townships in Upper and Lower Canada, on a reduced scale, for the Inspectors of Clergy Reserves, and marking the Reserves on them.

9. Preparing copies of the plans of all Towns and Townships in Canada for the County Registrars, in compliance with the 9th V. c. 34.

10. Preparing returns of all the lands in the Province which have been patented, names of patentees and date of Letters Patent, for the County Registrars, in compliance with the above mentioned Act.

11. Copying the original field notes and reports of surveys of Towns and Townships in both sections of the Province for the County Registrars, in compliance with the 12th section of 12th V. c. 31. Discontinued in 1853, and renewed for record in the office in 1856.

12. Examining the plans and books of reference of railways, under the provisions of the Railways Consolidation Act, 14th and 15th V. c. 51. The computation of the areas of all the lands taken for railway purposes forms part of this duty.

13. Compiling annual returns of persons in arrears for purchase money and interest on sales of Crown, Clergy and School lands.
14. Answering letters and personal applications respecting the original surveys of the Towns and Townships of the Province.
15. Superintending Municipal surveys under the provisions of the 12th V. c. 35, sections 26 and 31, and 18th V. c. 83, section 8.
16. Furnishing copies of plans and field-notes of the original surveys of the Towns and Townships to private applicants.
17. Preparing returns and statements for the Legislature.
18. Examining and checking lists of lands annually advertised by the Lower Canada County Municipalities on sale for taxes, and correspondence relating thereto.
19. Preparing descriptions of the boundaries of Cities, Towns and Villages in Upper Canada under the provisions of the Municipal Acts.
20. Surveys of the Indian Reserves on Lakes Huron and Superior.
21. Examination of the Returns of Surveys of Indian Lands performed under instructions from the Indian Department.
22. Copying plans of the above mentioned surveys.
23. Preparing descriptions and Letters Patent of the lands sold by the Indian Department.
24. Preparing statements for Lower Canada County and Township Municipalities.
25. Preparing statements of the amounts available for Public improvements in each County under the provisions of the 14th section of the Land Act.

#### LOWER CANADA.

26. Preparing plans of surveys for grants of Beach and Water lots in the Harbors of Quebec and Montreal, and more especially along that part of the Saint Lawrence subject to tide waters, and consequently keeping a very minute exhibit of the Harbor Map to prevent interference and clashing of such grants in connection with the rights of riparian proprietors.
27. The delimitation of the boundaries of Seigniories and the adjacent Crown Lands.
28. Copies of the plans, surveys, field-notes of property belonging to the Crown, whether as Military or public reserves, in the Cities and Towns in Lower Canada, the originals of which are records of this department.
29. Copies of the plans of surveys of the Seigniorie of Lauzon, acquired from the late Sir John Caldwell.
30. Adjudication and correspondence in the French and English languages relative to the land claims in the District of Gaspé under Statutes passed before and since the Union of the Provinces.
31. Copies of plans accordingly prepared for the local Agents.
32. Preparing descriptions and plans to be annexed to the Letters Patent for commutation of Seigniories into free and common soccage under the Imperial Act 6 Geo. IV. c. 9, and the Act known as the "Trade Act."\*

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\* NOTE—Seigniorial Act of 1854, 18 V. c. 111, (with its amendments) now operates practically as a repeal of this Law.

33. Preparing descriptions of the boundaries of Parishes and Seigniorial Villages from the reports of the Commissioners, in the French language, appointed under the 2 V. c. 29, required for the proclamation civilly erecting such Parishes and Villages.

34. Correspondence in both languages, and action to Council upon applications and memorials of associations in Lower Canada, in regard to the colonization and settlement of the public lands in that section of the Province.

35. Correspondence in both languages and preparation of instructions for surveys of verification of Township lands, connectively with the action under the provisions of the 20th section of the land Act.

36. Preparing plans and reports, often voluminous, under reference on state matters from the Head of the Government, relative to the disputed boundary with the adjacent Province, connectively with the late settled question of boundary between Lower Canada and the United States of America.

37. Preparing reports and statements in relation to the Magdeleine Islands under reference on matters of state.

#### JESUITS' ESTATES.

The administration and management of the Estates heretofore belonging to the late Order of the Jesuits in this Province, which comprise six large Seigniories, besides several small *Fiefs* and *Rotures*, and other property in the City of Quebec. This property was formerly administered by a Commissioner specially appointed by Government, but in the year 1847 it was placed under the control of this office.

The collection of the rents and mutation fines is entrusted to local agents (4 in number), who are under the direction of the department.

#### LAUZON.

The administration of the Seigniority of Lauzon acquired from the Estate of the late Sir John Caldwell. The direct agency of this Seigniority was, during the continuance of this office in Quebec, performed by the department itself. At the time of the removal to Toronto, in 1855, an agent was appointed; this agent is under the direction of the department, and in constant correspondence therewith.

#### CROWN DOMAIN,

#### *Censives & Papier Terrier.*

The administration of the *Censives* in Lower Canada, belonging to Her Majesty, as Sovereign, consisting of the *Censives* of Quebec and Three Rivers, and comprising in the former the greater part of the City of Quebec, and part of the *Banlieue*, the whole under the control of a special agent, who is likewise entrusted (under the direction and supervision of this department,) with the keeping of the documents appertaining to the office known as the *Papier Terrier* Office, and the collection of the *Quint* still due on sales made previous to the passing of the Provincial Statute which abolishes such *Quint*.

## CROWN DOMAIN,

*Beach and Deep water lots.*

Reporting and taking all requisite steps for the issue of grants of beach and deep water lots in Lower Canada. The agent of Lauzon is also Superintendent of beach and deep water lots in the Harbor of Quebec.

## COMMUTATIONS.

The carrying into effect of commutations of lands held under the Seigniorial Tenure in the Crown Seigniories, under the provisions of the Act 10 and 11 V. c. CXI.

## GENERAL,

*Relative to last mentioned Estates.*

The Estates and Domain mentioned in the (5) preceding sections are under the management of a special branch of the department established in 1847, and requiring the constant services of two or three Clerks, in addition to the extra labor it imposes on the (Surveying Branch) East of the Office, in the preparation of the numerous descriptions and plans required. But a very small portion of the time of this branch is taken up with the actual disposal of the vacant lands in the Jesuits' Estates and in Lauzon. The several duties which devolve upon it are too numerous to give in detail here, but the following may be briefly enumerated :

Keeping the accounts of the several Estates.

“ “ with the several Agents.

“ “ with the grantees, lessees, &c. of mill and other like property, and debtors for commutation money, *rentes constituées*, &c.

Correspondence (*in both languages*,) and reports on applications to lease or purchase.

“ (*in both languages*,) and reports on applications for remission of arrears.

“ respecting the collection of the rents, &c. and arrears.

“ on applications for grants of beach and deep water lots.

“ generally on matters connected with the management of the Estates.

“ on all matters connected with mining licenses in Lower Canada, the disposal of Seal-shoals, Fisheries, &c.

Annual returns and statements required by Acts of Parliament.

Preparing lists (every week,) of property in Seigniories belonging to the Crown, seized by the Sheriff and advertised in the *Canada Gazette*, and correspondence with the Agents in order that the rights of Government may be preserved.

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STATEMENT of Letters received and written, and Clerks employed in  
JESUITS' ESTATES AND CROWN Domain branch of Crown Lands  
Office, in 1856.

Letters received.....	745
“ written.....	637
Clerks employed.....	3 for part of the year and 2 during the remainder.
Jesuits' Estates Branch, 30 January, 1857.	

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The extra duties detailed in the foregoing Statement occupy, on an average of all the branches of the department, about two thirds of the time of the employées, leaving only one third for those duties which relate to the survey and sale of the public lands.

In all Acts of the Legislature requiring special services the cost of the service should be provided for instead of (as heretofore) adding it to the General Expenditure of the Crown Lands Department.

JOSEPH CAUCHON,  
Commissioner of Crown Lands.

Crown Lands Department,  
Toronto, 30th January, 1857.

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APPENDIX P.

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RETURN

OF

WOODS AND FORESTS BRANCH,

CROWN LAND DEPARTMENT,

Including Revenues accrued from Licenses granted, Timber Cut, and  
Government Slides, with Transactions of Supervisor of  
Cullers' Department,

FOR THE YEAR 1856.

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 PART FIRST.
 

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REVENUES accrued from Licenses granted and Timber cut in  
the following Territories :

Upper Ottawa Territory,.....	A. J. Russell, Agent.
Ontario	“ .....J. F. Way, “
Lower Ottawa	“ .....C. E. Belle, “
St. Maurice	“ .....O. Wells, “
St. Francis	“ .....G. J. Nagle, “
Saguenay	“ .....Geo. Duberger, “
Madawaska	“ .....S. V. Larue, “
Peninsula of Canada West Territory,.....	N. Hammond, “
Huron and Superior Territory,.....	A. W. Powell, “
Lower St. Lawrence	“ .....Chs. R. Dubé, “
Baie des Chaleurs	“ .....Jos. N. Verge, “

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UPPER OTTAWA TERRITORY,

A. J. RUSSELL, Agent.

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WOODS AND FORESTS.

RETURN of Licenses granted and Duties accrued in the several Territories during the year 1856.

LICENSES GRANTED.

NAMES.	Date.	No.	Area in square miles.	Amount of ground tents	LOCALITIES.
UPPER OTTAWA TERRITORY.					
A. J. Russell, Agent.					
D. T. Browne.....	1856. July 1	1	12 $\frac{5}{8}$	£ 1 12 1	d. Township of Darling.
do	do	2	25	3 2 6	do do
do	do	3	18	2 5 0	Bagot.
Chaffey & Co.....	2	4	1 $\frac{5}{8}$	9 6 8	do do
S. A. Huntington.....	5	5	6	1 0 0	do Allumette Island.
John Egan.....	8	6	25	3 2 6	do River Bonnehère.
do	do	7	25	3 2 6	do do
do	do	8	29	7 5 0	do do
do	do	9	32	4 0 0	do do
do	do	10	30	7 10 0	do River Little Madawaska.
do	do	11	50	6 5 0	do do
do	do	12	50	5 0 0	do Bonnehère.
John Egan & Co.....	do	13	50	6 5 0	do Madawaska.
do	do	14	50	6 5 0	do Egan Creek do.
John Egan.....	do	15	50	6 5 0	do do
do	do	16	40	12 10 0	do do
do	do	17	18 $\frac{1}{2}$	5 0 0	do Black River.
do	do	18	15	2 5 6	do do
do	do	19	24	1 17 6	do Deep River.
do	do	20	10	3 0 0	do do
do	do	20	10	2 10 0	do do

do	9	21	16	8 0 0	0 6 0	do River Bonnehère, Admaston and Bromly.
do	do	22	29	3 12 5	2 5 0	do River Bonnehère.
do	do	23	18	2 5 0	6 0 0	do do
do	do	24	15	1 17 6	6 0 0	do do
do	do	25	5	4 0 0	0 9 0	do do
do	do	26	19 $\frac{3}{8}$	2 8 0	0 0 0	Chalk River.
do	do	27	20	5 0 0	0 0 0	Township of Bliethefield.
John Egan & Co.....	do	28	14 $\frac{1}{2}$	3 13 4	4 0 0	do Sherbrooke and Oso.
do	do	29	12 $\frac{1}{2}$	6 5 0	0 0 0	do Clarendon.
do	do	30	18 $\frac{1}{2}$	4 11 2	2 0 0	do Onslow.
do	do	31	13 $\frac{3}{8}$	3 7 6	6 0 0	do Hull, Eardley, Masham, Wakefield.
do	do	32	6 $\frac{5}{8}$	2 0 0	0 0 0	do Masham.
John Egan & Co.....	do	33	18	9 0 0	0 0 0	do Clarendon.
John Egan.....	do	34	22 $\frac{5}{8}$	2 17 1	1 0 0	do Masham.
Hamilton Brothers.....	do	35	14	1 15 0	0 0 0	do Onslow.
do	do	36	19	2 7 6	6 0 0	do Masham.
do	do	37	42	5 5 0	0 0 0	do Low and River Gaineau.
do	do	38	35	4 7 6	6 0 0	do do
do	do	39	33	4 2 6	6 0 0	do do
do	do	40	27	3 7 6	6 0 0	do do
do	do	41	27	3 7 6	6 0 0	do do
do	do	42	11	12 16 8	8 0 0	do River Gaineau.
John Egan.....	August 2	43	26	3 5 0	0 6 0	do Township of Bristol.
D. McFarland.....	6	44	13	1 12 6	0 0 0	do do
do	do	45	2	2 0 0	6 0 0	do Pakenham.
Samuel Lowe.....	do	46	25	3 2 0	0 0 0	do Palmerston.
Gilmour & Co.....	12	47	24	3 0 0	0 0 0	do do
do	do	48	25	3 2 6	6 0 0	do do
do	do	49	18 $\frac{3}{8}$	9 5 0	5 0 0	do Dalhousie.
Allan Gilmour.....	do	50	11 $\frac{1}{8}$	11 3 4	4 0 0	do Olden.
do	do	51	9	2 5 0	0 0 0	do N. Sherbrooke.
Gilmour & Co.....	do	52	28	7 0 0	0 0 0	do River Sweyo.
John Egan.....	15	53	37	4 12 6	6 0 0	do Deep River and Oiseau Creek.
do	do	54	20	2 10 0	0 0 0	do McGilvray's Creek Blk. River.
do	do	55	25	12 10 0	0 0 0	do do
do	do	56	25	12 10 0	0 0 0	do do
				1287 $\frac{1}{8}$	268 14 7	

LICENSES GRANTED.

NAMES.	Date.	No.	Area in square miles.	Amount of ground rents.		LOCALITIES.
				£ s. d.	7	
Brought over.....			1,287½	268	14	
John Egan.....	1856 August 15	57	42¾	5	6	River Ottawa.
do.....	do	58	50	6	5	do
John Egan & Co.....	do	59	47	5	17	do
Samuel Dickson.....	18 do	60	22	2	15	Township of McNab.
do.....	do	61	2	1	0	do
do.....	do	62	4	1	0	Blithfield.
Isabella Haggart.....	do	63	6½	1	0	Pakenham.
Alexander Snedden.....	28 do	64	19¾	2	8	Olden.
John Browne.....	Sep. 15 do	65	8¾	4	5	Darling, Pakenham and Ramsey.
do.....	do	66	5½	4	0	Pakenham.
do.....	do	67	20	2	10	do
D. & B. Moore.....	do	68	6	1	0	Blithfield.
R. W. Cruise.....	17 do	69	14	1	15	River du Moine.
A. McArthur.....	Oct. 6 do	70	5	2	0	Black River.
do.....	do	71	24	3	0	Township of Bagot and Blithfield.
do.....	do	72	24	3	0	do
do.....	do	73	50	6	5	Admaston.
Alexander Horne.....	do	74	2	1	0	River Madawaska.
do.....	do	75	1	1	0	Constance Creek.
Jas. Hubbell.....	do	76	7¾	4	0	Darling.
Alexander McLaren.....	do	77	17¾	2	3	Lavant.
do.....	do	78	16	2	0	do
do.....	do	79	1¾	1	0	do
C. E. Levy & Co.....	10 do	80	40	5	0	do
				556	9	
			2459¾	3		

do	do	81	40	5	0	River Gaitneau.
H. K. Stewart.....	10 do	82	47	5	17	Township Lichfield.
Merrill, Young & Co.....	11 do	83	3¾	4	0	River Petewavee.
Peter White.....	13 do	84	50	6	5	Township Lanark.
William Rice.....	do	85	6	1	0	do
do.....	do	86	4	1	0	Darling.
William McKey.....	24 do	87	5	1	0	Township Lavant.
McKay & Bros.....	25 do	88	24	3	0	River Gaitneau.
McKay & McKinnon.....	do	89	24	3	0	Township Wakefield.
do.....	do	90	7¾	1	0	do
Austin Russell.....	do	91	4	1	0	do
John Egan.....	26 do	92	27	6	15	Oso.
J. Blood.....	23 do	93	15	3	15	River Bonnechère.
do.....	do	94	2	1	0	Township Olden.
Blood, Bond & Co.....	do	95	5¾	1	0	do
James Wilson.....	do	96	10	1	5	S. Sherbrooke.
R. W. Cruise.....	29 do	97	6	1	0	do
R. Kernahan.....	do	98	5	1	0	Olden, Oso.
do.....	do	99	12½	1	11	Bagot.
J. Coghlan.....	do	100	14	1	11	Waltham
do.....	do	100½	10	2	10	do
John Egan.....	Nov. 14 do	101	14	7	0	Oso and Olden.
A. McDonell.....	do	102	45	5	12	Olden.
C. & R. McDonell.....	do	103	50	6	5	Ottawa, Black River.
John Egan.....	do	104	50	25	0	Waltham and Chichester.
do.....	do	105	20	10	0	Calumet Island.
do.....	do	106	20	10	0	River Bonnechère.
do.....	do	107	15½	15	14	Black River.
do.....	do	108	50	25	0	River Quyon.
do.....	do	109	50	25	0	Deep River.
do.....	do	110	46	23	0	Black River.
do.....	do	111	4¾	1	0	do
Robert Craig.....	19 do	112	2¾	1	0	York River, Madawaska.
Boyd Caldwell.....	do	113	4¾	1	0	River Madawaska.
Louis Brissard.....	22 do	114	21	2	12	do
Alexander Caldwell.....	27 do	115	25	6	5	Township Lanark.
John Egan.....	Dec. 8 do			6	5	do
				556	9	Dalhousie.
			2459¾	3		Litchfield and rear.
						Lavant and Dalhousie.
						River du Moine.

WOODS AND FORESTS—Return of Licenses granted, &c.—(Continued.)

LICENSES GRANTED.

NAMES.	Date.	No.	Area in square miles.	Amount of ground rents.		LOCALITIES.
				£ s. d.		
Brought over.....	1856.		2,459 $\frac{3}{4}$	556	9 3	
John Egan.....	Dec. 8	116	39	4	17 6	River du Moine.
do	do	117	15	1	17 6	do
do	do	118	50	12	10 0	do
do	do	119	42 $\frac{3}{4}$	49	11 8	do
John Egan & Co.....	do	120	8	9	6 8	do
John Egan.....	do	121	42	10	10 0	River Ottawa.
do	do	122	18	9	0 0	do
do	do	123	21	2	12 6	River du Moine.
do	do	124	40	5	0 0	do
E. Cameron.....	1857, do	125	2	2	0 0	Township S. Sherbrooke.
George Bryson.....	Jan. 15	126	9	1	2 6	do Mansfield.
do	do	127	8	1	0 0	do
do	do	128	20	2	10 0	do
do	do	129	8	1	0 0	do
do	do	130	9	1	2 6	Black River.
do	do	131	7	1	0 0	Township S. Sherbrooke.
Moorehouse & Dodds.....	23		9	1	2 6	Township Mansfield and Black River.
Hiram Colton.....			9	1	2 6	Township Bagot.
George Rochester.....			2	1	0 0	do
do			17 $\frac{1}{2}$	2	4 2	do
M. Daniels & Co.....			2	1	0 0	Oso.
David Moore.....			24	3	0 0	River Ottawa.
do			48	6	0 0	do

do			20	2	10 0	Chalk River.
William Hardman.....			9	2	5 0	River Coulonge.
G. W. Usborne.....			50	6	5 0	Coulonge and Black Rivers.
do			30	3	15 0	Township of Pakenham and Fitzroy.
Hilliard & Dickson.....			12	1	10 0	do Ottawa and Chichester.
John Poupere.....			26	3	5 0	River Matawin.
Jas. S. Johnston.....			9	10	10 0	Amable du Fond.
do			36	42	0 0	Township of Oso.
J. M. G. Hall.....			11 $\frac{3}{4}$	1	8 9	Township of Olden.
do			14	16	6 8	River Petawawee.
Robert Skead.....			32 $\frac{3}{4}$	8	2 6	do
do			32	8	0 0	do
do			15	1	17 6	do
do			32	16	0 0	Township Lavant.
do			19 $\frac{3}{4}$	2	8 9	do
do			10	1	5 0	River Sweyo.
Stubbs & Kenny.....			10	2	10 0	do Madawaska.
Geo. & W. Aird.....			48	24	0 0	do
do			48	6	0 0	do
do			24	3	0 0	do
J. & D. Bell.....			15 $\frac{1}{4}$	1	19 2	Deep River and Sheen.
do			10	1	5 0	Chalk River.
do			50	6	5 0	River Ottawa and Maganissippi.
do			50	2	16 3	do
do			22 $\frac{3}{4}$	5	12 6	do
do			45	3	2 6	do
do			25	2	0 0	Maganissippi.
do			8	2	0 0	Township of Stafford.
Playfair & Lees.....			7	8	0 0	Bathurst.
do			3 $\frac{1}{4}$	4	0 0	do Olden.
do			8	4	0 0	do S. Sherbrooke.
James Walker.....			8	1	0 0	Chalk River.
William Moffatt.....			50	12	10 0	River du Moine.
do			50	12	10 0	do
Supple & Moffat.....			50	58	6 8	do
do			50	58	6 8	do
			3,841 $\frac{3}{4}$	1034	14 8	

LICENSES GRANTED.

NAMES.	Date.	No.	Area in square miles.	Amount of ground rents.		LOCALITIES.
				£ s. d.	ground rents.	
Brought over.....			3,841 $\frac{3}{8}$	1,034	14 8	
Supple and Moffatt.....			50	58	6 8	River du Moine.
do.....			50	58	6 8	do
John Egan.....			14	14	0 0	Calumet Island.
John Egan & Co.....			10	11	13 4	Benett's Creek.
John Egan.....			40	40	0 0	River Bonnetiere.
do.....			25	29	3 4	Ottawa and Petewawee.
do.....			11	11	0 0	River Ottawa.
do.....			9	9	0 0	do Madawaska.
do.....			50	58	6 8	do
do.....			25	29	3 4	do
do.....			25	29	3 4	do
do.....			25	29	3 4	do
do.....			25	29	3 4	do
do.....			33	8	5 0	do du Moine.
do.....			50	58	6 8	do
do.....			40	46	13 4	do
do.....			40	46	13 4	do
do.....			50	58	6 8	do
do.....			50	50	0 0	Bear River.
John Egan & Co.....			50	6	5 0	River Ottawa.
John Egan.....			32	37	6 8	do St. Sive.
do.....			43 $\frac{3}{8}$	50	15 0	do
do.....			15 $\frac{3}{8}$	18	1 8	do Petewawee.
do.....			50	58	6 8	Lake Temiscamingue.

do.....			25	29	3 4	do
do.....			50	58	6 8	do
do.....			25	29	3 4	do
H. Lemesurier.....			50	58	6 8	do
do.....			50	58	6 8	River Quinze.
W. H. Tistone.....			50	58	6 8	do
do.....			50	58	6 8	Lake Temiscamingue.
H. L. Routh.....			50	58	6 8	do
do.....			8	8	0 0	do
do.....			50	58	6 8	River Ottawa.
do.....			50	58	6 8	do
do.....			50	58	6 8	do
do.....			16	18	13 4	do Madawaska.
do.....			30	15	0 0	do
John Egan.....			19	2	7 6	do
Danl. McLachlin.....			50	6	5 0	do
do.....			50	6	5 0	do
do.....			50	6	5 0	do
do.....			20	2	10 0	do
do.....			50	6	5 0	do
N. Burwash.....			35	8	15 0	do
D. McLachlin.....			50	6	5 0	do
do.....			50	6	5 0	do
do.....			50	6	5 0	do
do.....			50	6	5 0	do
do.....			50	6	5 0	do
do.....			50	6	5 0	do
do.....			50	6	5 0	do
do.....			50	6	5 0	do
do.....			17	2	2 6	do
Andrew Leamy.....			50	12	10 0	Petewawee.
do.....			50	12	10 0	do du Moine.
do.....			27	3	7 6	do
do.....			42	5	5 0	Ottawa.
Robert Conroy.....			50	6	5 0	do Madawaska.
do.....			50	6	5 0	do
do.....			50	6	5 0	do
do.....			50	6	5 0	do
J. W. McClean.....			2 $\frac{3}{8}$	1	0 0	Township Eardley.
Carried over.....			6,121 $\frac{3}{8}$	2,594	15 6	

WOODS AND FORESTS—Return of Licenses granted &c.—(Continued.)

LICENSES GRANTED.

NAMES.	Date.	No.	Area in square miles.	Amount of ground rents.			LOCALITIES.
				£	s.	d.	
Brought over.....			6,121 $\frac{3}{4}$	2584	15	6	
J. W. McLean.....			2 $\frac{3}{4}$	1	0	0	Township Eardley.
Henry Thomas.....			40	5	0	0	River Madawaska.
do			25	3	2	6	do
do			15	1	17	6	do
H. Mann.....			8	1	0	0	do
Wm. Morris.....			14	1	15	0	Township Blythefield.
do			20	2	10	0	River Petawawee.
do			39	4	17	6	do
Seymour, Whitney & Co.			50	6	5	0	do Madawaska.
H. Muirholland.....			50	6	5	0	Black River.
do			20	5	0	0	do
do			45	11	5	0	do
Edmund Griffin.....			50	6	5	0	River Maganissippi.
Joseph Aumond.....			25	12	10	0	do Petawawee.
do			8	2	0	0	do
do			40	10	0	0	do
do			48	6	0	0	do
do			20	10	0	0	Ottawa.
do			50	12	10	0	do
do			50	12	10	0	do
do			25	3	2	6	Jean de Terre.
Wood, Petry, Poitras & Co.			20	10	0	0	River Ottawa.
do			20	5	0	0	Deep River.
do			36	9	0	0	River Madawaska.

do			25	3	2	6	Black River.
do			50	6	5	0	do
do			25	6	5	0	do
do			50	3	2	6	do
J. J. Harris & Co.....			50	12	10	0	River du Moine.
do			27 $\frac{3}{4}$	6	17	6	do
Chs. McCauley.....			50	6	5	0	Petawawee.
Merrill & Young.....			15	1	17	6	do Coulouge.
E. Johnston.....			15	3	15	0	do Bonnechère.
Marcotte & Poupare.....			30	7	10	0	do Black River.
do			41	10	5	0	do
John Gilmour.....			41	47	16	8	River Desert.
do			25	3	2	6	do
Allan Gilmour.....			20	20	0	0	Lake St. Mary.
do			40	10	0	0	River Desert.
J. Gilmour.....			22	5	10	0	do St. Joseph Gatineau.
Allan Gilmour.....			38	4	15	0	do Contuagama.
do			14	1	15	0	do
J. Gilmour.....			50	12	10	0	do Piekanoek.
do			50	6	5	0	do
do			30	3	15	0	do
Allan Gilmour.....			50	6	5	0	Bazebazna Creek.
do			41 $\frac{3}{4}$	5	3	9	do
do			28 $\frac{3}{4}$	14	0	0	River Gatineau.
do			50	6	5	0	Bazebazna Creek.
do			50	6	5	0	River Gatineau.
do			50	25	0	0	do
do			25	3	2	6	do
do			50	12	10	0	do
Js. Gilmour.....			10	5	0	0	do
do			2	1	0	0	Township Hull.
Allan Gilmour.....			15	15	0	0	Philemon's Creek.
Gilmour & Co.....			50	50	0	0	Creek du Sable.
do			24	3	0	0	River Gatineau.
do			8	2	0	0	Masham & Wakefield.
Carried over.....			8,053 $\frac{3}{4}$	3083	15	11	

WOODS AND FORESTS—Return of Licenses granted, &c.—(Continued.)

LICENSES GRANTED.

NAMES.	Date.	No.	Area in square miles.	Amount of ground rents.		LOCALITIES.
				£ s. d.		
Brought over.....			8,053½	3,083	15 11	
Gilmour & Co.....			45	0	0	Pakatoskin Lake.
do.....			9½	2	7 6	Siag Creek Gatineau.
do.....			8	4	0 0	River Puchagan do
do.....			25	3	2 6	Fish Lake do
do.....			50	12	10 0	River Baskatong.
do.....			23	2	17 6	do do
do.....			11	1	7 6	do do
do.....			25	3	2 6	do do
do.....			20	2	10 0	do do
do.....			32	16	0 0	do do
do.....			4	1	0 0	do do
do.....			36	9	0 0	Township Wakefield.
do.....			2	9	6 8	Rear of Lichfield.
Jas. Gilmour.....			17	4	5 0	Township do
A. Gilmour.....			50	58	6 8	River Jean de Terre.
Gilmour & Co.....			25	25	0 0	do Madawaska.
do.....			25	25	0 0	do do
do.....			25	25	0 0	do do
Wadsworth & Porter.....			50	58	6 8	do Mississippi.
do.....			25	29	3 4	do do
do.....			50	58	6 8	do do
Gilmour & Co.....			50	58	6 8	do do
do.....			20	2	10 0	do do
do.....			40	10	0 0	do do
do.....			25	29	3 4	do do

do.....			40	5	0 0	do do
do.....			50	6	5 0	Highland Creek.
do.....			50	6	5 0	River Madawaska.
do.....			45	5	12 6 8	do do
do.....			50	25	0 0	River Petewawee.
do.....			50	25	0 0	do do
do.....			50	6	5 0	do do
do.....			50	20	8 4	do do
do.....			17½	12	1 8 0	Petewawee & Ottawa.
do.....			42	5	1 5 0 8	do do
do.....			50	6	5 0 0	River Petewawee.
do.....			50	12	10 0 0	do do
do.....			25	3	2 0 6 0	do do
do.....			45	5	12 0 0	do do
do.....			50	6	5 0 0	do do
do.....			50	29	3 0 4 0	do do
do.....			50	29	3 0 4 0	do do
do.....			50	29	3 0 4 0	do do
do.....			50	46	13 4 4	do do
do.....			50	40	0 0 0	do do
do.....			10	11	13 4 0	do do
do.....			36	36	0 0 0	Ottawa and Chichester.
do.....			25	9	6 8	River Amable du Fond.
do.....			8	9	6 8	Ottawa & Mattawa.
do.....			20	23	6 8	Mattawa.
do.....			25	5	12 10 0 0	Ottawa.
do.....			50	6	5 0	do do
do.....			50	29	3 0 4 0	do do
do.....			50	29	3 0 4 0	do do
do.....			48	6	0 0 0	Black River
do.....			13	1	12 6	River-Sooctamata.
do.....			50	6	5 0	do Madawaska.
do.....			50	6	5 0	River Madawaska.
do.....			50	6	5 0	do do
do.....			993½	410	17 7	do do

Carried over. MOORE AND LOVELL & Co. (Company)

## WOODS AND FORESTS—Return of Licenses granted, &amp;c.—(Continued.)

## LICENSES GRANTED.

NAMES.	Date.	No.	Area in square miles.	Amount of ground rents.		LOCALITIES.
				£	s. d.	
Brought over.....			9931 $\frac{1}{2}$	4110	17 7	
Gilmour & Co.....			50	6	5 0	River Madawaska.
do.....			40	5	0 0	do
do.....			50	58	6 8	do
James Skead.....			50	58	6 8	Madawaska & Mississippi.
do.....			42	42	0 0	Madawaska.
do.....			26	25	0 0	Madawaska & Bonnechère.
do.....			11	12	16 8	Madawaska.
Dawson, Skead and McKey.....			50	50	0 0	do
do.....			30	30	0 0	do
do.....			50	12	10 0	do
James Skead.....			50	25	0 0	Amable Dufond.
do.....			50	25	0 0	do
Dawson and Skead.....			41	47	16 8	Ottawa & do
A. Gilmour.....			50	6	5 0	Coulange.
do.....			25	29	3 4	do
do.....			34	39	13 4	do
do.....			50	50	0 0	do
do.....			50	50	0 0	do
W. E. Chamberlain.....			28 $\frac{1}{2}$	33	5 0	Matawin.
Robt. Kenny.....			20	23	6 8	Coulange.
do.....			20	23	6 8	do
J. A. Huntington.....			20	2	10 0	Petawawee.
do.....			10	1	5 0	do
Muir Ewen and Co.....			16	2	0 0	Allumette Island.

J. P. Moffatt.....			50	6	5 0	River Ottawa.
Wood, Peiry, Poitras and Co.....			50	25	0 0	do
J. P. Moffatt.....			34	17	0 0	Ottawa & Chichester.
do.....			7	1	0 0	Chalk River.
McKey and Robertson.....			12	1	10 0	River Madawaska.
do.....			30	3	15 0	do
do.....			30	7	10 0	do
do.....			50	6	5 0	do
Wm. McKey.....			40	10	0 0	Ottawa.
* A. Austin.....			24	8	0 0	do
do.....			16	6	0 0	Township Osgood.
Joseph Armond.....			25	3	2 6	River Ottawa.
W. B. Cumming.....			3	1	0 0	do
Wm. Craig.....			8	8	0 0	Centugamé.
P. P. Harris.....			13 $\frac{1}{2}$	13	13 4	Pickanock.
do.....			11	11	0 0	Blue Sea Creek.
do.....			43	5	7 6	do
do.....			43	5	7 6	do
do.....			50	6	5 0	River Desert.
do.....			50	12	10 0	do
do.....			25	3	2 6	do
do.....			50	25	0 0	Geebo Creek.
do.....			50	25	0 0	Eagle River.
do.....			30	7	10 0	do
do.....			50	12	10 0	do
do.....			50	25	0 0	do
do.....			50	6	5 0	do
do.....			36	18	0 0	do
do.....			50	50	0 0	Turtle Creek.
do.....			25	6	5 0	Eagle River.
do.....			50	12	10 0	Tomasine. do
do.....			50	12	10 0	do
do.....			25	6	5 0	Old Woman's Creek.
do.....			7	2	0 0	Township Hull.
Roderick Ryan.....			25	12	10 0	River Ottawa.
McCoy & Adams.....			4 $\frac{1}{2}$	4	0 0	Township Oso.
Carried over.....			11962 $\frac{1}{2}$	5157	12 7	

WOODS AND FORESTS—Return of Licenses granted, &c.—(Continued.)

Names	Date	No.	Area in square miles	Amount of ground rents	LOCALITIES.
Brought over			11962	£ 58,700	
Roderick Ryan		30	131.8	40	River de Moine.
Michael Cullen		27	32.7	60	do
J. Smith		50	12.1	00	Montreal River.
do		25	12.3	00	do
J. L. McDougall		19	43.5	00	Township Admaston.
do		12	60.5	00	do
do		10	52.0	00	do
Camron & McCauley		25	62.5	00	River Ottawa.
Masson, Bruyere & Co.		8	41.0	00	do
Catherine McCauley		35	62.5	00	do
do		5	53.6	80	Magalloway.
do		16	81.0	00	do
do		20	233.6	80	Ottawa.
do		14	20.0	00	Petewawee.
do		17	20.0	00	Township Wakefield.
do		11	4.0	00	Eardley.
do		173	20.8	40	River Bonnechere.
do		50	25.0	00	Jean de Terre.
do		20	10.5	00	do
do		27	13.15	00	do
do		4	11.0	00	To Liehfield.
do		31	4.0	00	Westmeath.
do		17	22.2	60	Ross.
do		50	50.0	00	Lake Temiscamingue.

Names	Date	No.	Area in square miles	Amount of ground rents	LOCALITIES.
River Coulonge		46	5.15	0	River Coulonge.
do		453	53.1	8	do
do		31	7.15	0	do
do		50	12.10	0	do
do		50	6.15	0	do
do		50	1.5	0	do
do		50	6.5	0	do
do		50	5.15	0	do
do		25	29.3	4	Lake Temiscamingue.
do		16	4.10	0	Chalk River.
do		35	18.15	0	River Petewawee.
do		20	5.0	0	do
do		30	6.15	0	do
do		24	33.0	0	Ottawa & Chalk Rivers.
do		16	54.10	0	Chalk River.
do		36	54.10	0	do
do		12	1.0	0	Township Stafford.
do		15	1.0	0	do
do		31	13.17	3	do
do		23	2.17	3	Indian River.
do		35	24.7	3	do
do		35	31.17	6	Ottawa & Petewawee.
do		50	17.10	0	Indian River.
do		15	17.10	0	River de Moine.
do		31	3.17	6	Chalk River.
do		1233	36.24	5	River Petewawee.
do		50	36.25	0	Lake Temiscamingue.
do		50	6.5	0	River Ottawa & Jacko.
do		50	6.5	0	do
do		50	6.5	0	Lake Temiscamingue.
do		50	2.10	0	Montreal River.
do		50	7.7	3	River Gatineau
do		39	7.6	3	do
do		39	4.17	6	do
do		39	4.17	6	do
do		25	4.10	0	do
do		25	6.5	0	do
do		25	6.5	0	do

Carried over AOOD2. YAD. LOKE212. 150111 986516 121111 121111





## WOODS AND FORESTS—Return of Licenses granted

## DUTIES

## QUANTITY AND

NAMES.	LOCALITIES.	Saw Logs		White Pine.		Tamarac.	
		W. Pine.	Spruce.	Pieces.	Feet.	Pieces.	Feet.
A. J. Russell per McLean Stewart.							
William Morris				1413	62574		
do				1308	85883		
C. & K. McDonell				1261	104858		
John McLean				1030	54139		
W. H. Hurdeman							
Gilmour & Co.				2138	163414		
W. W. Griffin				189	10585		
Walton Smith				492	23243		
do				165	9715		
W. Mohr				107	5926		
W. Thompson				7	456		
Robert Black				740	37945		
Hilliard Dickson				8	1154		
do				4	150		
Peter McArthur				1	38		
Masson, Bruyere, Thomas & Co.							
do				1507	70370		
do				1390	73746		
Danl. McLachlin				1442	65187		
do				1385	63682		
do				1820	85558		
G. Bryson				4	122		
John Supple				1223	69990		
Gilmour & Co.				2384	88937		
Walton Smith				182	9382		
H. & J. Mair				1178	81593		
Masson, Bruyère, Thomas & Co.							
do				1444	64639		
Gilmour & Co.				9	309		
D. O'Meara				913	57898		
McLean & Lakie				19	960		
R. Thomson				151	9941		
A. Renney				3	124		
D. McFarlane				1446	87344		
Masson, Bruyère, Thomas & Co.							
do				829	68598		
W. McConnell				1058	75335		
John Egan & Co.				1084	96946		
Carried over				28334	1631041		

and duties accrued in the several Territories during the year 1856.

## ACCRUED

## DESCRIPTION OF TIMBER.

Oak.		Elm.		Birch.		Other wood.		Cord wood.	Oars.	Shingles.	Staves.		Duties accrued on timber cut.	REMARKS.
Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.				Std.	W. I.		
													£ s. d.	
													130 7 3	
													178 18 6	
													218 9 1	
													113 13 6	
													1 19 2	
													340 10 11	
	1	16											22 1 1	
	1	22											48 17 4	
													20 4 10	
													12 6 11	
													19 0	
	11	248											81 9 10	
	1	23											2 17 10	
	1	25											1 4 8	
													1 7	
													146 12 1	
													153 12 9	
													135 16 2	
													132 13 5	
													178 4 11	
													5 1	
													145 16 3	
													185 5 9	
													35 4 1	
	4	84											169 19 9	
													134 13 4	
													1 14 6	
													120 12 5	
													3 0 6	
													20 14 3	
													0 18 0	
													181 19 4	
													143 3 4	
													157 4 1	
													201 19 5	
	19	418											3423 10 11	



## WOODS AND FORESTS—Return of Licenses granted

## DUTIES

## QUANTITY AND

NAMES.	LOCALITIES.	Saw Logs.		White Pine.		Tamarac.	
		W. Pine.	Spruce.	Pieces.	Feet.	Pieces.	Feet.
A. J. Russell per McLean Stewart—Continued.							
Brought over .....							
Thomas Taylor.....				56915	3373916		
Thomas Bryson.....				596	28024		
Hiram Cotton.....				96	5296		
Benj. McConnell.....				1228	78574		
Gilmour & Co.....				1378	76285		
McConnell & Jolicœur.....				1966	129216		
John Poupore.....				1767	80146		
D. T. Brown Jr.....				231	13485		
Arthur McArthur.....				785	55954		
do.....				1231	51541		
Gilmour & Co.....				1089	78034		
Jas. McFarlane.....				1263	93707		
Hilliard & Dickson.....				333	20200		
A. Dunlop.....				638	36286		
do.....				1052	44600		
J. T. Coughlan.....				1069	56929		
J. L. McDougall.....				576	30020		
D. T. Brown.....				2	124		
A. Bourdages.....				559	41147		
Jos. Aumont.....				4	284		
C. S. Bellows.....				1353	98067		
John Lynch.....				1	35		
do.....				622	37109		
H. & J. Mair.....				1211	66116		
Daniel O'meara.....				1939	124216		
C. & R. McDonnell.....				921	50691		
do.....				1387	93887		
Samuel Dickson.....				1381	89926		
do.....				63	3102		
J. & D. Bell.....				208	10245		
John Foran.....				275	15151		
Alexander McLean.....				5	319		
Joseph Bell.....				446	24324		
James & D. Bell.....				1159	76677		
do.....				1996	65002		
John Poupore.....				355	19567		
do.....				813	38646		
do.....				598	30881		
Carried over.....				87511	5137729		

and duties accrued in the several Territories during the year 1856.

## ACCRUED.

## DESCRIPTION OF TIMBER.

Oak.		Elm.		Birch.		Other Woods.		Cord Wood	Oars.	Shingles.	Staves.		Duties accrued on Timber cut.	REMARKS.
Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.	Cords.			Std.	W. I.		
72	1791	208	6485										£	
1	23	2	58										s.	
35	696												d.	
													7067	6 0
													58	15 6
													15	7 9
													163	13 11
													158	18 7
													269	4 0
													166	19 5
													28	1 11
													116	11 5
													107	7 7
													162	11 5
													195	6 9
14	309	108	3487										58	10 11
1	22	1	44										75	18 4
		5	264										94	0 4
1	40												118	17 1
													62	10 10
													0	5 2
													85	14 6
18	558	3	113										4	11 0
													204	6 2
													0	1 6
													77	6 3
2	53	1	52										138	5 10
													258	15 8
													105	12 2
													195	12 0
													187	6 11
													6	9 3
													21	6 11
1	46	2	34										31	19 11
													0	13 4
													50	13 6
													159	14 11
													135	8 5
8	214												42	2 1
7	181	11	332										83	0 6
													64	6 9
160	3933	342	10896										10773	14 6

WOODS AND FORESTS—Return of Licenses granted and

QUANTITIES

QUANTITY AND

DESCRIPTION OF TIMBER.

NAMES.	LOCALITIES.	Saw Logs.		White Pine.		Tamarac.
		W. Pine.	Spruce.	Pieces.	Feet.	
A. J. Russell per McLean Stewart—Continued.						
Brought over				87511	5137729	
Samuel McKay				1032	59531	
J. & D. Bell				793	5296	
do				1161	61965	
do				588	30558	
A. Horne				1035	65909	
William Price				1091	75832	
J. & W. McLean				43	2306	
Alexander Caldwell				1260	84538	
do				187	12811	
John Egan & Co.				2021	138856	
do				14	600	
James Skead				1185	45271	
do				1093	82423	
do				1527	92030	
John Gillis				24	1238	
John Supple				7	306	
do				654	22475	
do				11	482	
John Conroy				1828	68615	
Benjamin McConnell				1116	70782	
L. E. Babcock				430	24768	
G. W. Aird				1445	90002	
do				1460	124610	
C. & R. McDonnell				1483	102212	
do				1639	117136	
do				1198	111616	
do				1194	104581	
do				1871	75950	
Robert Skead				239	15850	
do				769	69619	
R. Kernaghan				1248	111552	
Elliot Johnston				1061	55407	
Roderick Ryan				1471	117718	
do				1610	111463	
E. Varin				38	1925	
J. P. Moffatt				391	13876	
do				1432	98778	
do				1125	75286	
Carried over				121257	7538567	

duties accrued in the several Territories during the year 1856.

ACCRUED.

DESCRIPTION OF TIMBER.

Oak.		Elm.		Birch.		Other woods.		Cord wood.	Oars.	Shingles.	Staves.		Duties accrued on Timber cut.	REMARKS.
Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.				Std.	W. I.		
160	3933	342	10896										£ s. d.	
													10773	14 6
													124	0 6
													110	6 9
													129	1 11
													63	13 3
													137	12 11
													160	3 1
													6	0 3
													176	9 5
													27	4 2
													289	5 8
													1	8 1
													94	6 4
													171	14 7
													191	14 4
													3	18 2
													0	12 9
													47	2 1
													1	0 1
													142	19 0
													166	4 3
													51	12 0
													187	10 1
													259	12 2
													212	18 10
													244	0 8
													232	10 8
													217	17 7
													158	4 7
													33	0 5
													145	0 10
													232	11 4
													115	8 8
													245	4 11
													232	6 11
													4	5 9
													28	18 2
													205	15 9
													156	16 11
													15782	8 4

Oars £0 5 6.

WOODS AND FORESTS—Return of Licenses granted and

DUTIES

QUANTITY AND

NAMES.	LOCALITIES.	Saw Logs.		White Pine.		Tamarac.	
		W. Pine.	Spruce.	Pieces.	Feet.	Pieces.	Feet.
J. A. Russell per McLean Stewart— <i>Continue!</i>							
Brought over.....				124557	7538567		
W. Morris.....				1546	100977		
Gilmour & Co.....				1366	98288		
do.....				1276	74118		
Gilmour & Co.....				1770	87418		
John Supple.....				1461	73479		
John Egan & Co.....							
C. & R. McDonnell.....				1163	81830		
do.....				1400	92688		
John Egan & Co.....				1575	99051		
do.....				1047	77034		
do.....				120	6541		
Peter White.....				1765	92324		
John Poupore.....				39	1227		
C. & R. McDonnell.....				376	18924		
Wm. Moffatt.....				779	51889		
do.....				769	48835		
Joseph Aumond.....				325	11004		
do.....				1369	54454		
Benj. McConnell.....				288	16583		
Robert Skead.....				391	36337		
R. Thomson.....				1112	101804		
Gilmour & Co.....				1830	110070		
do.....				1919	97260		
C. & R. McDonnell.....				2181	132404		
John Egan & Co.....				968	39679		
do.....				1011	75115		
J. L. McDougall.....				15	658		
Joseph Aumond.....				1341	53200		
John Egan, & Co.,.....				1347	81370		
Robert Conroy.....				1968	98483		
do.....				297	16172		
do.....				37	3195		
do.....				1405	74609		
do.....				1544	87490		
do.....				15	1391		
Ira Masson.....				1627	79200		
Wm. McKay.....				26	1030		
do.....				1649	128411		
Carried over.....				163774	9843159		

duties accrued in the several Territories during the year 1856.

ACCRUED.

DESCRIPTION OF TIMBER.

Oak.		Elm.		Birch.		Other woods.	Cord wood.	Oars.	Shingles.	Staves.		Duties accrued on Timber cut.	REMARKS.
Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.	Feet.	Cords.			Sid.	W. I.		
172	4266	366	11989					44				£ s. d.	
												15782	8 4
												210	7 5
												204	15 4
												154	8 3
												182	2 5
												153	1 8
1	94											0	11 9
1	114	9	413									172	18 3
		1	75									193	8 3
												206	7 2
1	45											160	15 5
												13	12 7
												192	6 10
3	138	7	214									4	6 3
		122	3935									55	16 5
												108	2 1
												101	14 10
												32	8 0
												113	10 8
9	180											35	13 6
												75	14 1
												212	1 10
												229	6 3
												202	12 6
												275	16 10
												82	13 4
												156	9 10
												1	11 4
												110	16 8
												169	10 5
1	22	1	16									205	7 7
												33	13 10
												6	13 2
												155	8 9
												182	5 5
												2	18 0
12	197	2	103									166	13 2
												2	5 0
												267	10 6
200	5056	626	19087				44					20618	3 11

## WOODS AND FORESTS—Return of Licences granted and

## DUTIES

## QUANTITY AND

NAMES.	LOCALITIES.	Saw Logs.		White Pine.		Tamarac.	
		W. Pine.	Spruce.	Pieces.	Feet.	Pieces.	Feet.
A. J. Russell per McLean Stewart—Continued.							
Brought over.....				163744	9843159		
McKay & Robertson.....				1462	127241		
Danl. McLaughlin.....				1595	74074		
do.....				1275	108552		
do.....				1592	73697		
do.....				1120	101228		
do.....				1665	78910		
John Foran.....				4	190		
John Supple.....				2147	84734		
Ira Masson.....				144	8112		
W. J. Alleyn.....				1687	100669		
do.....				1880	97287		
Thos. Mansfield.....				1075	84507		
John Egan, & Co.....				1312	68358		
Saml. Huntington.....				256	12901		
				180588	10863619		
Per A. J. Russell.....		230498		12	840		
Per McLean Stewart.....				180588	10863819		
Total.....		230498		180600	10864659		

duties accrued in the several Territories during the year 1856.

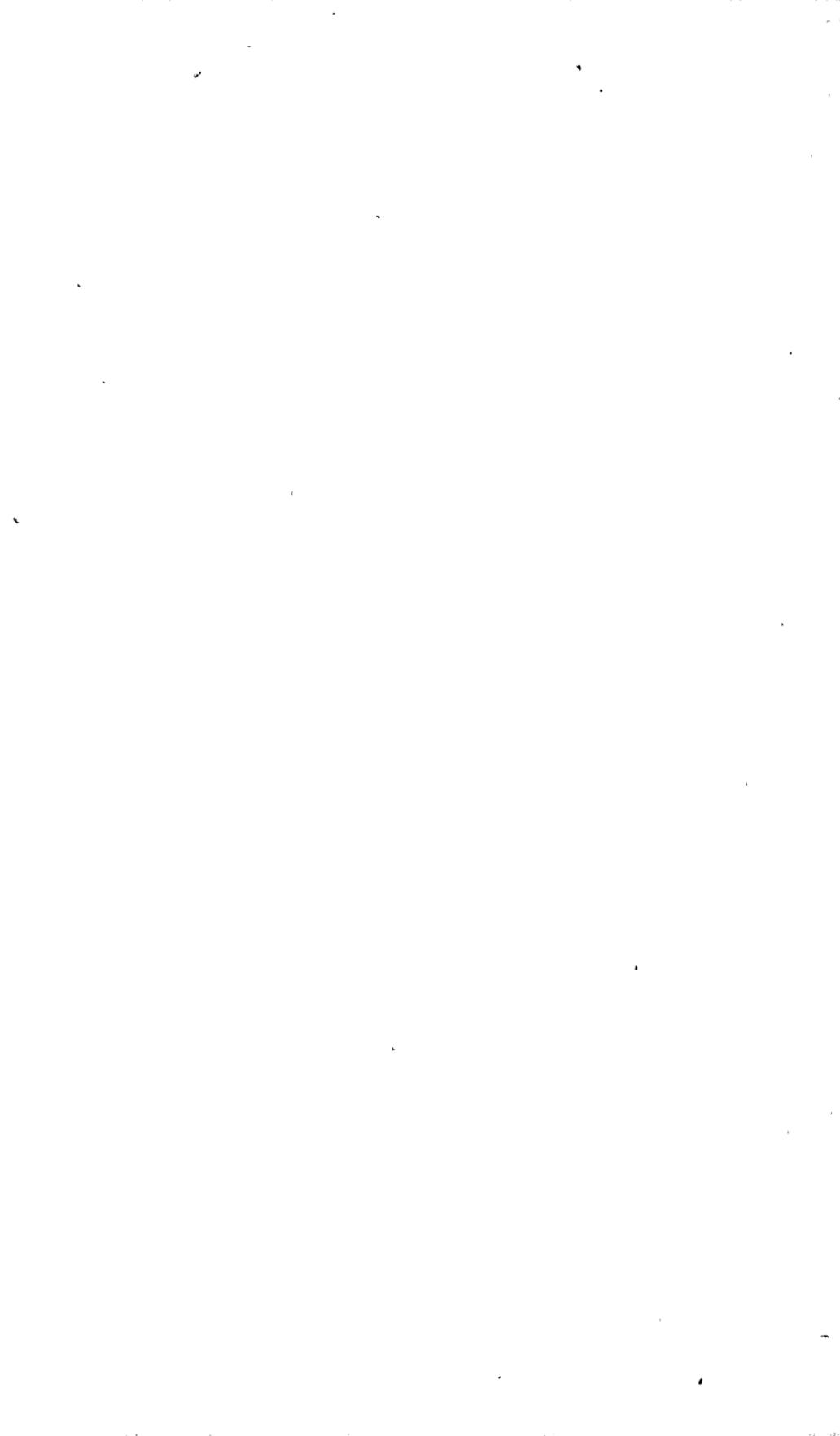
## ACCRUED.

## DESCRIPTION OF TIMBER.

Oak.		Elm.		Birch.		Other woods.		Cord wood.	Oars.	Shingles.	Staves.		Duties accrued on Timber cut.	REMARKS.
Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.				Std.	W. I.		
200	5056	626	19087					44					£ s. d. 20618 3 11	
													265 1 9	
													154 6 5	
													226 8 5	
													153 10 9	
													210 17 10	
													164 13 4	
													7 11	
													176 10 7	
													16 18 0	
													209 14 7	
													202 13 8	
													250 14 1	
													142 8 3	
													26 17 7	
203	5116	1092	37043					44					22819 7 1	
													4805 5 5	Trespass £1 9 7
203	5116	1092	37043					44					22819 7 1	
203	5116	1092	37043					44					27624 12 6	

## RECAPITULATION.

	£	s.	d.	£	s.	d.
Saw Logs—W. Pine No. 230,498 at 5d.	4802	0	10			
Square Timber—W. Pine 10,864,659 feet at 3d.		22634	14	2		
Square Timber—Oak 5,116 at 1½d.		31	19	6		
do do Elm 37,043 at 1d.		154	6	11		
Oars 44		0	5	6		
Trespass £1 9 7 less fractions 4s.		1	5	7		
					27624	12 6
Total ground rents for the year				6103	13	10
do Timber dues.....do				27624	12	6
Total accrued.....£				33728	6	4



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ONTARIO TERRITORY,

J. F. WAY, Agent.

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WOODS AND FORESTS—Return of Licenses granted, &c.—Continued.

LICENSES GRANTED.

NAMES.	Date.	No.	Area in Square Miles.	Amount of Ground Rent.		LOCALITIES.
				£	s. d.	
ONTARIO TERRITORY.						
J. F. Way, Agent.						
A. S. Rathburn & Co.	1856. 1st May	1	19	2	7	To Kenebec.
do	do	2	19	2	7	do
Cook & Harris	do	3	16	3	10	To Hinchinbrooke.
Foy & Anglin.	do	4	7	4	0	do
Wilcocks & Thorne.	do	5	4	1	0	To East Guillimbury.
D. D. Bogart	do	6	25	3	2	To Kaladar.
do	do	7	15	1	17	do
Billa Flint	do	8	23	2	17	To Elziver and Hungerford.
do	do	9	12	1	10	To Elziver.
do	do	10	12	1	10	do
do	do	11	8	2	0	do
do	do	12	25	3	2	To Kaladar.
do	do	13	9	2	5	do
Nelson Lingham	do	14	13	1	12	To Elziver.
do	do	15	50	6	5	do N. W. Corner.
Allen McDonald.	do	16	13	3	5	do
Sanford Baker	do	17	18	18	0	To Methuen.
James Morton	do	18	10	2	10	To Lake.
do	do	19	13	6	10	do

John Cameron	3rd May	20	18	0	0	To Hinchinbrooke.
do	do	21	6	1	0	To Harvey.
do	do	22	9	4	10	do
James Easton	do	23	2	1	0	To Madoc.
do	do	24	6	1	0	To Marmora.
Cook & Brothers	14th May	25	16	2	0	do
do	do	26	6	2	0	To Belmont.
David Roblin	31st May	27	25	3	2	To Kenebec.
do	do	28	20	2	10	do
Isaiah Blood	18th June	29	8	1	0	To Hinchinbrooke.
Donald Ross	30th June	30	3	1	0	To Thorah.
Billa Flint	do	31	6	8	0	To Elziver, N. E. Corner.
James Gallon	12th Sept.	32	11	2	15	To Burleigh.
John Bruce	23rd Sept.	33	3	1	0	To Thorah.
James Bird	1st Oct.	34	1	1	0	To Burleigh.
Denis McAuley	10th Oct.	35	5	4	0	To Harvey.
Isabella Haggart	13th Oct.	36	5	4	0	To Hinchinbrooke.
Geo. Chaffey & Brothers	23rd Oct.	37	16	2	0	To Bedford.
Chaffey & Co.	do	38	6	4	0	To Loughboro'.
Geo. Chaffey & Brothers	do	39	67	4	0	To Pittsburg.
Tett & Chaffey	do	40	18	9	5	To Loughboro'.
G. W. Redmond	do	41	11	3	0	To Methuen.
do	do	42	3	1	0	To Dummer.
do	do	43	1	1	0	To Belmont.
W. A. Scott	27th Oct.	44	9	1	5	To Harvey.
McRae	28th Oct.	45	1	1	0	To Eldon.
David Smith	29th Oct.	46	5	2	0	To Marmora.
do	do	47	5	2	0	To Madoc.
James Cumming	31st Oct.	48	3	1	0	To Lake.
do	do	49	11	1	0	do
do	do	50	11	1	10	do
do	do	51	12	1	12	do
do	do	52	11	1	10	do
do	do	53	10	5	10	do
do	do	54	50	58	6	To N. W. Corner of Lake.
do	do	55	50	50	0	Eels Creek.
do	do	56	50	58	6	N. Boundary of Madoc.
Carried forward			742	334	5	10

## WOODS AND FORESTS—Return of Licenses granted, &amp;c.—Continued.

NAMES.	Date.	No.	Area in Square Miles.	Amount of Ground Rent.	LOCALITIES.
J. F. Way—Continued. Brought over.....	31st Oct.....			£ s. d.	
James Cumming.....	do	57	74 $\frac{1}{2}$	17 10 0	To Burleigh.
do	do	58	14 $\frac{3}{4}$	15 3 4	do
do	do	59	12 $\frac{1}{8}$	8 0 0	do
do	do	60	7 $\frac{1}{6}$	9 0 0	Dummer.
do	do	61	9 $\frac{1}{6}$	25 13 4	To Methuen.
do	do	62	21 $\frac{1}{8}$	16 0 0	To Bexley.
do	do	63	16	50 0 0	Eels Creek.
do	do	64	50	50 0 0	do
A. W. Stuart.....	do	65	50	50 0 0	do
do	do	66	1 $\frac{1}{2}$	4 0 0	To Harvey.
Gilmour & Co.....	do	67	1 $\frac{1}{2}$	50 0 0	To Methuen.
do	do	68	50	50 0 0	To N. E. Angle, Harvey.
do	do	69	6 $\frac{1}{2}$	8 3 4	To Verulam.
A. Gilmour & Co.....	do	70	3 $\frac{1}{2}$	4 13 8	To Fenelon.
do	do	71	7 $\frac{1}{6}$	7 17 6	To Burleigh.
do	do	72	1 $\frac{1}{6}$	2 6 8	To Smith.
do	do	73	9 $\frac{1}{6}$	12 0 0	To Harvey.
do	do	74	30	30 0 0	Beaver Creek.
Watsworth & McCadle.....	do	75	30	30 0 0	do
do	do	76	13	13 0 0	South side.
Péris, Easton, Gilmour & Co.....	do	77	13	13 0 0	do
do	do	78	25	29 3 4	do
do	do	79	50	58 6 8	do
do	do	80	38	19 0 0	To Harvey, N. E.
R. A. Cumming & Townsend.....	do	81	2 $\frac{1}{4}$	2 0 0	To Hinchinbrooke.

A. McDonald.....	do	83	44	11 0 0	To Elziver (rear).
Egerton Perry.....	do	84	46	46 0 0	To North of Harvey.
A. H. Meyers.....	1st Nov.....	85	50	25 0 0	To Madee N. E.
Jos. Cannif.....	do	86	2	4 0 0	To Hungerford.
Jas. Wallis.....	4th Nov.....	87	5 $\frac{1}{2}$	1 0 0	To Summerville.
Jas. Easton.....	10th Nov.....	88	2	1 0 0	To Marmora.
Geo. Kemp.....	do	89	5 $\frac{1}{6}$	6 15 0	To Harvey.
D. Cameron.....	27th Nov.....	90	1 $\frac{1}{2}$	1 0 0	To Thorah.
do	do	91	1	2 0 0	To Eidon.
D. Cameron & Brother.....	do	92	3	1 0 0	Islands in Pigeon Lake.
John Langton.....	17th Dec.....				
J. W. Henry.....	7th Jan.....	95	13 $\frac{1}{2}$	14 0 0	To Harvey.
			1429 $\frac{59}{66}$	976 18 8	





## WOODS AND FORESTS—Return of Licenses granted and

## DUTIES

## QUANTITY AND

NAMES.	LOCALITIES.	Saw Logs		W. Pine.		Tamarac.		Oak.	
		W. Pine	Spuce.	Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.
J. F. Way, Agent— Continued.									
Brought over.....		19948		705	49558				
James Wallis.....	Sommerville.....	4800							
S. M. Detlor.....	Hinchinbrooke.....								
Cook & Brothers.....	Hungerford.....			69	5388				
H. H. Humphries.....	Percy.....							9	261
Hiram Merrill.....	Seymour.....								
Robert Campbell.....	Percy.....			20	1413				
Trespass 50 per ct.....									
Thomas Hill.....	Harvey.....	200							
Trespass 50 per ct.....									
Wm. Francis.....	Harvey.....			84	6806				
Trespass 25 per ct.....									
T. D. McAuley.....	Percy.....			19	1654				
Trespass 50 per ct.....									
Mossem Boyd.....	Ops.....								
Trespass 50 per ct.....									
T. Buck.....	Dummer & Belmont.....			1	92			13	595
Trespass 50 per ct.....									
Interest.....									
G. T. W. Marcellius.....	Hungerford & Sheffield.....			5	443			2	61
Trespass 25 per ct. on Elm on £4 8 2.....									
Charges.....									
Patrick Dessitt.....	Seymour.....							2	57
D. McMillen.....	Belmont.....			15	1054				
Trespass 25 per ct. on W. Pine on £2 3 11.....									
James Easton.....	Marmora.....			544	43338				
John Cameron.....	Harvey.....			15	552				
do.....	do.....			881	70578			2	63
Trespass 25 per ct. on W. Pine on £101 10 5.....									
Cook & Brothers.....	Belmont.....			105	8901				
do.....	do.....			563	44643				
Trespass 25 per ct. on W. Pine on £28 8 4.....									
Cook & Brothers.....	Belmont.....			338	26936				
Trespass 25 per ct. on £34 8 6.....									
Carried over.....		24948	3364	261356				28	1037

## duties accrued in the several Territories during the year 1856.

## ACCRUED.

## DESCRIPTION OF TIMBER.

Elm.	Birch.	Other woods.		Cord wood.	Oars.	Shingles.	Staves.		Duties accrued on Timber cut.	REMARKS.
		Piece.	Feet.				Std.	W. I.		
Pieces.	Feet.	Pieces.	Feet.	Cords.					£ s. d.	
59	1958					25250		7000	678 9 10	
									100 0 0	
								5330	22 4 2	Cut in Trespass.
1	33								11 7 3	
4	126								0 10 6	
8	309								2 18 5	
2	88								3 6 3	
									1 13 1	Trespass.
									4 3 4	
									2 1 8	do
									14 3 7	
									3 10 11	Trespass.
									3 8 11	
									1 14 6	do
60	2650								11 0 10	
									5 10 5	do
80	3217								17 6 4	
									8 13 2	do
									2 2 6	Interest.
25	1058								5 14 4	
									1 2 0	Trespass.
									5 15 7	Charges.
									0 7 2	
20	706								5 2 9	
									0 10 11	Trespass.
6	233								91 5 2	
121	3936								17 11 0	
									147 8 8	
									25 7 7	do
115	4118								35 14 1	
									93 0 2	
									7 2 1	do
									56 2 4	
									8 12 2	do
504	18432					25	25250	5330 7000	1395 1 8	
							500 Rails, 49 Floats.			

WOODS AND FORESTS—Return of Licenses granted and

DUTIES		QUANTITY AND							
NAMES.	LOCALITIES.	Saw Logs.		W. Pine.		Tamarac.		Oak.	
		W. Pine.	Spruce.	Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.
J. F. Way, Agent— <i>Continued.</i>									
Brought over.....		24948		3364	261356			28	1037
A. J. Foley.....	Seymour.....			57	3707				
Trespass 50 per ct.....									
John Cameron.....	Hinchinbrooke.....			43	1609				
G. W. Redmond.....	Belmont and Dummer.....			188	15054				
Trespass 50 o/o on £39 0 7									
George Kempt.....	Ops and Verulam.....			18	1694			8	394
Trespass 50 per ct. on £45									
11 8. Elm and W. Pine.									
George Kempt.....	Verulam.....			5	1223				
Ira J. Cook.....	do.....			31	4083				
Trespass 50 per ct.....									
W. A. Scott.....	Ennismore and Harvey.....			148	11331				
Trespass 50 o/o on £2 11 1									
David Roblin.....	Kenebec.....			187	12726				
W. M. Platt.....	Harvey.....			116	9312				
Trespass 50 per ct.....									
James Easton.....	Hungerford.....			19	1341				
James Sleeper.....	Percy and Monaghan.....			50	3500				
Trespass 50 per ct.....									
Henry Fowlds.....	Asphodel and Percy.....			93	8951				
Trespass 25 per ct.....									
John Gilchrist, Junr.....	Dummer.....			19	2883				
Trespass 50 per ct.....									
David Roblin.....	Kenebec.....	9320							
D. D. Bogart.....	Kalador.....	4500							
do.....	Elziver.....	5502							
do.....	Hungerford.....	2351							
do.....	Sheffield.....	2991							
Trespass 25 per ct.....									
John Haggart.....	Hinchinbrooke.....	410							
N. Lingham.....	Elziver.....	6609							
N. Lingham.....	Grimsthorpe.....	4607							
N. Lingham.....	Madoc & Elziver.....	2167							
Trespass 25 per ct.....									
Wellington Frizzell.....	Sheffield.....	1657							
Trespass 50 per ct.....									
Frs. Walbridge.....	do.....	4100							
Trespass 50 per ct.....									
Carried over.....		56631	4338	338770				36	1421

duties accrued in the several Territories during the year 1856.

ACCRUED.												REMARKS.				
DESCRIPTION OF TIMBER.																
Elm.		Birch.		Other woods.		Cord wood.		Shingles.		Staves.			Duties			
Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.	Cords.	Cars.	Shingles.	Std.	W. I.	accrued on		Timber cut.			
504	18432			500 Rails, &c.				25250	5330	7000	£ s. d.					
17	536										1395	1	8			
											10	0	10			Trespass.
											5	0	5			
											3	7	0			
98	3704										46	15	11			
											19	10	4			Trespass.
234	10093										47	19	8			
											22	15	11			Trespass.
											2	11	0			
											10	12	2			
											5	6	1			Trespass.
											23	12	2			
											1	5	6			Trespass.
											26	10	3			
											19	8	0			
											9	14	0			Trespass.
											2	15	11			
											9	2	7			
14	441										4	11	4			Trespass.
											18	13	0			
											4	13	3			Trespass.
8	297										7	4	11			
											3	12	6			Trespass.
											194	3	4			
											93	15	0			
											114	12	6			
											48	19	7			
											62	6	3			
											15	11	7			Trespass.
											8	10	10			
											137	13	9			
											95	19	7			
											45	2	11			
											11	5	9			Trespass.
											34	10	5			
											17	5	3			Trespass.
											85	8	4			
											42	14	2			Trespass.
888	34027			500 Rails. 49 Floats.		25		25250	5330	7000	2708	3	8			

WOODS AND FORESTS—Return of Licenses granted and

		DUTIES							
		QUANTITY AND							
NAMES.	LOCALITIES.	Saw Logs		W. Pine.		Tamarac.		Oak.	
		W. Pine.	Spruce.	Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.
J. F. Way, Agent— <i>Continued.</i>									
Brought over .....		56631		4338	338770			36	1421
M. Mahor .....	Sheffield .....	800							
Trespass 50 per ct. ....	Bedford .....	3109							
Arnold Fulson .....									
Trespass 50 per ct. on Logs on £64 15 5 .....									
Morton, McKee & Co .....	Bedford .....	6564							
Trespass 50 per ct. on Logs on £136 15 0 .....									
Gilmour & Co. ....	Lake .....	11700							
do .....	Anglesea .....	5500							
W. H. Fredenburgh .....	North Crosby .....	140							
Trespass 50 per ct. ....									
Charles Warner .....	Bedford .....	1000							
Trespass 50 per ct. ....									
Daniels & Co .....	Oso .....	903							
Trespass 50 per ct. ....									
Haggart & Gray .....	Olden .....	542							
Trespass 50 per ct. ....									
Blood Bond & Co .....	Bedford .....	4095							
Trespass 50 per ct. ....									
Blood Bond & Co .....	Hinchinbrooke .....	5183							
Thos. Pool .....	Storrington .....								
A. S. Rathbone & Co. ....	Kenebec .....	10070							
Billa Flint .....	Kaladar & Elziver .....	9693							
Cook & Brothers .....	Tyendinaga .....			17	1190				
Trespass 25 per ct. ....									
Cook & Brothers .....	Belmont .....			8	320				
Trespass 50 per ct. ....									
Cook & Brothers .....	Hungerford .....								
Trespass 25 per ct. ....									
Cook & Brothers .....	Marmora & Sheffield .....				8370				
Trespass 25 per ct. ....									
Cook & Brothers .....	Marmora & Belmont .....			12	420				
Trespass 50 per ct. ....									
Jacob Smith .....	Sheffield .....	300							
Trespass 50 per ct. ....									
Elias McKim .....	Sheffield .....	160							
Trespass 50 per ct. ....									
Brought over .....		128921		4375	349070			36	1421

duties accrued in the several Territories during the year 1856.

		ACCRUED.									
		DESCRIPTION OF TIMBER									
Elm.	Birch.	Other woods.	Cord wood.	Oars.	Shingles.	Staves.	Duties			REMARKS.	
							Std.	W. I.	Timber cut.		
Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.	Std.	W. I.	£	s.	d.	
888	34027	500 Rails, &c.	25		25250	5330	7000	2708	3	8	
		36 Floats at 1s. 3d. ....						16	13	4	Trespass.
		108 Floats at 1s. 3d. ....						8	6	8	Trespass.
								67	0	5	Floats £2 5s.
								32	7	9	Trespass.
								143	10	0	Floats £6 15s.
								68	7	6	Trespass.
								243	15	0	
								114	11	8	
								2	18	4	
								1	9	2	Trespass.
								20	16	8	
								10	8	4	Trespass.
								18	16	3	
								9	8	2	Trespass.
								11	5	10	
								5	12	11	Trespass.
								85	6	3	
								21	6	7	Trespass.
								107	19	7	
		1500 rails at 1s. 3d. 100 .....						0	19	9	Rails.
								209	15	10	
								201	18	9	
200	6800							30	16	3	
								7	14	1	Trespass.
								0	13	4	
								0	6	8	do
102	3468							14	9	0	
								3	12	3	do
								17	8	9	
								4	7	2	do
								0	17	6	
								0	8	9	do
								6	5	0	
								3	2	6	do
								3	6	8	
								1	13	4	do
1190	44295	2000 Rails, &c.	25		25250	5330	7000	4205	17	8	





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**LOWER OTTAWA TERRITORY,**

**C. E. BELLE, Agent.**

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WOODS AND FORESTS—Return of Licenses granted and duties accrued in the several Territories during the year 1856.

LICENSES GRANTED.

NAMES.	Date.	No.	Area in square Miles.	Amount of Ground rents.	LOCALITIES.
LOWER OTTAWA TERRITORY.					
C. E. Belle, Agent.					
Patrick Lee	1856. Jan. 28	1	2	£ s. d.	To Grenville.
Malcolm Dewar	Jan. 29	2	1	0 0 0	To Caledonia.
Alex. Cowan	Feb. 8	25	25	3 2 6	To Harrington.
do	do	25	3 1/2	3 2 6	do
M. Dewar	17	1	0	0 0 0	To Caledonia.
G. W. Eaton	Mar. 3	50	50	6 5 0	Rivière du Lièvre.
do	do	50	7 1/2	1 0 0	do
do	do	50	50	6 5 0	do
Allan Gilmour	7	26	26	3 5 0	Between the Nation and Lièvre Rivers.
James McLean	do	1	1/2	1 0 0	do
G. G. Dunning	Oct. 2	2	4	1 0 0	To Grenville.
A. H. Wilson	11	3	1/2	1 0 0	To Cumberland.
John McLean	do	4	1/2	1 0 0	do
James Mann	16	5	1/2	4 0 0	To Lochaber.
P. McDougall	17	6	1/2	1 0 0	To Cumberland.
John Cameron	18	7	3	1 0 0	do
John Canil	24	8	4 1/2	1 0 0	To Cambridge.
Peter Cockburn	28	9	1/2	1 0 0	To Russell.
Patrick Lee	29	10	6	1 0 0	To Grenville.
Anthony Cullen	do	11	20	2 10 0	To Templeton.
John McLaurin	Nov. 3	12	1 1/2	2 0 0	do

John A. Perkins	do	13	22 1/2	2 16 3	do
do	do	14	1 1/2	1 0 0	To Buckingham.
John McLean	do	15	1 1/2	1 0 0	To Russell.
D. McDonald	4	16	16	2 0 0	To Caledonia.
Thomson & Co.	10	17	4 1/2	1 0 0	To Templeton.
John McLean	20	18	1/2	1 0 0	To Ang. Grenville.
Robert Blayney	23	19	1 1/2	1 0 0	To Caledonia.
1857.					
Hugh O'Neil	Jan. 2	20	1 1/2	1 0 0	To Cambridge.
R. Helmer	4	21	1	1 0 0	To Russell.
A. Ashfield	do	22	1 1/2	1 0 0	do
Scallon, Leprohon and Delanaudières	14	23	23 23 1/2	5 5 0	River L'Assomption.
do	do	24	24 24 1/2	5 5 0	do
E. Scallon	do	25	50	6 5 0	do
do	do	26	26 26 1/2	6 5 0	do
do	do	27	27 27 1/2	24 0 0	do
do	do	28	12	12 0 0	do
Scallon, Leprohon and Delanaudières	do	29	36	13 10 0	do
E. Scallon	do	30	10	1 5 0	River L'Achigan.
A. Gilmour	30	31	25	6 5 0	River Petite Nation.
do	do	32	20	5 0 0	do
W. Stewart	do	33	35	4 7 6	do
Peter Leech	do	34	25	3 2 6	do
do	do	35	11 1/2	2 16 3	do
A. Gilmour	do	36	50	6 5 0	do
do	do	37	50	58 5 8	do
do	do	38	50	12 10 0	do
do	do	39	22 1/2	2 16 3	do
James Gilmour	do	40	50	12 10 0	do
A. Gilmour	do	41	27 1/2	32 1 8	do
Peter Leech	do	42	50	25 0 0	do
Allan Gilmour	do	43	25	6 5 0	do
S. J. Dawson	do	44	30	7 10 0	do
A. Gilmour	do	45	35	4 7 5	do
do	do	46	35	17 10 0	do
do	do	47	50	6 5 0	do
do	do	48	26	3 5 0	do
				352 9 1	
Carried over.				1216 2/3	

WOODS AND FORESTS—Return of Licenses granted, &c.—Continued.

LICENSES GRANTED.

NAMES.	Date.	No.	Area in sq're miles	Amount of Ground rents.		LOCALITIES.
				£	s. d.	
C. E. Belle, Agent—Continued.	1857.		1216 <sup>23</sup> / <sub>33</sub>			
Brought over.....	Jan. 30	49	20	352	9 1	River Blanche.
A. Gilmour.....	do	50	27 <sup>1</sup> / <sub>2</sub>	2	10 0	do
do	do	51	28 <sup>1</sup> / <sub>2</sub>	3	9 5	do
do	do	52	33	3	11 11	do
do	do	53	48	4	2 6	do
do	do	54	25	6	0 0	do
Gilmour & Co.....	do	55	36	12	10 0	do
Peter McGill and J. H. Dorwin.....	31	56	8	9	0 0	do
do	do	57	49	4	0 0	River Lacouarreau.
do	do	58	50	49	0 0	do
do	do	59	25	25	0 0	do
G. W. Eaton for Heirs Bowman.....	do	60	25	3	2 6	River L'Assomption.
do	do	61	21	2	12 6	River Lievre.
do	do	62	22	2	15 0	do
do	do	63	40	5	0 0	do
do	do	64	50	6	5 0	do
do	do	65	50	6	5 0	do
do	do	66	50	6	5 0	do
do	do	67	50	6	5 0	do
do	do	68	50	6	5 0	do
do	do	69	50	12	10 0	do
do	do	70	50	12	10 0	do
do	do	71	50	25	0 0	do
do	do	72	50	25	0 0	do
do	do	73	25	3	2 6	do
do	do	74	25	3	2 6	do
do	do	75	50	50	0 0	do
do	do	76	50	50	0 0	do
do	do	77	50	50	0 0	do

do	do	78	24	0	0 0	do
do	do	79	50	0	0 0	do
do	do	80	25	6	5 0	do
do	do	81	50	6	5 0	do
do	do	82	50	6	5 0	do
do	do	83	7 <sup>1</sup> / <sub>2</sub>	1	0 0	do
do	do	84	12	1	0 0	do
do	do	85	38	4	15 0	do
do	do	86	46	5	15 0	do
do	do	87	25	3	2 6	do
do	do	88	25	3	2 6	do
do	do	89	43	5	7 6	do
do	do	90	15	1	17 6	do
do	do	91	25	3	2 6	do
do	do	92	20	2	10 0	do
do	do	93	46	5	15 0	do
do	do	94	47	23	10 0	do
do	do	95	47 <sup>1</sup> / <sub>2</sub>	23	15 0	do
do	do	96	50	25	0 0	do
do	do	97	37 <sup>1</sup> / <sub>2</sub>	18	15 0	do
do	do	98	50	6	5 0	do
do	do	99	13	1	12 6	do
do	do	100	25	3	2 6	do
do	do	101	15	1	17 6	do
do	do	102	9	4	10 0	do
do	do	103	50	6	5 0	do
do	do	104	47	23	10 0	do
do	do	105	11 <sup>1</sup> / <sub>2</sub>	1	8 9	do
do	do	106	50	12	10 0	River Rouge.
do	do	107	24	6	0 0	do
do	do	108	3	1	0 0	do
do	do	109	5	1	0 0	do
do	do	110	15	1	17 6	do
do	do	111	15	3	15 0	do
do	do	112	20	5	0 0	do
do	do	113	7 <sup>1</sup> / <sub>2</sub>	3	0 0	do
do	do	114	12	2	0 0	do
do	do	115	25	6	5 0	do
Total			3405 <sup>1</sup> / <sub>2</sub>	1103	19 8	

## WOODS AND FORESTS—Return of Licenses granted and

## DUTIES

## QUANTITY AND

NAMES.	LOCALITIES.	Saw Logs.		White Pine.		Tamarac.	
		W. Pine.	Spruce.	Pieces.	Feet.	Pieces.	Feet.
LOWER OTTAWA TERRITORY.							
C. E. Belle, Agent.							
A. McDonald	Lochaber	886					
P. M. Gauvern	Alfred			21	976		
G. M. Bradford	Cumberland			115	5638		
A. Linck	do			45	2000		
J. McCuaig	Plantagenet						
Jos. St. Germain	Lochaber			16	800		
James McMorriss	Kilkenny	115					
Louis St. Jean	Rawdon		50				
J. Sawyer	Williamsburgh						
S. Tucker	Clarence			100	5000		
do	do						
Thomas Blaney	Caledonia						
G. G. Dunning	do			40	2000		
H. Dunning	Buckingham			4	176		
do	do			43	840		
J. McGillevary	Lochaber						
J. L. Campbell	Templeton	300					
A. Laframboise	Buckingham			40	1440		
do	do			19	720		
P. Rivest	Cumberland						
S. Tucker	Clarence			7	350		
P. Cockburn	Cambridge	800					
D. Morrison	Lochiel Gore	247					
Trespass, 50 per cent.							
P. Garvey	E. Hawkesbury	334					
D. McCuaig	do	20					
J. McDonald	Lochaber	320		9	442		
A. Darragh	N. Plantagenet			40	1880		
D. McLean	do			30	1000		
L. Laviolette	Lochaber			23	1060		
do	do						
Gilmour & Co.				117	4873		
J. A. Perkins	Templeton	2782					
A. St. Germain	Lochaber			20	820		
J. Dehert	do			20	820		
J. Paquette	do			90	3690		
Carried over		5304	50	799	34525		

## duties accrued in the several Territories during the year 1856.

## ACCRUED.

## DESCRIPTION OF TIMBER.

Oak.	Elm.		Birch.		Other woods.		Cord wood.	Oars.	Shingles.	Staves.	Duties accrued on Timber cut.	REMARKS.
	Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.						
											£ s. d.	
											8 0 10	
											2 0 8	
											11 14 11	
											4 3 4	
		61	208								0 17 4	
											1 13 4	
											2 7 11	
											0 10 5	
					150	2082	Cedar	s.			4 6 9	Cedar at ½d.
											10 8 4	
		74	2220								9 5 0	
					80	1200					2 10 0	Cedar at ½d.
											4 3 4	
											0 7 4	
											1 15 0	
					154						3 0 0	Cedar for £3 0 0.
											6 5 0	
											3 0 0	
											1 10 0	
							Floats.				6 0 0	Floats
											0 14 7	
											16 13 4	
											5 2 11	
											2 11 5	Trespass.
											6 19 2	
											0 8 4	
					3	147					8 4 0	
											3 18 4	
											2 1 8	
					2	76					2 10 6	
							1	51			0 2 2	Basswood.
					22	475					12 2 7	
											57 19 2	
											1 14 2	
											1 14 2	
											7 13 9	
											214 9 9	
					162	3126						
							231	3333				
							154	rn'd.				

WOODS AND FORESTS—Return of Licenses granted and

DUTIES

QUANTITY AND

NAMES.	LOCALITIES.	Saw Logs.		White Pine.		Tamarac.	
		W. Pine.	Spruce.	Pieces.	Feet.	Pieces.	Feet.
C. E. Belle, Agent— <i>Continued.</i>							
Brought over. ....		5304	50	799	34525		
J. Paquette. ....	Lochaber .....						
do .....	do .....						
C. Bertrand .....	Buckingham .....			22	902	3	123
J. B. Trottier .....	Alfred .....			50	2050		
E. Scallon .....	River Assomption. ....	3353					
Scallon & Leprohon. ....	do .....	4270					
P. McMartin .....	Cambridge. ....	1000					
Jos. Dufresne .....	Kilkenny .....	414					
A. Foubert. ....				105	4515		
G. B. Hall. ....	North River .....	3024	125				
G. M. Bradford .....				109	6765		
do .....				11	312		
J. B. Paquette. ....				7	276		
P. McMartin .....				11	476		
do .....							
do .....				3	130		
M. Quesnel .....				69	2628		
J. & F. McGauren. ....		186		71	2854		
M. Beaudry. ....				529	15888		
J. Gilchrist .....							
Hamilton Brothers. ....	River Rouge. ....	3490					
G. W. Eaton .....	River Lièvre .....	48064					
Gilmour & Co. ....	River Petite Nation .....	19664					
Thomson & Co. ....	River Lièvre .....	40286					
W. Dunning & Son. ....	To Cumberland. ....			105	5350		
J. B. Grier .....	do .....			101	4956		
		129055	175	1992	81627	3	123
Collections per McLean Stewart.							
William Russell .....				4	242		
Scallon & Corriveau .....				396	24957		
J. Taylor .....				19	1050		
A. McMillan .....				3	143		
Carried over. ....				422	26392		

duties accrued in the several Territories during the year 1856.

ACCRUED.

DESCRIPTION OF TIMBER.

Oak.	Elm.		Birch.		Other wood.		Cord wood.	Oars.	Shingles.	Staves.	Duties accrued on Timber cut.	REMARKS.
	Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.						
		162	3126		485	3333					£ 214 9 9	
		1	41			41					0 3 5	[each.
											2 11 3	Round cedars 1s 3d
		2	82								2 7 10	
											4 12 3	
											69 17 1	
											88 19 2	
											20 16 8	
											8 12 6	
											9 8 1	
											64 6 1	
											14 1 10	
		22	859								4 4 7	
											0 11 6	
											0 19 7	
		41	1111								4 12 7	
											0 5 5	
		1	20								5 11 2	
		90	7	245							11 8 1	
		258	40	1121							33 2 0	
											6 5 8	
											72 14 2	
											1001 6 8	
											409 13 4	
											839 5 10	
		2	580		307	Cedars					16 19 2	Cedars £2 3s. 9d.
			27	653	224						21 5 0	“ 8 4s. 2d.
		41	928 3 3	7258	231	3333					2928 10 8	
					726							
											0 10 1	
											51 19 11	
											2 3 9	
			2	63							0 11 3	
			2	63							55 5 0	

## WOODS AND FORESTS—Return of Licenses granted and

## DUTIES

## QUANTITY AND

NAMES.	LOCALITIES.	Saw Logs.		White Pine.		Tamarac.	
		W. Pine.	Spruce.	Pieces.	Feet.	Pieces.	Feet.
C. E. Belle per McLean Stewart—Continued.							
Brought over.....				422	26392		
C. Johnson.....				1	36		
George Morgan.....				82	4741		
John Cullen.....				239	16311		
J. McKinley.....				18	1148		
John Cockburn.....							
do.....				109	4828		
L. Dellaboughs.....				35	1834		
A. & D. McDonald.....				2	96		
G. McBean.....				21	900		
J. McLean.....				151	6393		
J. McCullin.....							
L. McDonnell.....				22	970		
George Campbell.....				5	395		
A. Kemble.....				114	7215		
P. McDougall.....				3	123		
McLarent King.....				196	11072		
Adam Baker.....				1	50		
Jos. Weegan.....							
Charles Dallen.....				184	9961		
J. Cameron.....				64	4389		
Ira Monk.....				9	553		
Adam Linch.....				74	5246		
H. Franklin.....				212	10186		
James Quinn.....				49	3450		
Stout & McKinnon.....				104	5445		
George Brush.....				16	909		
H. O'Neil.....							
D. & J. Cameron.....							
J. M. Read.....				240	11181		
Pat. Grant.....							
Geo. Morgan.....				1	97		
P. Cockburn.....				207	10410		
McNee & Holmes.....							
A. McBean.....				18	872		
H. Dunning.....							
Carried over.....				2599	145203		

## duties accrued in the several Territories during the year 1856.

## ACCRUED.

## DESCRIPTION OF TIMBER.

Oak.	Elm.	Birch.	Other woods.	Cord wood.	Oars.	Shingles.	Staves.	Duties accrued on Timber cut.	REMARKS.
								£ s. d.	
								55 5 0	
								0 1 6	
								10 12 7	
								33 19 8	
								2 15 7	
								6 11 4	
								1 6 6	
								10 8 0	
								23 0 10	
								0 4 0	
								4 11 6	Oars £2 14s. 0d.
								14 12 10	
								0 1 10	
								2 3 6	
								0 16 6	
								25 0 7	
								2 14 3	
								23 1 4	
								7 15 5	
								0 14 6	
								20 15 2	
								12 0 0	
								1 9 7	
								10 18 7	
								29 1 5	
								7 12 2	
								12 12 1	
								2 3 0	
								3 0 9	
								5 2 1	
								39 16 11	
								0 7 11	
								0 4 1	
								28 6 5	
								0 3 4	
								2 6 9	
								2 4 9	
								404 2 3	

## WOODS AND FORESTS—Return of Licenses granted and

## DUTIES

## QUANTITY AND

NAMES.	LOCALITIES.	Saw Logs.		White Pine.		Tamarac.	
		W. Pine.	Spruce.	Pieces.	Feet.	Pieces.	Feet.
C. E. Belle per McLean Stewart— <i>Continuel.</i>							
Brought over .....				2599	145263		
J. Jordan .....				11	520		
R. McLellan .....							
J. Jordan .....							
J. Franklin .....				2	75		
J. McGackey .....				4	148		
M. McMillan .....				534	23299		
R. Stewart .....				39	2136		
J. Gandy .....				76	3830		
M. Dewar .....				95	4939		
Alex. Robertson .....				1	44		
P. Cockburn .....							
A. & J. McDonell .....				114	6591		
G. J. Browse .....				4	170		
Adam Link .....							
R. McGillis .....				5	244		
J. Roddy .....				16	711		
A. Wilson .....				145	9107		
H. D. Ackert .....				67	3369		
D. McDonald .....				121	4552		
R. McLellan .....				21	1077		
do .....							
H. Cameron .....				16	807		
McMartin & Co. ....				1	55		
M. McMillan .....				39	1826		
Geo. E. Cooke .....				2	61		
J. S. Whitcomb .....				142	7960		
do .....				168	9417		
A. Foubert .....				57	3070		
do .....				55	1320		
G. G. Dunning .....				835	48783		
Gilmour & Co. ....				1496	99190		
do .....				2960	142627		
A. McMillan .....							
D. McRae .....							
A. R. McMillan .....							
W. R. McGillis .....				245	14221		
Thomas Munroe .....							
Carried over .....				9870	535352		

## duties accrued in the several Territories during the year 1856.

## ACCRUED.

## DESCRIPTION OF TIMBER.

Oak.	Elm.		Birch.	Other woods.		Card woor.	Oars.	Shingles.	Staves.	Duties accrued on Timber cut.	REMARKS.
	Pieces.	Feet.		Pieces.	Feet.						
22	553	695	22899				43			£ 404 2 3	
1	76									1 1 8	
		49	1251							0 9 6	
		7	191							5 4 3	
		1	41							0 19 1	
5	144	91	2476							0 9 7	
		2	63							59 15 2	
1	30	18	338							4 14 3	
		70	2235							9 11 6	
		21	762							19 12 1	
		17	514				293			3 5 4	Oars £1 16s. 7d.
		8	273							14 17 5	
							360			0 7 1	
										2 5 0	Oars £2 5s. 0d.
2	49	32	981							0 10 2	
1	35									5 17 7	
										19 3 11	
										7 0 5	
		294	7612							41 4 0	
2	119	79	2684				21			14 6 0	Oars 2s. 8d.
		7	2167							9 0 7	
1	23	6	2274							11 6 1	
1	43	166	5985				186			26 9 8	Oars £1 3s. 3d.
		7	3107							16 15 0	
12	277	4	1689							8 17 11	
		2	74							16 17 10	
										19 12 5	
		11	309				360			9 18 9	Oars £2 5s. 0d.
										2 15 0	
		6	151							102 5 3	
										206 12 11	
		52	1536							303 10 9	
							15			0 1 11	Oars 1s. 11d.
							13			0 1 8	Oars 1s. 8d.
		6	241							1 0 1	
2	52	8	283							31 2 8	
							360			2 5 0	Oars £2 5s. 0d.
50	1401	1807	60136				2040			1387 9 2	

## WOODS AND FORESTS—Return of Licenses granted and

## DUTIES

## QUANTITY AND

NAMES.	LOCALITIES.	Saw Logs.		White Pine.		Tamarac.	
		W. Pine.	Spruce.	Pieces.	Feet.	Pieces.	Feet.
C. E. Belle per McLean Stewart— <i>Continued.</i>							
Brought over.....				9870	535352		
Gilmour & Co.....				497	27747		
Patrick Lee.....				353	17018		
Jno. McCuaig.....				376	18697		
D. McGregor.....				1	46		
A. Cullen.....				575	31152		
E. McGregor.....				42	2256		
E. Varin.....							
Trespass, 50 per cent.....							
Total per McL. Stewart.....				11714	632268		
“ “ himself.....		129055	175	1992	81627	3	123
		129055	175	13706	713895	3	123

## RECAPITULATION—STEWART:

White Pine, 632,268 ft. at ½d.....	£1317 4 6
Oak, 1,512 ft. at 1½d.....	9 9 0
Elm, 73,611 ft. at 1d.....	306 14 3
Oars, 2374 for.....	14 16 0
Trespass.....	0 9 4
Fractions.....	0 3 6
	<u>£1648 16 7</u>

## duties accrued in the several Territories during the year 1856.

## ACCRUED.

## DESCRIPTION OF TIMBER.

Oak.		Elm.		Birch.		Other woods.		Cord wood.	Oars.	Shingles.	Slaves.	Duties accrued on Timber cut.	REMARKS.
Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.	Cords.		Sid.	W. I.		
50	1401	1897	60136						2040			£ 1387 9 2	
		10	316									57 16 2	
7	111	242	8511						184			36 16 8	Oars £1 3s. 0d.
		99	3039									76 5 3	
												12 15 2	
		57	1609									64 18 0	
									150			11 8 1	Oars 18s. 9d.
												0 18 9	Trespass 9s. 4d.
												0 9 4	
57	1512	2305	73611						2374			1648 16 7	
41	928	303	7258			957	3333					2928 10 8	
98	2440	2608	80869			957	3333		2374			£4577 7 3	

## RECAPITULATION—BELLE:

Saw Logs: White Pine, 129,055 at 5d. £2688 12 11
“ Spruce, 175 at 2½d. 1 16 6
Sq. TIMBER: W. Pine, 81,627 ft. at ½d. 170 1 2
“ Tamarac, 123 ft. at 1d. 0 10 3
“ Oak, 928 ft. at 1½d. 5 16 0
“ Elm, 7,253 ft. at 1d. 30 4 10
“ Cedars, 3,333 ft. at ½d. 6 18 11
Floats, &c. 21 19 2
Trespass £2 11s. 5d., less fractions 6d. 2 10 11

2928 10 8

Total Ground Rents for the year.....  
Timber Dues.....

1103 19 8  
4577 7 3

Total accrued.....

£5681 6 11



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ST. MAURICE TERRITORY,

O. WELLS, Agent.

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WOODS AND FORESTS—Return of Licenses granted and duties accrued in the several Territories during the year 1856.

NAMES.	Date.	No.	Area in square miles.	Amount of ground rents.	LOCALITIES.
<b>ST. MAURICE TERRITORY.</b>					
O. WELLS, Agent.					
G. W. Philips, Agent, St. Maurice Lumber Company	1856.	1	50	£ 0 10 0	No. 1, E.
do	November 1	2	50	6 10 0	do 1, W.
do		3	50	0 5 0	No. 5, W.
do		4	30	0 5 0	do 5, E.
do		5	50	0 5 0	No. 2, N. W.
G. Baptist		6	50	10 0 0	No. 6, E.
N. F. Draper, Agent, Hunterstown Lumber Company		7	20	0 10 0	No. 2, S.
do		8	50	1 5 0	No. 3, S.
John Broster		9	50	0 5 0	No. 4, S.
do		10	20	1 2 6	No. 2, N.
R. A. Seymour		11	50	56 0 0	No. 3, N.
W. Demers	Feb. 1, 1857.	12	50	9 5 0	No. 3, N.
do		13	10	2 10 0	To Alton.
do		14	15	1 17 6	do
do		15	50	12 10 0	Rear Baiscan,
do		16	50	6 5 0	Colbert R. Noire,
C. E. Dunn		17	50	25 0 0	Baiscan,
Trustees of Estate W. Newhouse,		18	50	25 0 0	River Pierre,
W. Price & Co.		19	50	25 0 0	do
do		20	50	6 5 0	Baiscan,
do		21	50	6 5 0	do
do		22	50	6 5 0	Rear do
do		23	3	1 0 0	To Radnor.
do		24	50	15 0 0	St. Maurice,
N. F. Draper, Agent, Hunterstown Lumber Company		25	30	3 15 0	do
do		26	25	3 2 6	River du Loup,
do		27	30	7 10 0	do
do		28	25	3 2 6	do
do		29	40	5 0 0	do

do		30	50	6 5 0	No. 4, W.
do		31	30	3 15 0	No. 3, W.
do		32	35	4 7 6	No. 2, W.
do		33	25	3 15 0	No. 1, W.
do		34	25	6 5 0	No. 1, W.
do		35	35	63 0 0	Rear River du Loup,
A. Gilmour & Co.		36	36	70 0 0	Matawin,
do		37	50	37 0 0	do
G. W. Philips, Agent, St. Maurice Lumber Company		38	50	37 0 0	Rear St. Maurice,
do		39	50	71 0 0	Rear Rat River,
do		40	50	30 0 0	Rat River,
do		41	50	30 0 0	Mekinak,
do		42	12	17 15 2	Bastonals,
G. Pemberton, Trustee Estate, J. B. Hall		43	50	37 0 0	Rear St. Maurice,
do		44	50	80 0 0	St. Maurice,
do		45	50	37 0 0	Croche River,
do		46	25	27 5 5	Matawin,
do		47	50	22 0 0	St. Maurice, N. 3,
do		48	50	37 0 0	do
Geo. Baptiste		49	50	37 0 0	River Croche,
do		50	50	37 0 0	St. Maurice,
do		51	50	37 0 0	do
do		52	50	37 0 0	do
do		53	30	22 4 0	Matawin,
do		54	35	25 18 0	do
do		55	20	14 16 0	do
do		56	20	14 16 0	do
do		57	50	66 0 0	do
do		58	50	37 0 0	Mekinak,
do		59	40	29 12 0	Rat River,
do		60	25	3 2 6	Shawinigan.
do		61	12½	1 11 3	do
do		62	20	5 0 0	Caxton.
do		63	50	37 0 0	St. Maurice,
do		64	50	37 0 0	do
do		65	50	37 0 0	Vermillion,
do		66	59	37 0 0	do
Total			2628½	1414 17 10	

WOODS AND FORESTS—Return of Licenses granted and

DUTIES

QUANTITY AND

NAMES.	LOCALITIES.	Saw Logs.		White Pine.		Tamarac.	
		W. Pine	Spruce.	Pieces.	Feet.	Pieces.	Feet.
<b>ST. MAURICE TERRITORY.</b>							
O. WELLS, Agent							
Pemberton	St. Maurice	2100					
Davidson	Croche	3263					
Trustees of Estate of G. B. Hall.		1500					
	Rear do	1100					
do	St. Maurice	426					
do	do	17 28	162				
W. Price & Co.	Batiscan	1250	366				
do	do		2500				
do	Rear do	204	875				
do	St. Maurice	806	625				
G. W. Philips, Agent, St. Maurice Lumber Company		7212					
	Rear Rat River	4297					
do	Rat River	5110					
do	Mekinak	5748					
do	Bastonais	2640					
do	Rear Matawin	2615					
do	do St. Maurice	1839					
N. F. Draper, Agent, Hunterston Lumber Company		2186					
	River du Loup	928					
do	do	1186					
do	do	1115					
do	do	3839					
do	do	1452					
do	do	1420					
do	do	1064					
do	do	1233					
Geo. Baptist	Shawinigan	2082	2760				
do	St. Maurice	1200					
do	Matawin	2060	369				
do	do	560					
do	do	840					
do	do	1040					
do	do	2147					
do	St. Maurice	2075					
do	do	1866					
do	do	3340					
do	Mekinak	674					
Carried over		74145	7656				

duties accrued in the several Territories during the year 1856.

ACCRUED.

DESCRIPTION OF TIMBER.

Oak.		Elm.		Birch.		Other woods.		Cord wood.		Oars.		Shingles.		Staves.		Duties accrued on Timber cut.	REMARKS.
Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.	Cords.				Std.	W. I.	£	s.		
																	£ 43 15 0
																	67 19 7
																	31 5 0
																	22 18 4
																	8 17 6
																	37 13 9
																	29 17 1
																	26 0 10
																	13 7 3
																	23 6 1
																	150 5 0
																	89 10 5
																	106 9 2
																	119 15 0
																	55 0 0
																	54 9 7
																	38 6 3
																	45 10 10
																	19 6 8
																	24 14 2
																	23 4 7
																	79 19 7
																	30 5 0
																	29 11 8
																	22 3 4
																	25 13 9
																	72 2 6
																	25 0 0
																	46 15 0
																	11 13 4
																	17 10 0
																	21 13 4
																	44 14 7
																	43 4 7
																	38 17 6
																	69 11 8
																	14 0 10
																	1624 8 9

Jesuits' Lands.

## WOODS AND FORESTS—Return of Licenses granted and

## DUTIES

## QUANTITY AND

NAMES.	LOCALITIES.	Saw Logs.		White Pine.		Tamarac.	
		W. Pine.	Spruce.	Pieces.	Feet.	Pieces.	Feet.
O. Wells, Agent— <i>Continued.</i>							
Brought over.....		74145	7656				
Geo. Baptist.....	Rat River.....	3174					
Edward Quinn.....	St. Maurice.....			550			
do.....	do.....			1020			
do.....	Vermillion.....			75			
do.....	do.....			320			
W. Demers.....	Colbert.....	910	1540				
Total.....		78229	9196	1965	84340		

## duties accrued in the several Territories during the year 1856.

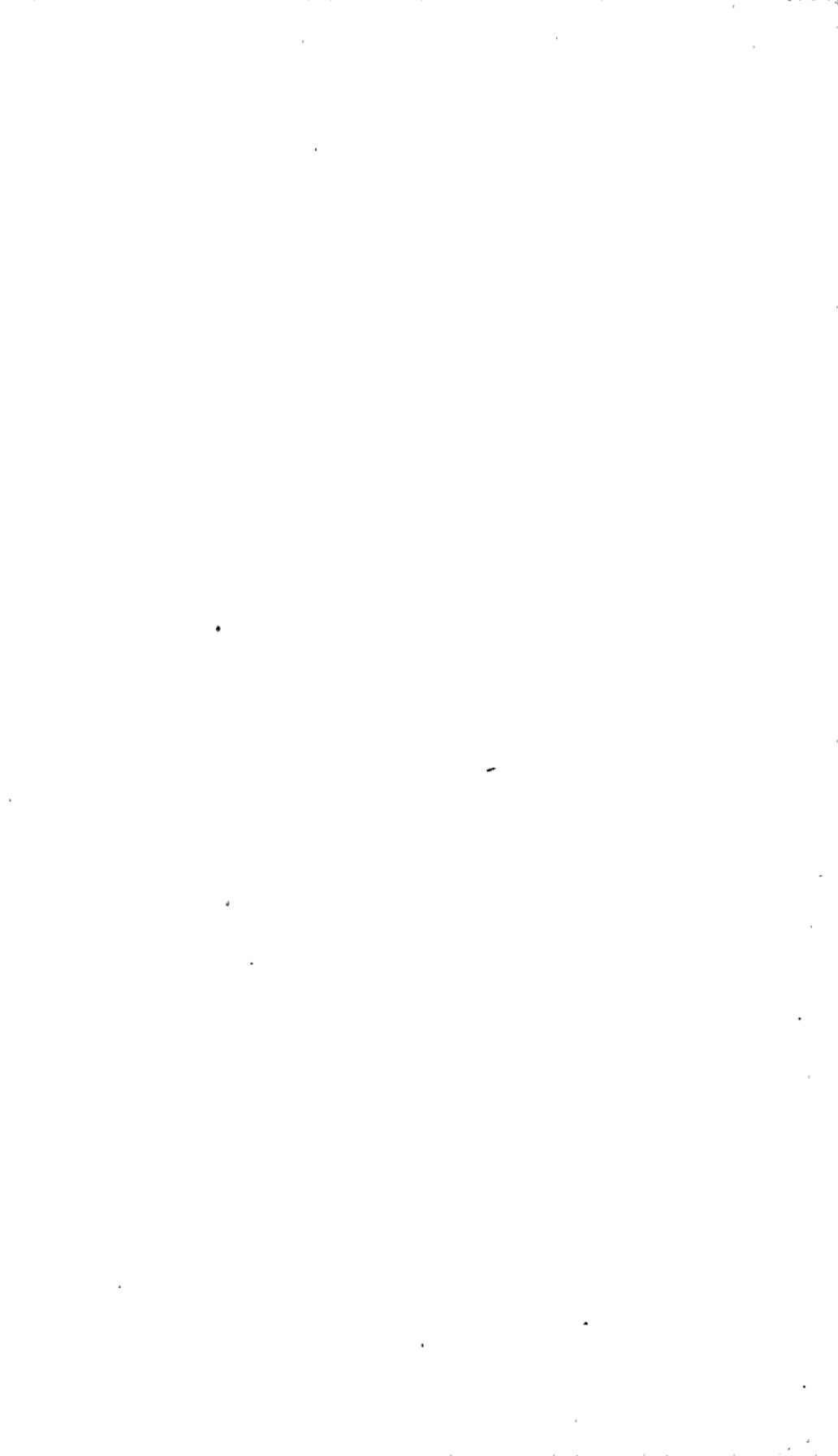
## ACCRUED.

## DESCRIPTION OF TIMBER.

Oak.		Elm.		Birch.	Other woods.	Cord wood.	Oars.	Shingles.	Staves.	Duties accrued on Timber cut.	REMARKS.
Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.	Cords.			Std.		
											£ s. d.
											1624 8 9
											66 2 6
											175 14 2
											35 0 0
											1901 5 5

## RECAPITULATION.

Saw Logs: W. Pine 78229 at 5d.....	£1629 15 5
do Spruce, 9196 at 2½d.....	95 15 10
Square Timber, W. Pine, 84340 feet at ¾d.....	175 14 2
	<u>1901 5 5</u>
Total ground Rents for the year.....	1414 17 10
do Timber dues do.....	1901 5 5
Total accrued.....	<u>£3316 3 3</u>



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ST. FRANCIS TERRITORY,

G. J. NAGLE, Agent.

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LICENCES GRANTED.

NAMES.	Date.	No.	Area in square miles.	Amount of ground rents.	LOCALITIES.
<b>ST. FRANCIS TERRITORY.</b>					
G. J. NAGLE, Agent.					
C. S. Clarke	May 10, 1856.	1	25	£ 3 2 6	Township Coleraine.
Henry Aylmer	do	4	25	12 10 0	do do Emberton.
do	do	5	25	12 10 0	do do Hampton.
do	do	6	14	7 0 0	do do Westbury.
do	do	7	6	3 0 0	do do Melbourne.
Turner Humphrey & Co.	Oct. 3, do	8	14½	3 12 6	do do Coleraine.
C. S. Clarke	Oct. 30, do	9	12	1 10 0	do do Winslow.
do	do	10	10	1 5 0	do do Garthby.
do	do	11	25	6 5 0	do do Lambton.
do	do	12	25	3 2 6	do do Adstock.
do	do	13	25	3 2 6	do do Price.
do	do	14	13	1 12 6	do do Winslow
do	do	15	95	3 2 6	do do do
do	do	16	25	3 2 6	do do do
do	do	19	25	6 5 0	do do Ditton.
do	do	20	25	6 5 0	do do do
do	do	22	10	1 5 0	do do Weedon.
do	do	23	25	25 0 0	do do Hampden.
do	do	24	25	25 0 0	do do do
do	do	25	20	2 10 0	do do Straford.
do	do	26	20	2 10 0	do do do
do	do	27	15	1 17 6	do do do

do	do	28	16	4 0 0	do do Adstock.
do	do	29	15	3 15 0	do do Coleraine.
do	do	30	10	1 5 0	do do do
do	do	31	19	2 7 6	do do Garthby.
C. & R. Holyoke & Co.	Nov. 14, 1856	32	25	6 5 0	do do do
do	do	33	25	3 2 6	do do do
do	do	34	14	1 15 0	do do do
Representatives of G. B. Hall	Oct. 28, 1856.	36	25	3 2 6	do do Bulstrode & Gore.
do	do	37	15	1 17 6	do do Standfold & Gore.
do	do	38	25	6 5 0	do do Maddington.
do	do	39	21	2 12 6	do do do
do	do	40	14	3 10 0	do do do
do	do	41	24	24 0 0	do do Astor.
do	do	42	21	5 5 0	do do Ham, Wolfstown and Augmentation.
do	do	43	22	5 10 0	do do Horton and Warwick.
do	do	44	16	4 0 0	do do Nelson, Somerset & Augmentation.
do	do	45	15	4 0 0	do do Halifax, Inverness & Ireland.
do	do	46	8	15 0 0	do do Coleraine.
do	do	49	8	2 0 0	do do Gore of Gentilly.
Ant. Mayrand	Nov. 10 1856.	50	64	1 0 0	do do Aston.
do	do	52	23	2 17 6	do do Gore of Bulstrode & Maddington.
R. M. Harrison.	Nov. 21, 1856	53	16	2 0 0	do do Artabaska.
do	do	54	3	1 0 0	do do Tingwick.
Thos. A. Lambert.	Oct. 28, 1856	55	3	1 0 0	do do Maddington.
Chs. Hughs.	Nov. 3, 1856	55	8	1 0 0	do do Bulstrode.
A. Mayrand.	Nov. 10, 1856	56	1	1 0 0	do do Maddington.
Total			825	241 0 0	

WOODS AND FORESTS—Return of Licenses granted and

DUTIES

QUANTITY AND

NAMES.	LOCALITIES.	Saw Logs.		W. Pine.		Tamarac.	
		W. Pine.	Spruce.	Pieces.	Feet.	pieces.	Feet.
ST. FRANCIS TERRITORY. G. J. NAGLE, Agent.							
C. & R. Holyoke & Co.	Garthby.....	3018					
do	do .....	2033					
Cyrus S. Clarke	Winslow.....	25-5					
do	Garthby.....	3446					
do	Adstock.....	2585					
do	Price.....	2585					
do	Winslow.....	2585					
do	do .....	2585					
do	do .....	2500					
do	Weedon.....	2500	589				
Pemberton Bros.	Stratford.....	2100					
Adolph Aylmer	do .....	2500					
G. B. Hall	do .....	3192					
Cyrus S. Clarke	Colemine.....	2400					
Geo. B. Hall	do .....	2600					
do	Bulstode & Gore.....	147	1712		66	858	
do	Stanford & Gore.....	851	358		449	6056	
do	Maddigan.....	722	105				
H. J. Larkin	Acton.....	742	272				
do	do .....	317	298				
Trespass 50 per ct.							
A Mayrand	Bulstode. &c.....	2128	2100		229	4426	
do	Aston.....	420					
Laliberté.	Sommeiset.....						
Jas. Goodhue	Arthabaska.....						
Lalib Gerard	Stanford.....				20	400	
J. Barlow	Stanford, &c.....				16	400	
Pre. Lamothe	Nelson.....						
J. D. Malliot	Arthabaska.....		425				
A. Baril	do .....		263				
J. C. Allice	Warwick.....	117					
N. Dodds	Orford.....	1211	236				
B. Little &c.	do .....	69					
W. Brooks	do .....	550½	117½				
A. Reynolds	do .....	1971					
Wm. Reynolds	do .....	2121	117				
Carried over		50789½	6582½		780	12140	

duties accrued in the several Territories during the year 1856.

ACCRUED.

DESCRIPTION OF TIMBER.

Duties accrued on Timber cut.	Oak.		Elm.		Birch.		Other woods.		Cord wood.		Staves.		REMARKS.
	Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.	Cords.	Std.	W. I.		
£ s. d.													
62	17	6											
42	7	1											
53	17	1											
71	15	10											
53	17	1											
53	17	1											
53	17	1											
53	17	1											
52	1	8											
58	4	5											
50	0	0											
52	1	8											
66	10	0											
50	0	0											
54	3	4											
22	13	8											Tamarac at ½d.
34	17	6					3 knees at 2s.						do ½d.
16	2	8											
18	5	10											
9	12	1											
4	16	1											Trespass £4 16s. 1d.
73	6	11											
8	15	0											
1	13	4					11 knees.	3					
2	10	0					30 knees.						
4	3	4					20 knees.						
9	1	3					79 knees.						Trespass
4	3	4											do
9	6	9					20 900						do
6	0	7											do
15	12	8											do
82	1	9											do
40	18	9											do
119	3	1											do
133	14	6											do
1446	6	0					30 900	148 knees.	3				

WOODS AND FORESTS—Return of Licenses granted and

DUTIES

QUANTITY AND

NAMES.	LOCALITIES.	Saw Logs.		W. Pine.		Tamarac.	
		W. Pine.	Spruce.	Pieces.	Feet.	Pieces.	Feet.
G. J. Nagle. Agent— <i>Continued.</i>							
Brought over.....							
Mills & Son.....	Orford.....	50789½	6582½			780	12140
Frs. Tennant.....	do.....	1444					
Grondines & Turner.....	do.....	56	627				
		82½	596				
Total.....		52371½	7805½			780	12140

duties accrued in the several Territories during the year 1856.

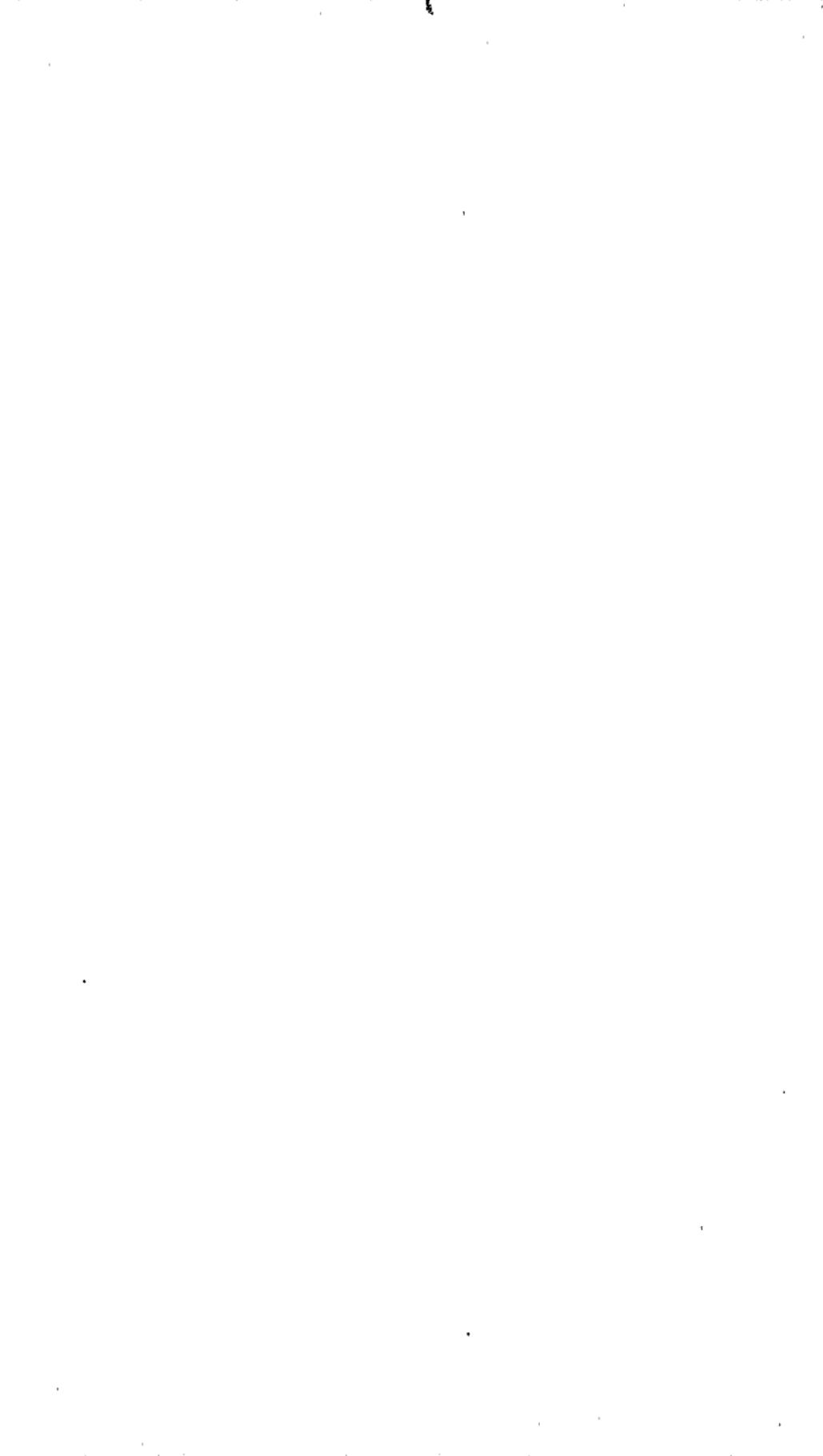
ACCRUED.

DESCRIPTION OF TIMBER.

Oak.	Elm.	Birch.	Other woods.	Cord wood.		Shingles.	Staves.		Duties accrued on Timber cut.	REMARKS.
				Logs.	Sticks.		Sticks.	W. I.		
Pieces. Feet.	Pieces. Feet.	Pieces. Feet.	Pieces. Feet.	Logs.	Sticks.	Sticks.	W. I.	£ s. d.		
		30 900	148 knees.	3				1446 6 0		
								88 4 6	Trespass.	
								16 18 9	do	
								19 10 8	do	
		30 900	148 knees.	3				1570 19 11		

RECAPITULATION.

Saw Logs: W. Pine 52371½ at 5d.....	£1091 1 7
Spruce 7805½ at 2½d.....	81 6 2
Square Timber, Tamarac 12140 at ½d.....	25 5 10
Birch 900 at ½d.....	1 17 6
Ship's knees and Cord Wood and Trespass charges, &c.....	371 8 10
	<u>1570 19 11</u>
Total ground Rents for the year.....	241 0 0
do Timber dues.....	1570 19 11
Total accrued.....	<u>£1811 19 11</u>



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# SAGUENAY TERRITORY,

**GEO. DUBERGER, Agent.**

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WOODS AND FORESTS.  
RETURN of Licenses granted and Duties accrued in the several Territories during the year 1856.

## LICENSES GRANTED.

NAMES.	Date.	No.	Area in square miles.	Amount of ground rents.	LOCALITIES.
<b>SAGUENAY TERRITORY.</b>					
Geo. Duberger, Agent.					
James Gibb.....	1856.	1		£ s. d.	Rear of Seigniory of Mille Vaches.
do .....	Oct. 10	2	50	6 5 0	do.
Rembly and Savard.....	do	3	50	6 5 0	To Tremblay.
Pleuriau and Gagnon.....	Nov. 7	4	2 $\frac{7}{8}$	1 0 0	do
John Guay.....	8	5	1 $\frac{1}{8}$	1 0 0	do Jonquière and Laterrière.
do .....	10	6	8	1 0 0	do Laterrière.
do .....	do	7	8	1 0 0	do Jonquière and Laterrière.
do .....	do	8	8	1 0 0	do Jonquière.
Simard and Pedneau.....	do	9	3 $\frac{3}{4}$	1 0 0	do Simard.
Tremblay, Gagné & Co.....	do	10	1 $\frac{3}{4}$	1 0 0	do Tremblay.
E. and J. Tremblay.....	22	11	2 $\frac{1}{2}$	1 0 0	do
Thomas Savard.....	24	12	1 $\frac{3}{8}$	1 0 0	do Simard.
Nap. Trenchon.....	26	13	$\frac{3}{4}$	1 0 0	do
Dallaire and Villeneuve.....	Dec. 3	14	$\frac{1}{2}$	1 0 0	do
F. Lavoie.....	15	15	2	1 0 0	do Bagot.
			145 $\frac{1}{8}$	25 10 0	
			1160	500 0 0	
Add remaining to be issued, about 60 Licenses.			1305 $\frac{7}{16}$	525 10 0	

Note :—The License Return is incomplete.

## WOODS AND FORESTS—Return of

## DUTIES

## QUANTITY AND

NAMES.	LOCALITIES.	Saw Logs.		White Pine		Tamarac.	
		White Pine.	Spruce	Pieces	Feet.	Pcs.	Fee.
SAGUENAY TERRITORY.							
George Duberger, Agent.							
James Gibb.....	River Portneuf.....	4,760	2,250				
do .....	do .....	1,740	4,200				
Nazaire Tétu & Co.....	Escoumains.....	127	9,800				
do .....	Sault au Mouton.....	1,554					
Wm. Price & Co.....	Grande Baie.....	2,130	1,716				
Wm. Price.....	Chicoutimi.....	14,934	62	106	Red Pine.....		
D. E. Price.....	River St. John.....	6,035	196	911	Red Pine.....		
Henry Simard.....	Port aux Quilles.....	300	500		Red Pine.....		
G. Tremblay.....	Black River.....	600					
A. Dufour.....	Echafaud des Basques.....	100	600				
A. Tremblay.....	River au Canard.....	600	100				
	W. Pine..	32,880	19,228				
	R. Pine..	1,213					

## Licenses granted and duties accrued—Continued.

## ACCRUED.

## DESCRIPTION OF TIMBER.

Oak.		Elm.		Birch.		Other Wood.		Cord Wood.		Staves.		Duties accrued on Timber cut.	REMARKS.	
Pcs.	Feet	Pcs.	Feet	Pcs.	Feet	Pcs.	Feet	Cords.	Oars.	Shingles.	W.			I.
												122	12	1
												80	0	3
												104	14	7
												32	7	6
												65	6	10
														Red Pine £3 1 10
												338	6	10
												131	8	11
														Red Pine. £26 11 5
												11	9	2
												12	10	0
												8	6	8
												13	10	10
												920	13	5
RECAPITULATION.														
Saw Logs—White Pine..... 32,880 at 5d.												£685	0	0
Red Pine..... 1,213 at 7d.												35	7	7
Spruce..... 19,228 at 2½												200	5	10
												920	13	5
Total Ground Rents for the year.....												25	10	0
Timber dues .....												920	13	5
Total accrued.....												£946	3	5



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MADAWASKA TERRITORY,

S. V. LARUE, Agent.

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LICENSES GRANTED.

NAMES.	Date.	No.	Area in Square Miles.	Amount of Ground rents.	LOCALITIES.
S. V. Larue—Continued.					
Brought over.....			1345	£ s. d.	
C. S. Clarke.....	March 4	43	20	296 5 0	Territory of River St. John.
Pembergrt Bros.....	3	101	50	5 0 0	Chesham Township.
Wm. Price.....	4	44	20	12 10 0	Territory of River St. John.
do	do	48	22	5 0 0	do
do	do	49	25	5 10 0	do
do	do	50	20	6 5 0	do
do	do	51	20	5 0 0	do
do	do	52	20	5 0 0	do
do	do	53	20	5 0 0	do
do	do	54	20	5 0 0	do
do	do	55	20	5 0 0	do
do	do	56	20	5 0 0	do
do	do	57	20	5 0 0	do
G. B. Heil.....	14	88	20	2 19 5	Buckland & Cranbourne.
do	do	89	22	2 15 0	ranbourne & Standon.
do	do	104	22	2 18 1	standon & Wate.
do	do	105	2	2 15 10	Ware To.
H. D. Breaky.....	31	84	2	8 5 0	Liniers To.
do	do	85		2 17 6	Marlow & Jersey.
do	do	86		3 2 6	Marlow To.

do	do	87	20	5 0 0	Watford & Shenley.
do	do	94	13	1 12 6	Marlow To.
do	do	95	15	3 15 0	Liniers To.
do	do	96	21	2 12 6	Jersey To.
do	do	97	17	2 2 6	do
do	do	100	30	3 15 0	Rixborough To.
do	do	107	38	4 15 0	Gahurst Township.
do	do	108	30	7 10 0	Gardner do
do	do	109	30	7 10 0	do do
do	do	110	12	3 0 0	Dorset do
James Jenkins.....	2	3	25	6 5 0	Territory of River St. John.
do	do	4	25	6 5 0	do
Benj. Beveridge.....	April 18	21	20	2 10 0	do
do	do	22	20	2 10 0	do
J. R. Thiboutot.....	4	81	8	1 0 0	Ixworth Township.
Louis Sirois.....	do	76	8	1 0 0	Ashworth Township.
J. Ete. Boulter.....	do	111	8	1 0 0	Ashburton Township.
Wm. Price & Co.....	do	112	8	2 0 0	Hourdages Township.
do	do	80	8	2 0 0	Lessard & Arrago do
				462 5 10	
				2170½	

Note:—The License Return is incomplete.

## WOODS AND FORESTS—Return of Licenses granted and

## DUTIES

## QUANTITY AND

NAMES.	LOCALITY.	Saw Logs.		White Pine.	
		W. Pine.	Spruce.	Pieces.	Feet.
MADAWASKA TERRITORY.					
S. V. LARUE, Agent.					
Louis Sirois.....	To Ashford.....	139½			
P. Thiboutot.....	do Ixworth.....	48			
Sundry persons of Ste. Anne.....	do Ashford.....	249½	6½		
do of St. Roch.....	do do.....	146	47		
do of St. Jean, St. Pierre & other places.....	do do.....	Sundry	kinds of	wood.	
A. G. Hart.....	Leverrier.....	502½			
Chs. Audet.....	Montmagny.....				
J. & S. Glasier.....	River St. John.....	Exported 3645		1097	43380
G. B. Hall.....	Buckland, Standon & Cranbourne.....	187	16923		
H. D. Breaky.....	Jersey, Linière & Marlow.....	1745	488		
J. & S. Glasier.....	River St. Johns.....	630		3100	124000
W. H. McCrillis.....	do.....	1060		357	14300
McCrillis & Clark.....				350	14000
Pre. Thiboutot.....	To Ixworth.....	Sundry	kinds of	wood.	
do.....	do.....				
Louis Sirois.....	Ashford.....	148	1		
		8500½	17465½	4904	196180

## Duties accrued in the several Territories during the year 1856.

## ACCRUED.

## DESCRIPTION OF TIMBER.

Tama- rack.	Pieces. Feet.	Oak. Pieces. Feet.	Elm. Pieces. Feet.	Birch. Pieces. Feet.	Other woods.		Cords. Oars.	Shingles.	Standa d. W. I.	Slaves	Duties			Remarks.	
					Pieces.	Feet.					accrued on				
											£	s.	d.		
						Cedar.						2	18	1	
						21	316					1	13	2	
						300						8	2	10	Trespass.
						250						6	6	1	do
												47	0	3	do
												15	14	1	do
								250000				12	10	0	do
												243	5	10	Saw logs at 10d.
												180	3	7	
												41	8	9	
												271	9	2	
												51	17	6	
												29	3	4	
												4	2	3	
												0	2	3	
												3	1	11	
						571						918	19	1	

## RECAPITULATION.

Saw Logs W. Pine 8500½ at 5d.....	£	177	1	11
do add exported 3645 at 5d....		75	18	9
do Spruce 17465½ at 2½d.....		181	18	7
Sq. Timber & Shingles: 252,250 at 1s. m.		12	12	1
W. Pine 196,180 feet at ½d.....		408	14	2
Cedar 316 feet at ½d.....		0	13	2
Trespass.....		62	0	1
Fractions.....		0	0	2
		918	19	1
Total ground rents for the year.....	£	462	5	10
Timber dues.....		918	19	1
Total accrued.....	£	1381	4	11



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PENINSULA OF CANADA WEST,

N. HAMMOND, Agent.

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WOODS AND FORESTS.

RETURN of Licenses granted and Duties accrued in the several Territories during the year 1856.

LICENSES GRANTED.

NAMES.	Date.	No.	Area in square miles.	Amount of ground rents.	LOCALITIES.
PENINSULA OF CANADA WEST.					
N. HAMMOND, Agent.					
J. C. Thornbury.....	1856. March 24	1	1	£ 1 0 0	To Toronto.
E. Higgins.....	April 2	2	1	1 0 0	do
J. C. Thornbury.....	do	3	1	1 0 0	do
G. Valentine.....	do	4	8	1 0 0	do Greenock.
G. Kirk.....	do	5	1	1 0 0	do Essex.
Boucher & Lyal.....	do	6	2	4 0 0	do Simcoe.
Robt. Davis.....	do	7	2½	1 5 0	Town plot of Ripon.
H. R. A. Boys.....	do	8	2	1 0 0	do Hythe.
J. Valentine.....	do	9	6	1 0 0	To Greenock.
			22½	12 5 0	



WOODS AND FORESTS—Return of Licenses granted and

DUTIES

QUANTITY AND

NAMES.	LOCALITIES.	Saw Logs.		White Pine.		Tamarac.	
		W. Pine.	Spruce.	Pieces.	Feet.	Pieces.	Feet.
N. Hammond, Agent—							
<i>Continued.</i>							
Brought over .....		2590		2662	106479		
A. Carrier .....	Co. Essex .....						
Ingalls & Nickelby .....	do Lambton .....						
do .....	do .....						
M. Clancy .....	do do .....						
H. & D. M. Cook .....	do do .....						
do .....	do do .....						
do .....	do Norfolk .....						
W. D. North .....	do Essex & Kent .....						
A. Reed & Co .....	do Middlesex & Kent .....						
A. Carrier .....	do Kent .....						
H. Waters .....	do Kent & Essex .....						
R. Caufield .....	do Haldimand .....						
Ingalls & Nickelby .....	do Lambton .....						
M. Clancy .....	do Kent .....						
H. & D. M. Cook .....	do Norfolk .....						
do .....	do Lambton .....						
H. R. A. Boys .....	do Simcoe .....			20	800		
J. McAllister .....	do Essex .....						
Hooker & Pridham .....	do do .....						
Ebberts & Robinson .....	do Kent .....						
H. & D. M. Cook .....	do Welland .....						
do .....	do Elgin & Kent .....						
do .....	do do .....						
A. Carrier .....	do Essex .....						
D. D. Calvin & Co .....				259	18,135		
Fowler & Kelsey .....							
H. & D. M. Cook .....				4	454		
John Pearson .....							
Trespass 50 per cent. ....							
Ebberts & Robertson .....							
Kelsey & Fowler .....							
John McLeod .....							
do .....							
Carried over .....		2590		2945	125868		

duties accrued in the several Territories during the year 1856.

ACCRUED.

DESCRIPTION OF TIMBER.

Oak.		Elm.		Spruce.		Other woods.		Cord wood		Staves.		Duties accrued on Timber cut.	REMARKS.	
Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.	Cords.	Oars.	Shingles.	Std.			W. I.
417	16680					99		1250			51846	8127	£ s. d. 532 15 3	
											3215	1200	3 13 11	
87	3480										7510		7 10 2	
													21 15 0	
											8000		8 0 0	
											1620		1 12 5	
											13514		13 10 3	
											6000		6 0 0	
											7038	22379	15 19 9	
											19536	91126	55 11 8	
											4936	1880	5 13 9	
											13605	30483	25 15 11	
21	840										2991		8 4 9	
231	11240												70 5 0	
												2075	0 16 6	
											2625		2 12 6	
120	4800												30 0 0	Ind. Timber
													1 13 4	
38	1520												9 10 0	
												2583	1 0 8	
											530		0 11 7	
35	1400												8 15 0	
													11 7 8	
											8234	7843	4 1 7	
											4081		17 8 9	
											11881	13958	37 15 8	
											41688		41 13 9	
											20s.		1 3 5	
													27 12 0	
													13 16 0	Trespass.
												1869		
												±d.	1 13 11	
2	236												1 9 6	
													15 16 9	Trespass.
4	229												1 8 8	
1054	44841	1	54			99		1250			208900	182523	1107 0 1	

## WOODS AND FORESTS—Return of Licenses granted and

## DUTIES

## QUANTITY AND

NAMES.	LOCALITIES.	Saw Logs.		White Pine.		Tamarac.	
		W. Pine.	Spruce.	Pieces.	Feet.	Pieces.	Feet.
N. Hammond, Agent— <i>Continued.</i>							
Brought over.....		2590		2945	125868		
Adam Papts.....							
A. Reed & Co.....							
J. B. La Liberté.....							
Per McL. Stewart.....				263	18,589		
“ himself.....		2,590		2,682	107279		
Total.....		2,590		2,945	125868		

## duties accrued in the several Territories during the year 1856.

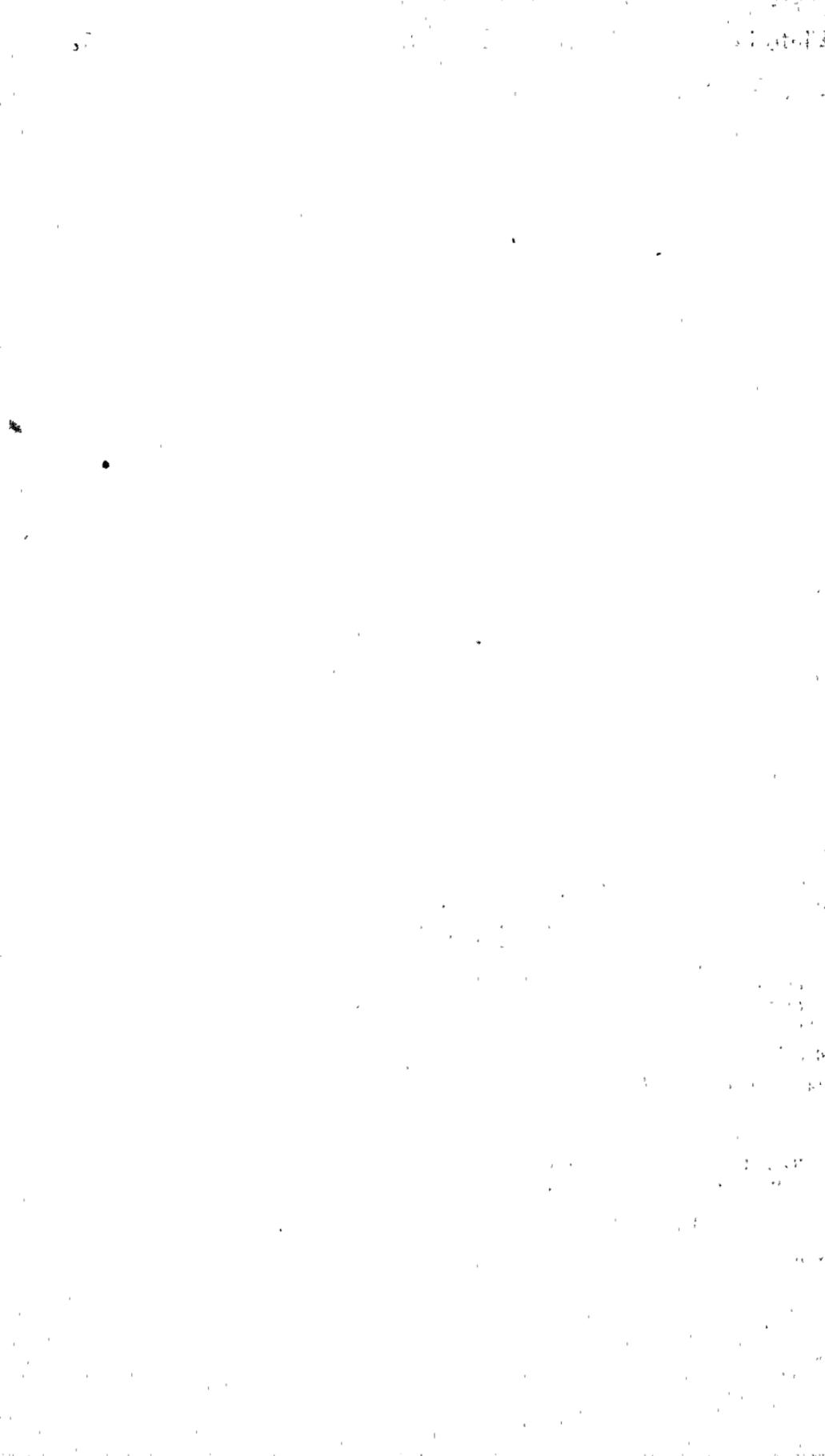
## ACCRUED.

## DESCRIPTION OF TIMBER.

Oak.	Elm.	Birch.	Other woods.		Cord wood.	Oars.	Shingles.	Staves.		Duties accrued on Timber cut	REMARKS.
			Pieces.	Feet.				Std.	W. I.		
1054	44841	1 54		99	1250			208900	182523	£ 1107 0 1	
								8020	1794	s. 1 17 5	
135	12330							1d. 1725	7836	41 11 7	
									36336	122 2 0	
190	17211	1 54						51433	47835	3/8 5 8	
999	39960			99	1250			167212	180654	864 5 5	
1189	57171	1 54		99	1250			218645	228469	1172 11 1	

## RECAPITULATION :

Saw Logs :	White Pine,	2590 at 5d .....	53 19 2
SQUARE TIMBER :	White Pine,	125868 ft. at 1s. 2d .....	262 4 6
“ “	Oak,	57171 ft. at 1d. ....	357 6 5
“ “	Elm,	54 ft. at 1d. ....	0 4 6
“ “	Masts,	99 ft. at 5s. ....	24 15 0
CORDWOOD :	Cords,	1250 at 1s. ....	62 10 0
Standard & Pipe Staves,		209100 at 20s m. ....	209 0 9
Do do		9745 at 1d each .....	40 12 1
West India do		180654 at 8s. m. ....	72 5 2
		47835 at 1s. 4d. each. ....	49 16 7
Trepass, less fractions 3s. 6d. ....			39 16 11
			1172 11 1
Total Ground Rents for the year .....			12 5 0
“ Timber Dues .....			1172 11 1
Total accrued .....			1184 16 1



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# HURON AND SUPERIOR TERRITORY,

A. W. POWELL, Agent.

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WOODS AND FORESTS—Return of Licenses granted and Duties accrued in the several Territories during the year 1856.

LICENSES GRANTED.

NAMES.	Date.	No.	Area in Square Miles.	Amount of Ground rents.		LOCALITIES.
				£	s. d.	
<b>HURON AND SUPERIOR TERRITORY.</b>						
A. W. Powell, Agent.						
Quetton St. George.....	1856. Jan. 2	38	50	6	5	River Severn.
Waddell and Murray.....	Feb. 13	39	30	7	10	Collins Inlet.
Francis Clemow.....	do	40	30	3	15	River Thessalon.
do	do	41	30	3	15	do
do	do	42	30	3	15	do
do	do	43	30	3	15	do
do	do	44	25	3	2	do
do	do	45	25	3	2	do
do	do	46	25	3	2	do
do	do	47	25	3	2	do
do	do	48	30	3	15	River Missisagua.
do	do	49	30	3	15	do
do	do	50	50	6	5	River St. Mary.
do	do	51	25	3	2	do Severn.
do	do	52	25	3	2	do
do	do	53	40	5	0	do Muskoka.
do	do	54	20	2	10	do
do	do	55	40	5	0	do
do	do	56	20	2	10	do
do	do	57	14	1	15	do
do	Mar. 1	58	20	2	10	Spanish River.
do	do	59	8	1	0	do

do	do	60	30	3	15	Rivière au Sable.
do	do	61	30	3	15	do
do	do	62	25	3	2	Serpent River.
do	do	63	25	3	2	do
do	do	64	25	3	2	do
do	do	65	25	3	2	do
do	do	66	25	3	2	do
do	do	67	8	1	0	Spanish River.
do	do	68	18	2	5	do
do	do	69	25	3	2	do
do	do	70	30	3	15	do
do	do	71	15	1	17	do
do	do	72	36	4	10	do
do	do	73	30	3	15	do
do	do	74	15	1	17	do
do	do	75	8	1	0	Islands in River Severn.
do	do	76	50	12	10	Seguin River.
do	do	77	50	12	10	do
do	Apr. 4	78	25	3	2	Moon River.
do	do	79	25	3	2	do
do	do	80	25	3	2	White Fish River.
do	do	81	25	3	2	do
do	do	82	25	3	2	Michipicton River.
do	do	83	25	3	2	do
do	May 19	1	50	6	5	Missisagua River.
do	do	2	48	6	0	do
do	do	3	50	6	5	do
do	do	4	50	6	5	do
do	do	5	25	3	2	White Fish River.
do	do	6	25	3	2	do
do	do	7	25	3	2	Moon River.
do	do	8	25	3	2	do
do	do	9	25	3	2	Michipicton River.
do	do	10	25	3	2	do
do	do	11	50	6	5	Paraskey River.
do	Aug. 8	12	50	6	5	do
do	do	13	50	6	5	French and Menegansiciby Rivers.
do	do					do
Carried forward.....				233	15	0

## LICENSES GRANTED.

NAMES.	Date.	No.	Area in Square Miles.	Amount of Ground rents.		LOCALITIES.
				£ s. d.		
Brought forward.....			1740	223	15 0	
Gzowski & al.....	Aug. 8	14	50	6	5 0	Menegisciby River.
do	do	15	50	6	5 0	do
do	do	16	50	6	5 0	Wanabitasobe do
do	do	17	50	6	5 0	do
do	do	18	50	6	5 0	do
do	do	19	50	6	5 0	do
do	do	20	30	3	15 0	Goulais Point.
do	do	21	25	3	2 6	Michipicoten River.
do	do	22	25	3	2 6	do
do	do	23	50	6	5 0	French River.
do	do	24	50	6	5 0	Key do
do	do	25	4	1	0 0	Sturgeon do
Robt. Johnson.....	do	26	32	4	0 0	Spanish do
D. McLachlin.....	Oct. 2	27	30	3	15 0	do
J. S. Hall.....	do	28	30	3	15 0	do
James S. Kidd.....	do	29	12½	1	11 3	do
John Porter.....	do	30	15	1	17 6	do
J. S. Hall.....	do	31	50	6	5 0	Severn River.
Andrew Heron.....	6	32	30	3	15 0	Missisagua River.
W. Moberly.....	7	33	30	3	15 0	do
do	do	34	30	3	2 6	River St. Mary.
do	do	35	25	3	2 6	Moon River.
Gzowski & al.....	do	36	25	3	2 6	do
do	do	37	25	3	2 6	White Fish River.
do	do	38	25	3	2 6	do

do	do	39	25	3	2 6	Michipicoten River.
do	do	40	25	3	2 6	do
D. Cameron.....	9	41	40	5	0 0	North of Eldon.
Wm. Smith.....	Nov. 1	42	50	12	10 0	Shawenegan River.
N. J. Brown.....	do	43	50	6	5 0	Neboywaske do
do	do	44	50	6	5 0	Parry's Sound.
W. M. Gibson & al.....	do	45	50	6	5 0	Seguin River.
J. H. Gibson & al.....	do	46	50	6	5 0	Shebisheging River.
Savigny & Co. & al.....	Dec. 24	47	50	6	5 0	Muskoka do
do	do	48	50	6	5 0	do
do	do	49	50	6	5 0	do
do	do	50	50	6	5 0	do
J. B. Gordon.....	do	51	50	6	5 0	Bad River.
Thomas Dick.....	do	52	50	6	5 0	do
J. S. Dennis.....	do	53	50	12	10 0	Maganetawan River.
do	do	54	50	12	10 0	do
Chs. Jones.....	do	55	30	15	0 0	Key River.
W. B. Hamilton.....	do	56	15	1	17 6	Muskoka River.
do	do	57	15	1	17 6	do
do	do	58	30	3	15 0	Black River.
do	do	59	15	1	17 6	do
Waddle, Murray & Co.....	do	60	50	6	5 0	Masening River.
E. Silvois & al.....	do	61	32	4	0 0	River de Bourne.
do	do	62	24	3	0 0	do
do	do	63	50	12	10 0	do
Jas. H. Wylie.....	do	.....	.....	7	5 0	Lake Nippissing.
Thos. Steers.....	do	.....	.....	3	10 0	Bonus on Licenses 57, 58 & 59.
W. Moberly.....	do	.....	.....	3	2 6	Bonus on License 50.
G. Caswell and F. Clemow.....	do	.....	.....	3	2 6	River Severn.
do	do	.....	.....	3	2 6	do
W. Moberly.....	do	.....	.....	6	5 0	do
George Kirk.....	do	.....	.....	6	5 0	Spanish River.
do	do	.....	.....	6	5 0	River Severn.
do	do	.....	.....	6	5 0	Rivière au Sable.
Frs. Clemow.....	do	.....	.....	3	15 0	do
do	do	.....	.....	3	15 0	Thessalon River.
do	do	.....	.....	3	15 0	do
do	do	.....	.....	3	15 0	do
Carried forward.....			3994½	563	1 3	

WOODS AND FORESTS—Return of Licenses granted, &c.—Continued.

LICENSES GRANTED.

NAMES.	Date.	No.	Area in Square Miles.	Amount of Ground rent.			LOCALITIES.
				£.	s.	d.	
Brought forward.....			3994½	563	1	3	
Frs. Clemow.....	Dec. 24		30	3	15	0	Thessalon River.
do .....	do		25	3	2	6	do
do .....	do		25	3	2	6	do
do .....	do		25	3	2	6	do
do .....	do		25	3	2	6	do
G. Caswell & Clemow.....	do		25	3	2	6	River Severn.
do .....	do		25	3	2	6	do
Joseph Smith.....	do		40	5	0	0	Muskoka River.
do .....	do		20	2	10	0	do
do .....	do		40	5	0	0	do
do .....	do		20	2	10	0	do
Thomas Steers.....	do		14	1	15	0	Spanish River.
do .....	do		20	2	10	0	do
do .....	do		30	3	15	0	do
do .....	do		36	4	10	0	do
do .....	do		15	1	17	6	do
do .....	do		8	1	0	0	River Severn.
Geo. Caswell and Frs. Clemow.....			4417½	615	18	9	

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A. W. POWELL, AGENT—CONTINUED.

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## WOODS AND FORESTS—Return of Licenses granted and

## DUTIES

## QUANTITY AND

NAMES.	LOCALITIES.	Saw Logs.		W. Pine.		Tamarac.		Oak.	
		W. Pine.	Spruce.	Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.
HURON AND SUPERIOR TERRITORY.									
A. W. Powell, Agent.									
Waddle and Murray.....	Beaverton River.	2200	.....	.....	.....	.....	.....	.....	.....
Andrew Heron.....	Severn do	9075	.....	.....	.....	.....	.....	.....	.....
Eusébe Silvois.....	Rivière de Bourne	1716	.....	.....	.....	.....	.....	.....	.....
do	do	200	.....	.....	.....	.....	.....	.....	.....
W. B. Hamilton.....	Muskoka River..	1613	.....	.....	.....	.....	.....	.....	.....
Waddle and Murray.....	Beaverton do	6500	.....	.....	.....	.....	.....	.....	.....
		21334	.....	.....	.....	.....	.....	.....	.....

## Duties accrued in the several Territories during the year 1856.

## ACCRUED

## DESCRIPTION OF TIMBER

Elm.		Birch.		Other wood.		Cord wood.		Staves.		Duties accrued on Timber Cut.	REMARKS.	
Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.	Cords.	Oars.	Shingles.	Standard			W. I.
											£ s. d.	
											45 16 8	Indian Timber.
											189 1 3	
											35 15 0	Indian Timber.
											4 3 4	
											34 4 7	
											135 8 4	
											444 9 2	
RECAPITULATION.												
Saw Logs—White Pine 21,334 at 5d.....										444 9 2		
Total Ground Rents for the year.....										615 18 9		
do Timber dues do .....										444 9 2		
Total accrued.....										£1060 7 11		



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**LOWER ST. LAWRENCE TERRITORY.**

**CHS. T. DUBE, Agent.**

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## WOODS AND FORESTS.

RETURN of Licenses granted and Duties accrued in the several Territories during the year 1856.

## LICENSES GRANTED.

NAMES.	Date.	No.	Area in square miles.	Amount of ground rents.	LOCALITIES.
LOWER ST. LAWRENCE TERRITORY.					
C. T. Dubé, Agent.					
1856.				£ s. d.	
Saml. Bradley, Jr. ....	Nov. 18	1	15	1 17 6	Great Matane River.
C. H. Tetu & Co. ....	21	2	44	5 10 0	Trois Pistoles.
W. Price & Sons. ....	27	3	12	1 10 0	Ste. Anne des Monts.
do. ....	Dec. 16	4	8	1 0 0	To McNider.
do. ....	do	5	22	2 15 0	River Meis.
do. ....	do	6	24	3 0 0	do Rimouski.
.E. Barry. ....	17	7	14	1 15 0	To Viger and Whitworth.
			139	17 7 6	





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BAIE DES CHALEURS TERRITORY.

JOS. N. VERGE, AGENT.

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## WOODS AND FORESTS—Return of Licenses granted and

## DUTIES

## QUANTITY AND

NAMES.	LOCALITIES.	Saw Logs.		White Pine.		Tamarac.		Oak.	
		W. Pine.	Spruce.	Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.
BAIE DES CHALEURS TERRITORY.									
Jos. N. VERGE, Agent.									
Edouard Allard.....	To Nouvelle.....			33	1320				
Alex. Chamberlain.....	do Escuminac.....	20	900	337	11795				
do	do do.....								
Dun. Carmichael.....	do do.....			1	50				
John McDonald.....	do do.....								
Alex. Chamberlain.....	do do.....								
John Pike.....	do do.....	9	295	47	1974				
George Foley.....	do Nouvelle.....	19	67	43	1320				
do	do do.....								
Thomas Bell.....	do Patapidia.....			140	4900				
Jas. McDonald.....	do Matapidia.....		90						
Chas. Murray.....	do Escuminac.....								
John Travis.....	do Matapidia.....		600						
Andrew Mann.....	do do.....		50						
Alexander Fraser.....	do do.....								
Peter Heron.....	River du Loup.....		40						
William White.....	To Matapidia.....		105						
Valentine Wheeler.....	do do.....								
John Keys.....	do Nouvelle.....			110	4400				
Richard Ferguson.....	Restigouche.....			1	27				
William Grey.....	Escuminac.....								
H. Disbrasay.....	Nouvelle.....								
John Fougere.....	Maria.....			40	1120				
Joshua Woodman.....	Big Cascapidia.....	15	3	30	1000				
Jas. Stewart.....	do do.....			250	10000				
S Harriman.....	do do.....			23	800				
Wm. Burton.....	Little do.....	60	90	170	5600				
Alex. Querrey.....	do do.....	5	410						
James Carrol.....	Maria.....	20	33	15	440				
Carried forward.....		148	2683	1240	44746				

## Duties accrued in the several Territories during the year 1856.

## ACCRUED.

## DESCRIPTION OF TIMBER.

Elm.	Birch.		Other wood.		Cord wood.		Staves.				Duties accrued on Timber Cut.	Remarks.
	Pieces.	Feet.	Pieces.	Feet.	Cords.	Oars.	Shingles.	Standard.	West Indian.			
											£ s. d.	
	164	4920	22	990 Spruce.							15 1 3	
	174	5220	50	1995 do							51 5 5	
			16	450 Juniper.							0 11 3	
	11	220									1 4 0	
						36					0 16 8	
	86	3010	68	2262 Spruce.		25					18 7 2	
	160	3620	15	400 do							12 9 5	
			2	60 Juniper.							10 4 2	
	80	2400	7	210 Spruce.							6 7 6	
			60	1200 do							2 10 0	
	13	325	2	40 do							7 0 3	
	9	180									0 17 11	
	20	700	114	3850 Spruce.							9 9 7	
	40	800									2 1 8	
	20	600									2 6 11	
	17	476									0 19 10	
	44	1320	6	160 Spruce.							12 5 0	
	8	232	4	108 do							0 15 4	
						30					1 0 0	
			16	360 Juniper.							1 10 0	
											2 6 8	
	15	400									3 5 3	
											20 16 8	
	8	320									2 6 8	
											13 17 1	
											4 7 6	
	16	360									2 8 7	
	885	25103	S. 348	11215	91						206 11 9	
			J. 34	870								

## WOODS AND FORESTS—Return of Licenses granted and Duties

## DUTIES

## QUANTITY AND

NAMES.	LOCALITIES.	Saw Logs.		White Pine.		Tamarak.		Oak.	
		White Pine	Spruce.	Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.
Joseph Verge, Agent— <i>Continued.</i>									
Brought over.		148	2683	1240	44746				
Patrick Hamilton.	Maria.	22	37	10	308				
Richard Burton.	Little Cascapedia.	180	75	20	720				
Wm. McRae.	Bonaventure.			240	7000				
Wm. McKenzie.	do			140	4360				
John McCormick.	Little Cascapedia.	100		60	2247				
Philip Nellis.	Big do								
William Stanley.	Gaspé N. W. River.	100	50	18	440				
Joseph Shaw.	Gaspé S. W. River & Louglastown.	8000	2000	200	8000				
Peter Campbell.	Maria.								
Dan. Murchy.	Escuminac			12	384				
		8550	4845	1940	68205				

## accrued in the several Territories during the year 1856.

## ACCRUED.

## DESCRIPTION OF TIMBER.

Elm.	Birch.	Other wood.		Cord wood.	Oars.	Shingles.	Standard.	Staves. West Indian.	Duties accrued on Timber Cut.	Remarks.
		Pieces.	Feet.							
	885	25103		91					£ s. d.	
	10	250							206 11 9	
									2 0 2	
									6 0 8	
									14 11 8	
									9 1 8	
									6 15 4	
			52	780 Spruce.					1 12 6	
									3 10 5	
									204 3 4	
			50	500 Spruce.					1 0 10	
	18	576							2 0 0	
	913	25929	S. 450 J. 34	12495 870	91				457 8 4	

## RECAPITULATION.

	£	s.	d.
Saw Logs White Pine 8,550 at 5d.	178	2	6
do Spruce 4,845 at 2½d.	50	9	5
Square Timber and White Pine 68,205 feet at ½d.	142	1	11
Birch 25,929 at ½d.	54	0	5
Spruce 12,495 at ½d.	26	0	8
Juniper 870 at 1d.	3	12	6
Cord Wood, cords 91 at 8d.	8	0	8
Fractions	0	0	3
	457	8	4

## WOODS AND FORESTS.

GENERAL RECAPITULATION by Territories shewing the total area under License; the total amount of Ground Rents, and the total amount of Timber Dues accrued during the year ended the 31st day of December 1856.

TERRITORIES.	Area under License in Square miles.	Amount of Ground Rents accrued.			Amount of Timber dues accrued.			Total accrued.		
		£	s.	d.	£	s.	d.	£	s.	d.
Upper Ottawa.....	15160 <sup>2</sup> / <sub>10</sub>	6103	13	10	27624	12	6	33728	6	4
Ontario .....	1429 <sup>1</sup> / <sub>10</sub>	976	18	8	5021	7	4	5998	6	0
Lower Ottawa.....	3405 <sup>1</sup> / <sub>10</sub>	1103	19	8	4577	7	3	5631	6	11
St. Maurice.....	2628 <sup>1</sup> / <sub>2</sub>	1414	17	10	1901	5	5	3316	3	3
St. Francis.....	825	241	0	0	1570	19	11	1811	19	11
Saguenay.....	1305 <sup>7</sup> / <sub>10</sub>	525	10	0	920	13	5	1446	3	5
Madawaska.....	217 <sup>1</sup> / <sub>10</sub>	462	5	10	918	19	1	1381	4	11
Peninsula of Canada West.....	22 <sup>1</sup> / <sub>10</sub>	12	5	0	1172	11	1	1184	16	1
Huron & Superior.....	4417 <sup>1</sup> / <sub>2</sub>	615	18	9	444	9	2	1060	7	11
Lower St. Lawrence.....	139	17	7	6	1026	8	3	1043	15	9
Baie des Chaleurs.....	.....	.....	.....	.....	457	8	4	457	8	4
	31504 <sup>1</sup> / <sub>10</sub>	11473	17	1	45636	1	9	57109	18	10

JOSEPH CAUCHON,  
Commissioner.

Crown Land Department,  
Toronto, 31st December 1856.

WOODS AND FORESTS: GENERAL RECAPITULATION.

NAMES OF AGENTS.	LICENSES GRANTED.			DUTIES ACCRUED.																						Duties accrued on Timber cut.	Total accrued from Licenses granted and Timber cut.				
	No. of Berths.	Area in Square Miles.	Amount of Ground Rent.	QUANTITIES AND DESCRIPTION OF TIMBER.																											
				Saw Logs.			White Pine.		Tamarac.		Oak.		Elm.		Birch.		Spruce.		Cedar and Juniper.		Oars.	Shingles.	Staves.		Floats and Rails. No.			Masts. No.	Cord Wood. Cords.		
				White Pine.	Spruce.	Red Pine.	Pieces.	Feet.	Pcs.	Feet.	Pcs.	Feet.	Pcs.	Feet.	Pcs.	Feet.	Pcs.	Feet.	Pieces.	Feet.			Std.	W. I.							
A. J. Russell.....	534	15,160 <sup>3</sup> / <sub>4</sub>	£ 6,103 s. 13 d. 10	230,498			180,600	10,864,659			203	5,116	1,092	37,043					44											£ 27,624 s. 12 d. 6	£ 33,728 s. 6 d. 4
J. F. Way .....	95	1,429 <sup>3</sup> / <sub>4</sub>	976 18 8	160,090			4,377	349,237			40	1,580	1,715	62,169							25,250	5,330	7,000	393			25	5,021 7 4	5,998 6 0		
C. E. Belle.....	132	3,405 <sup>3</sup> / <sub>8</sub>	1,103 19 8	129,055	175		13,706	713,895	3	123	98	2,440	2,608	80,869					{ 726 round. } C. 231 3,333 }	2,374								4,577 7 3	5,681 6 11		
O. Wells .....	66	2,628 <sup>1</sup> / <sub>2</sub>	1,414 17 10	78,229	9,196		1,965	84,340																					1,901 5 5	3,316 3 3	
Ger. J. Nagle .....	47	825	241 0 0	52,371 <sup>3</sup> / <sub>4</sub>	7,805 <sup>1</sup> / <sub>2</sub>				780	12,140					30	900											3	1,570 19 11	1,811 19 11		
Geo. DuBerger.....	75	1,305 <sup>7</sup> / <sub>16</sub>	525 10 0	32,880	19,228	1,213																						920 13 5	1,446 3 5		
S. V. Larue.....	94	2,170 <sup>1</sup> / <sub>3</sub>	462 5 10	8,500 <sup>1</sup> / <sub>2</sub>	17,465 <sup>1</sup> / <sub>2</sub>		4,904	196,180											{ 550 round. } C. 21 316 }		252,250							918 19 1	1,381 4 11		
N. Hammond .....	9	22 <sup>3</sup> / <sub>4</sub>	12 5 0	2,590			2,945	125,868			1,189	57,171	1	54														1,172 11 1	1,184 16 1		
A. W. Powell.....	138	4,417 <sup>1</sup> / <sub>2</sub>	615 18 9	21,334																	218,645	228,489		99	1,250		444 9 2	1,060 7 11			
Chas. T. Dubé.....	7	139	17 7 6	24,425	49,219		235	2,331							913	25,929	450	12,495	J. 34 870								1,026 8 3	1,043 15 9			
Jos. N. Verge.....				8,550	4,845		1,940	68,205																			91	457 8 4	457 8 4		
	1,197	31,504 <sup>1</sup> / <sub>2</sub>	11,473 17 1	748,523 <sup>1</sup> / <sub>4</sub>	107,934	1,213	210,672	12,404,715	783	12,263	1,530	66,307	5,416	180,135	943	26,829	450	12,495	J. 34 870 C. 252 3,649	2,418	277,500	223,975	235,489	393	99	1,369 <sup>3</sup> / <sub>4</sub>	45,636 1 9	57,109 18 10			
									148 knees.										1,276 round.												

Total accrued from Licenses Granted and Timber cut.....£57,109 18 10  
 " " Slides..... 8,608 3 4  
 Grand Total.....£65,718 2 2

JOSEPH CAUCHON,  
 Commissioner.

Crown Land Department,  
 Toronto, 31st December, 1856.

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APPENDIX P.

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PART SECOND.

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REVENUES ACCRUED FROM GOVERNMENT SLIDES.

Ottawa Slides, - - - - E. MASSE, Agent.

St. Maurice Slides, - - - - C. H. GODBY, “

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## WOODS AND FORESTS—Return of Tolls accrued from Ottawa Slides and Works during the year 1856.

Date.	Names of Owners of Timber.	Slides passed through.	Rate of Slidage.	Amounts Accrued.
E. MASSE, AGENT.			s. d.	£ s. d.
1856. Jan'y 18	John Egan.....	66 Cribs Saw Logs passed through Arnprior Slide.....	2 6	8 5 0
May 15	John & W. McLean..	50 do squared Timber through Chaudière Slide.....	5 0	12 10 0
do 16	W. H. Hindiman...	59 do do do do...	do	14 15 0
do 31	Walton Smith.....	60 do do do do...	do	15 0 0
do 31	do	60 do do do do...	do	15 0 0
June 2	William Mohr.....	56 do do do do...	do	14 0 0
do 3	Robert Klock.....	48 do do do do...	do	12 0 0
do 5	Hilliard & Dickson ...	51 do from head of the Chats to foot of Chaudière.....	7 6	19 2 6
do do	do	48 do do do do...	do	18 0 0
do do	do	22 do through Chaudière Slide.....	5 0	5 10 0
do 6	H. & J. Mair.....	86 do Saw Logs from head of High Falls Madawaska to Chats Lake.	10 0	43 0 0
do 7	N. Burwash. ....	12 do squared timber from head of Arnprior to foot of Chaudière.	8 9	5 5 0
do do	do	26 do from head of the Chats to foot of Chaudière.....	7 6	9 15 0
do 9	Walton Smith.....	54 do through Chaudière Slide...	5 0	13 10 0
do 10	Peter McArthur.....	37 do do do do...	do	9 5 0
do do	Masson, Bruyere, Thomas & Co.....	66 Deals do do do...	7 6	24 15 0
do do	do	64 do squared timber from head of High Falls Madawaska to foot of Chaudière.....	17 6	56 0 0
do do	do	59 do from head of the Chats to foot of Chaudière.....	7 6	22 2 6
do 9	George Marshall.....	43 do from head of Arnprior to foot of Chaudière.....	8 9	18 16 3
do 11	Daniel McLachlin....	56 do from head of High Falls to foot of Chaudière.....	17 6	49 0 0
do do	do	57 Cribs squared timber from head of High Falls Madawaska to foot of Chaudière.....	17 6	49 17 6
do do	do	73 do do do do...	do	63 17 6
do do	George Bryson.....	63 do from head of Calumet to foot of Chaudière.....	12 6	39 7 6
do 12	John Supple.....	59 do do do do...	do	36 17 6
do do	John Grierson.....	63 do through Chaudière Slide...	5 0	15 15 0
do 16	H. & J. Mair.....	63 do from head of Arnprior to foot of Chaudière.....	8 9	27 11 3
do 17	Masson, Bruyere, Thomas & Co.....	60 do from head of the Chats to foot of the Chaudière.....	7 6	22 10 0
do 18	Robert Thompson....	19 do from head of Calumet to foot of Chaudière.....	12 6	11 17 6
do do	do	33 do from head of Portage du Fort to foot of Chaudière.....	8 9	14 8 9
do do	Robert Kenney.....	36 do through Chaudière Slide...	5 0	9 0 0
Carried over.....				676 13 9

## WOODS AND FORESTS—Return of Tolls accrued from Ottawa Slides and Works during the year 1856.

Date.	Names of Owners of Timber.	Slides passed through.	Rate of Slideage.	Amounts Accrued.
	E. Masse, Agent, (Continued.)	Brought over.....	s. d.	£ s. d.
1856.				676 13 9
June 18	G. W. Osborne.....	18 Cribs deals from head of the Chats to foot of Chaudière.....	10 0	9 0 0
do do	Daniel O'Meara.....	15 do squared timber from head of Calumet to foot of Chaudière....	12 6	28 2 6
do do	Thomas Bryson.....	69 do do do do.....	do	43 2 6
do do	Alex. McLean.....	61 do through Chaudière Slide....	5 0	15 5 0
do 19	Duncan McFarlane....	73 do from head of Arnprior to foot of Chaudière.....	8 9	31 13 9
do do	Masson, Bruyere, Thomas & Co.....	44 do from head of the Chats to foot of Chaudière.....	7 6	16 10 0
do do	Wm. McConnell.....	57 do from head of Calumet to foot of Chaudière.....	12 6	35 12 6
do do	do.....	5 do through Chaudière Slide....	5 0	1 5 0
do do	John Egan & Co.....	53 do squared timber from head of Calumet to foot of Chaudière....	12 6	39 7 6
		1 do through Calumet Slide.....	5 0	0 5 0
		1 do do Portage du Fort....	2 6	0 2 6
		1 do do Chats Slide.....	5 0	0 5 0
do 20	John Foran.....	49 do from head of Calumet to foot of Chaudière.....	12 6	30 12 6
do do	Wm. Craig.....	48 do do do do....	do	30 0 0
do do	do.....	34 do from head of Portage du Fort to foot of Chaudière.....	8 9	14 17 6
do do	do.....	3 do through Chaudière Slide....	5 0	0 15 0
do do	Samuel Lowe.....	79 do from head of the Chats to foot of Chaudière.....	7 6	29 12 6
do do	David T. Browne....	62 do from head of Arnprior to foot of Chaudière.....	8 9	27 2 6
do 21	Taylor & Carswill....	101 do from head of Calumet to foot of Chaudière.....	12 6	63 2 6
do do	John Poupore.....	63 do do do do....	do	39 7 6
do do	Masson, Bruyere, Thomas & Co.....	80 do from head of the Chats to foot of Chaudière.....	7 6	30 0 0
do do	Solomon Jones.....	1 do through Chaudière Slide....	5 0	0 5 0
do do	James Skead.....	59 do from head of Calumet to foot of Chaudière.....	12 6	36 17 6
do do	do.....	80 do from head of High Falls Madawaska to foot of Chaudière....	17 6	70 0 0
		6 do head of High Falls to Chats Lake.....	10 0	3 0 0
do do	John Brown.....	9 do through Chaudière Slide....	5 0	2 5 0
		30 Cribs squared timber from head of High Falls Madawaska to foot of Chaudière.....	17 6	26 5 0
		55 do from head of the Chats to foot of Chaudière.....	7 6	20 12 6
		1 do through Chats Slide.....	5 0	0 5 0
		Carried over.....		1322 10 0

## WOODS AND FORESTS—Return of Tolls accrued from Ottawa Slides and Works during the year 1856.

Date.	Names of Owners of Timber.	Slides passed through.	Rate of Slidage.	Amounts Accrued.
	r. Masse Agent, (Continued.)	Brought over.....	s. d.	£ s. d.
1856.				1322 10 0
June 23	Hugh Carmichael....	69 Cribs from head of Portage du Fort to foot of Chaudière.....	8 9	30 3 9
		1 do through Calumet Slide....	5 0	0 5 0
		1 do do Chats do.....	5 0	0 5 0
		1 do do Chaudière do.....	5 0	0 5 0
do do	do.....	78 do from head of Calumet to foot of Chaudière.....	12 6	48 15 0
do 24	Wm. McKay.....	48 do from head of Arnprior to foot of Chaudière.....	8 9	21 0 0
do 25	Hiram Colton.....	69 do from head of Calumet to foot of Chaudière.....	12 6	43 2 6
do do	Widow Al. McCauley.	77 do do do do.....	do	48 2 6
do do	Jos. Aumond.....	49 do do do do.....	do	30 12 6
do do	James Walker.....	73 do do do do.....	do	45 12 6
do do	Wm. & Js. Snedden..	81 do from head of Chats to foot of Chaudière.....	7 6	30 7 6
do do	Arthur McArthur....	82 do from head of Arnprior to foot of Chaudière.....	8 9	35 17 6
do do	Jos. Aumond.....	73 do through Chaudière Slide....	5 0	18 5 0
do 26	Hugh Carmichael....	79 do from head of Calumet to foot of Chaudière.....	12 6	49 7 6
do do	do.....	77 do do do do.....	do	48 2 6
do do	do.....	37 do do do do.....	do	23 2 6
do do	do.....	30 do from head of Portage du Fort to foot of Chaudière.....	8 9	13 2 6
do do	do.....	10 do from head of the Chats to foot of Chaudière.....	7 6	3 15 0
do do	do.....	1 Crib squared timber through Chaudière Slide.....	5 0	0 5 0
do do	Masson, Bruyere, Thomas & Co.....	62 do from head of High Falls to foot of Chaudière.....	17 6	54 5 0
do 27	H. & J. Mair.....	54 do do do do.....	do	47 5 0
		6 do from head of Arnprior to foot of Chaudière.....	8 9	2 12 6
do do	do.....	64 do from head of High Falls to foot of Chaudière.....	17 6	56 0 0
do 28	H. L. Browne.....	42 do from head of Chats to foot of Chaudière.....	7 6	15 15 0
do do	John Egan & Co.....	82 do from head of Calumet to foot of Chaudière.....	12 6	51 5 0
		1 do through Calumet Slide....	5 0	0 5 0
		1 do do Portage du Fort....	2 6	0 2 6
do 30	R. W. Cruice.....	63 do from head of Calumet to foot of Chaudière.....	12 6	39 7 6
July 1	Walter Findlay.....	94 do do do do.....	do	58 15 0
do 2	David Moor.....	28 do from head of Joachim to foot of Chaudière.....	17 6	24 10 0
		25 do from head of Calumet to foot of Chaudière.....	12 6	15 12 6
		Carried over.....		2178 13 9

WOODS AND FORESTS—Return of Tolls accrued from Ottawa Slides and Works during the year 1856.

Date.	Names of Owners of Timber.	Slides passed through.	Rate of Slidge.	Amounts Accrued.
	E. Mâsse, Agent, (Continued.)	Brought over.....	s. d.	£ s. d.
1856.				2178 13 9
July 1	David Moor.....	50 Cribs from head of Calumet to foot of Chaudière.....	12 6	31 5 0
do do	do .....	50 do do do do...	do	31 5 0
do do	Louis Brissard.....	23 do do do do...	do	14 7 6
		33 do from head of Portage du Fort to foot of Chaudière .....	8 9	14 8 9
do do	do .....	73 do from head of Calumet to foot of Chaudière.....	12 6	45 12 6
do do	do .....	57 do do do do...	do	35 12 6
do 3	Benj. McConnell....	69 do do do do...	do	43 2 6
	McConnell & Jolicœur	80 do from head of Joachims to foot of Chaudière.....	17 6	70 0 0
do 5	Robert Conroy.....	102 Cribs squared timber through Chaudière Slide.....	5 0	25 10 0
do do	John Poupore.....	51 do from head of Calumet to foot of Chaudière.....	12 6	31 17 6
		25 do from head of Chats to foot of Chaudière.....	7 6	9 7 6
do do	do .....	1 do through Chats Slide.....	5 0	0 5 0
do do	do .....	61 do from head of Calumet to foot of Chaudière.....	12 6	38 2 6
do 7	John Foran.....	48 do do do do ..	do	30 0 0
		16 do through Chaudière Slide...	do	4 0 0
do 8	Arthur McArthur....	59 do from head of High Falls to foot of Chaudière.....	17 6	51 12 6
		3 do from head of Arnprior to foot of Chaudière.....	8 9	1 6 3
do do	do .....	53 do from head of High Falls to foot of Chaudière.....	17 6	46 7 6
do do	Eusebe Varin.....	33 do through Chaudière Slide...	5 0	8 5 0
do do	John Lynch.....	63 do from head of Calumet to foot of Chaudière.....	12 6	39 7 6
do 9	James McFarlane....	80 do from head of Chats to foot of Chaudière.....	7 6	30 0 0
		27 do through Chaudière Slide..	5 0	6 15 0
do do	John Supple.....	84 do from head of Calumet to foot of Chaudière.....	12 6	52 10 0
do do	Hilliard & Dickson...	54 do from head of Arnprior to foot of Chaudière.....	8 9	23 12 6
do 10	John L. McDougall ..	72 do from head of the Chats to foot of Chaudière.....	7 6	27 0 0
		2 do through Chaudière Slide...	5 0	0 10 0
do 11	John L. Coghlan....	48 do from head of Calumet to foot of Chaudière.....	12 6	30 0 0
		1 do through Chaudière Slide...	5 0	0 5 0
do do	A. H. Dunlop.....	77 Cribs squared timber from head of Calumet to foot of Chaudière	12 6	48 2 6
do do	do .....	59 do do do do...	do	36 17 6
		Carried over .....		3006 1 3

## WOODS AND FORESTS—Return of Tolls accrued from Ottawa Slides and Works during the year 1856.

Date.	Names of Owners of Timber.	Slides passed through.	Rate of Sillage.	Amounts Accrued.
	E. Masse, Agent, (Continued.)	Brought over.....	d. s.	£ s. d. 3006 1 3
1856.				
July 11	D. T. Brown.....	73 Cribs from head of Arnprior to foot of Chaudière.....	8 9	31 18 9
do 15	C. S. Bellows.....	67 do from head of Calumet to foot of Chaudière.....	12 6	41 17 6
do do	John Lynch.....	61 do do do do.....	do	38 2 6
do do	Jos. Aumond.....	77 do do do do.....	do	48 2 6
do 16	H. & J. Mair.....	95 do from head of High Falls to foot of Chaudière.....	17 6	83 2 6
		6 do from head of Arnprior to foot of Chaudière.....	8 9	2 12 6
do do	Daniel O'Meara.....	72 do from head of Calumet to foot of Chaudière.....	12 6	45 0 0
do do	Samuel Dickson.....	60 do from head of Chats to foot of Chaudière.....	7 6	22 10 0
do do	do.....	60 do do do do.....	do	22 10 0
do 18	John Poupore.....	74 do from head of Calumet to foot of Chaudière.....	12 6	46 5 0
		6 do through Chaudière Slide...	5 0	1 10 0
do do	C. & R. McDonell...	72 do from head of Chats to foot of Chaudière.....	7 6	27 0 0
do do	do.....	72 do do do do.....	do	27 0 0
do 23	Joseph Bell.....	74 do from head of Joachins to foot of Chaudière.....	17 6	64 15 0
do do	do.....	61 do do do do.....	do	53 7 6
do do	Alex. McClaren.....	92 do from head of Calumet to foot of Chaudière.....	12 6	57 10 0
do 24	J. & D. Bell.....	76 do do do do.....	do	47 10 0
		8 do from head of Chats to foot of Chaudière.....	7 6	3 0 0
do do	do.....	72 do squared timber from head of Calumet to foot of Chaudière...	12 6	45 0 0
do do	do.....	80 do do do do.....	do	50 0 0
		7 do through Chaudière Slide...	5 0	1 15 0
		7 do do Portage du Fort...	2 6	0 17 6
do 25	Jos. Aumond.....	54 do from head of Joachins to foot of Chaudière.....	17 6	47 5 0
do 26	Alex. Horn.....	63 do from head of Chats to foot of Chaudière.....	7 6	23 12 6
do do	William Rice.....	64 do do do do.....	do	24 0 0
do do	G. W. Osborne.....	49 do Deals from head of the Chats to foot of Chaudière.....	10 0	24 10 0
do do	John Gillies.....	58 do squared timber from head of the Chats to foot of the Chaudière.....	7 6	21 15 0
do do	Alex. Caldwell.....	63 do do do do.....	do	23 12 6
do do	do.....	64 do do do do.....	do	24 0 0
do 28	C. & R. McDonell...	37 from head of Calumet to foot of Chaudière.....	12 6	23 2 6
		17 do from head of Chats to foot of Chaudière.....	7 6	6 7 6
		Carried over.....	.....	3985 12 6

## WOODS AND FORESTS—Return of Tolls accrued from Ottawa Slides and Works during the year 1856.

Date.	N mes of Owners of Timber.	Slides passed through.	Rate of Sillage.	Amounts Accrued.
			s. d.	£ s. d.
	E. Masse, Agent, (Continued.)	Brought over.....	...	3995 12 6
1856.				
July 28	J. & D. Bell.....	27 Cribs from head of Joachins to foot of Chaudière.....	17 6	23 12 6
		33 do from head of Calumet to foot of Chaudière.....	12 6	20 12 6
		75 do from head of Joachins to foot of Chaudière.....	17 6	65 12 6
		78 do do do do...	do	68 5 0
do 30	C. & R. McDonell....	81 do from head of Chats to foot of Chaudière.....	7 6	30 7 6
do do	do .....	90 do from head of Calumet to foot of Chaudière.....	12 6	56 5 0
August, 1	J. E. Babcock & Co..	Boomage of 1488 pieces of White Pine at Gatineau Booms.....	0 2	12 8 0
do do	John & W. McLean..	14 Cribs squared timber from head of Calumet to foot of Chaudière...	12 6	8 15 0
		1 do through Chaudière Slide...	5 0	0 5 0
do 2	John Egan & Co.....	55 do do do do...	do	13 15 0
do do	do .....	48 do do do do...	do	12 0 0
do do	do .....	58 do do do do...	do	14 10 0
do do	do .....	109 do from head of Chats Slide to foot of Chaudière.....	7 6	40 17 6
do 5	James Skead.....	61 do from head of High Falls to foot of Chaudière.....	17 6	53 7 6
		3 do from head of High Falls to Chats Lake.....	10 0	1 10 0
do do	do .....	2 do through Chats Slide.....	5 0	0 10 0
		56 do from head of High Falls to foot of Chaudière.....	17 6	49 0 0
		5 do from head of Arnprior to foot of Chaudière.....	8 9	2 3 9
		2 do through Chaudière Slide...	5 0	0 10 0
do do	do .....	60 do from head of High Falls to foot of Chaudière.....	17 6	52 10 0
		2 do through High Falls Slide...	7 6	0 15 0
do do	John L. McDougall ..	42 do from head of Arnprior to foot of Chaudière.....	8 9	18 7 6
		23 do from head of Chats to foot of Chaudière.....	7 6	8 12 6
do do	John Supple.....	94 from head of Calumette to foot of Chaudière.....	12 6	58 15 0
do do	do .....	94 do do do do...	do	58 15 0
do 6	Benj. McConnell.....	61 do do do do...	do	38 2 6
do do	John Curry.....	78 do do do do...	do	48 15 0
		1 do through Chaudière Slide...	5 0	0 5 0
do 7	Geo. & Wm. Aird....	74 Cribs squared timber from head of High Falls to foot of Chaudière.....	17 6	64 15 0
	do .....	74 do do do do...	do	64 15 0
		Carried over.....	...	4874 6 9

## WOOD AND FORESTS—Return of Tolls accrued from Ottawa Slides and Works during the year 1856.

Date.	Names of Owners of Timber.	Slides passed through.	Rate of Slidage.	Amounts Accrued.		
				£	s.	d.
	E. Masse, Agent, (Continued.)	Brought over.....	s. d.	4874	6	9
1856						
Augt. 7	C. & R. McDonell ...	78 Cribs from head of the Chats to foot of Chaudière.....	7 6	29	5	0
do do	do	72 do do do do...	do	27	0	0
do do	do	70 do do do do...	do	26	5	0
do do	do	1 do through Chats Slide.....	5 0	0	5	0
do 8	Robert Skead.....	70 do from head of Chats to foot of Chaudière.....	7 6	26	5	0
	do	62 do do do do...	do	23	5	0
	do	75 do do do do...	do	28	2	6
do do	Elliot Johnston.....	81 do do do do...	do	30	7	6
do do	Robert Kernachan.....	68 do do do do...	do	25	10	0
do 9	Roderick Ryan.....	82 do squared timber from head of Joachims to foot of Chaudière.	17 6	71	15	0
		1 do from head of Calumet to foot of Chaudière.....	12 6	0	12	6
do do	do	85 do from head of Joachims to foot of Chaudière.....	17 6	74	7	6
do 11	C. & R. McDonell. ...	72 do from head of the Chats to the foot of Chaudière....	7 6	27	0	0
do 13	James P. Moffatt.....	64 do do do do...	do	24	0	0
		68 do from head of Calumet to foot of Chaudière.....	12 6	42	10	0
		76 do do do do...	do	47	10	0
		1 do through Calumet.....	5 0	0	5	0
do do	do	1 do do Portage du Fort...	2 6	0	2	6
do do	do	77 do from head of Calumet to foot of Chaudière.....	12 6	48	2	6
do 14	William Morris.....	88 Cribs squared timber from head of Armprior to foot of Chaudière.	8 9	38	10	0
do do	John Supple.....	80 do from head of Calumet to foot of Chaudière.....	12 6	50	0	0
do 15	John Egan & Co.....	77 do from head of Chats to foot of Chaudière.....	7 6	28	17	6
do do	do	43 do do do do...	do	16	2	6
do do	do	64 do from head of High Falls to foot of Chaudière.....	17 6	56	0	0
do do	do	51 do from head of Calumet to foot of Chaudière.....	12 6	31	17	6
do do	do	6 do from head of Portage du Fort to foot of Chaudière.....	8 9	2	12	6
do 22	L. M. Coullée.....	1 do from head of Chats to foot of Chaudière.....	7 6	0	7	6
	Peter White.....	4 do through Chaudière Slide...	5 0	1	0	0
		95 do from head of Calumet to foot of Chaudière....	12 6	59	7	6
do 27	Wm. Moffatt.....	42 do from head of Joachims to foot of Chaudière.....	17 6	36	15	0
do do	do	41 do do do do...	do	35	17	6
		Carried over.....		5784	4	3

## WOODS AND FORESTS—Return of Tolls accrued from Ottawa Slides and Works during the year 1856.

Date.	Names of Owners of Timber.	Slides passed through.	Rate of Sillage.		Amounts Accrued.		
			s.	d.	£	s.	d.
1856.	E. Masse, Agent, (Continued.)	Brought over .....	.....	.....	5784	4	3
Augt. 28	Joseph Aumont .....	Boomage of 368 pieces squared timber at Gatineau Boom.....	0	2	3	1	4
do do	do .....	do of 14 pcs. flatted do do..	0	1	0	1	2
do do	do .....	58 Cribs squared timber from head of Calumet to foot of Chaudière.	12	6	36	5	0
do do	do .....	1 do through Chaudière Slide..	5	0	0	5	0
do do	do .....	64 do from head of Calumet to foot of Chaudière.....	12	6	40	0	0
do do	Ben. McConnell.....	14 do do do do do..	do	do	8	15	0
do do	do .....	1 do from head of Chats to foot of Chaudière.....	7	6	0	7	6
Sept. 1	Robert Thompson....	32 Cribs squared timber through Calumet Slide.....	3	9	6	0	0
do do	do .....	66 do from head of Calumet to foot of Chaudière.....	12	6	41	5	0
do do	C. & R. McDonnell..	51 do from head of the Chats to foot of Chaudière.....	7	6	19	2	6
do do	do .....	53 do do do do do..	do	do	19	17	6
do do	John Egan & Co.....	56 do do do do do..	do	do	21	0	0
do do	do .....	59 do from head of High Falls to foot of Chaudière.....	17	6	51	12	6
do 2	Robert Conroy.....	61 do do do do do..	do	do	56	0	0
do do	do .....	72 do do do do do..	do	do	63	0	0
do do	do .....	93 do do do do do..	do	do	81	7	6
do do	do .....	27 do from head of Arnprior to foot of Chaudière.....	8	9	11	16	3
do 3	Ira Mason.....	80 do from head of Calumet to foot of Chaudière.....	12	6	50	0	0
do do	do .....	76 do do do do do..	do	do	47	10	0
do do	do .....	1 do through Calumet Slide.....	5	0	0	5	0
do 8	McKay & Robertson..	76 do from head of High Falls to foot of Chaudière.....	17	6	66	10	0
do do	do .....	82 do do do do do..	do	do	71	15	0
do do	Daniel McLachlin....	67 do do do do do..	do	do	58	12	6
do do	do .....	64 do do do do do..	do	do	56	0	0
do do	do .....	71 do do do do do..	do	do	62	2	6
do do	do .....	61 do do do do do..	do	do	53	7	6
do do	do .....	1 do from head of High Falls to Chat's Lake.....	10	0	0	10	0
do do	do .....	1 do through Chats Slide.....	5	0	0	5	0
do do	do .....	71 do from head of High Falls to foot of Chaudière Slide.....	17	6	62	2	6
do 9	Wm. Morris.....	120 Cribs squared timber from head of Calumet to foot of Chaudière.	12	6	75	0	0
do do	do .....	3 do through Calumet.....	5	0	0	15	0
do do	do .....	3 do do Portage du Fort..	2	6	0	7	6
do do	do .....	2 do do Chats.....	5	0	0	10	0
do do	do .....	72 do from head of Calumet to foot of Chaudière.....	12	6	45	0	0
Carried over .....					6894	13	0

## WOODS AND FORESTS—Return of Tolls accrued from Ottawa Slides and Works during the year 1856.

Date.	Names of Owners of Timber.	Slides passed through.	Rate of Slidage.	Amounts Accrued
1856.	E. Mâsse, Agent, (Continued.)	Brought over.....	s. d.	£ s. d. 6894 13 0
Sept. 10	John Supple.....	93 Cribs squared timber from head of Calumet to foot of Chaudière.	12 6	58 2 6
do 15	Philip Thompson....	1 do through Chaudière Slide.	5 0	0 5 0
do do	Wm. T. Aylen.....	Boomage of 6718 Saw Logs at Gatineau Boom.....	1 2	13 19 11
do do	do .....	80 Cribs squared timber from head of Calumet to foot of Chaudière.	12 6	50 10 0
do 24	G. W. Osborne.....	84 do do do do...	do	52 10 0
Oct. 1	do .....	51 do Deals from head of the Chats to foot of Chaudière.....	10 0	25 10 0
do 8	Alex. McIntosh.....	1 do squared timber do do...	7 6	0 7 6
do 27	G. B. Hall's Estate...	50 do Deals from head of the Chats to foot of the Chaudière.	10 0	25 0 0
do 28	John Egan & Co.....	2 do squared timber through Chaudière Slide.....	5 0	0 10 0
Nov. 1	Hamilton Brothers....	Boomage of 26,065 Saw Logs at Gatineau Boom.....	0 ½	54 6 0½
do 22	Harris & Brownson...	83 Cribs Saw Logs through Arnprior Slide.....	2 6	10 7 6
do 29	J. M. Currier & Co...	44 do Deals through Chaudière Slide.....	7 6	16 10 0
Dec. 18	Gilmour & Co.....	Boomage at Gatineau Boom of 71,693 Saw Logs.....	0 ½	149 7 2½
		do of 53 pcs. squared timber.	0 2	0 8 10
		do do do do...	0 ½	9 7 11
		19,242 Saw Logs.....	0 ½	40 1 9
		355 Cribs squared timber from head of Calumet to foot of Chaudière..	12 6	221 17 6
		414 do from head of High Falls Madawaska, to foot of Chaudière	17 6	362 5 0
		81 do do from head of Joachins to foot of Chaudière.....	17 6	70 17 6
		1 do through Calumet Slide.....	5 0	0 5 0
		1 do do Chats Slide.....	5 0	0 5 0
		42 do do Chaudière Slide..	do	10 10 0
		Total accrued.....		8067 7 2
		Of which per McL. Stewart.....		7054 3 4
		do himself.....		1013 4 2
				8067 7 6

WOODS AND FORESTS—Return of Tolls accrued from St. Maurice Slides and Works during the year 1856.

Date.	Names of Owners of Timber.	Slides passed through	Rates of Slidage.	Amount accrued.
1856	C. H. Godby, Agent.			<p style="text-align: right;">£ s. d.</p>
	T. McDougall .....			9 3 6
	A. Gilmour & Co. ....			3 18 0
	G. B. Hall. ....			115 18 11
	E. Quinn & Co. ....			48 17 0
	G. Baptist. ....			125 6 3
	W. Price. ....			0 16 0
	St. Maurice Lumber Company. ....			236 17 6
		Total accrued. ....		540 16 2

Note:—The Slides on the St. Maurice being of recent date, and the Office not yet entirely organized, the details are not given in full.

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APPENDIX P.

PART THIRD.

TRANSACTIONS OF SUPERVISOR OF CULLERS'  
DEPARTMENT.

WILLIAM QUINN,	-	-	-	Supervisor,	Quebec.
GEORGE COLLER,	-	-	-	Deputy do	Sorel.
CHS. E. BELLE,	-	-	-	do do	Montreal.

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**B.—WOODS AND FORESTS—Statement of Lumber Measured, Culled and Counted at the Port of Quebec, through the Office of the Supervisor of Cullers during the season of 1856.**

	PIECES.	Measured off.	TONS.	s. d.	£ s. d.
White Pine	274617	do	447054 <sup>26</sup> / <sub>100</sub>		
Basswood	218	do	280 <sup>32</sup> / <sub>100</sub>		
Butternut	62	do	68 <sup>25</sup> / <sub>100</sub>		
White Wood	35	do	44 <sup>10</sup> / <sub>100</sub>		
		Total	447447 <sup>36</sup> / <sub>100</sub>	2 <sup>3</sup> / <sub>4</sub>	5127 0 2
Red Pine	57416	do	60777 <sup>20</sup> / <sub>100</sub>		
Oak	17449	do	32005 <sup>0</sup> / <sub>100</sub>		
Elm	32571	do	30161 <sup>4</sup> / <sub>100</sub>		
Ash	2165	do	2416 <sup>32</sup> / <sub>100</sub>		
Tamarac	21729	do	14817 <sup>3</sup> / <sub>100</sub>		
Birch	3293	do	1390 <sup>23</sup> / <sub>100</sub>		
Maple	67	do	74 <sup>18</sup> / <sub>100</sub>		
Beech	15	do	12 <sup>28</sup> / <sub>100</sub>		
Hemlock	1330	do	989 <sup>31</sup> / <sub>100</sub>		
Spruce	26	do	26 <sup>0</sup> / <sub>100</sub>		
Walnut	1228	do	829 <sup>3</sup> / <sub>100</sub>		
			143522 <sup>20</sup> / <sub>100</sub>	3 <sup>3</sup> / <sub>4</sub>	2242 10 10
White Pine	1924	Culled and Measured, or Measured in Shipping order	2952 <sup>3</sup> / <sub>100</sub>	5 <sup>3</sup> / <sub>4</sub>	66 2 3
Red Pine	14	do	15 <sup>10</sup> / <sub>100</sub>	6 <sup>1</sup> / <sub>4</sub>	0 8 1
Elm	1143	do	920 <sup>8</sup> / <sub>100</sub>		
Ash	3	do	3 <sup>0</sup> / <sub>100</sub>		
Tamarac	9	do	4		
Birch	848	do	264 <sup>30</sup> / <sub>100</sub>		
		Total	1192 <sup>10</sup> / <sub>100</sub>	7 <sup>1</sup> / <sub>2</sub>	35 8 0

		Counted off	do	do	do	per 100 pieces.
Oars	1040	do	do	do	do	2 6 10
Oars	61476	do	do	do	do	35 17 3
Masts and Bowsprits	728	24 inches and upwards, each	do	do	do	139 10 8
do	683	19 to 24 inches, each	do	do	do	110 19 9
do	107	12 to 19 do	do	do	do	11 11 10
Spars, Red Pine	80	19 to 24 do	do	do	do	13 0 0
do	1492	12 to 19 do	do	do	do	161 12 8
Spars, Spruce	31	do	do	do	do	3 7 2
Staves, Standard	1603	1,235m. 4c. 2qrs.—27 pieces: per mille	do	do	do	895 14 4
do West India	1,339 682	940m. 1c. 3qrs.—26 pieces: per mille	do	do	do	297 14 7
Deals	1,128 238	Culled 1,920,577 <sup>32</sup> / <sub>100</sub> standard pieces per 100 stl.	do	do	do	2720 16 4
do	1,721 021	Counted 333,565 <sup>24</sup> / <sub>100</sub> standard pieces per 100 stl.	do	do	do	97 5 11
Planks and Boards	277,234	Culled per 100 pieces	do	do	do	263 16 0
do	263,081	Counted do	do	do	do	24 6 7
Lathwood	29,195	Counted and culled per cord	do	do	do	219 19 10
	2,639 <sup>24</sup> / <sub>100</sub>		do	do	do	12469 9 1
						12 11 9
						12482 0 10
						96 18 7
						12385 2 3

Returned outstanding as per Statement B of 31st December, 1855, £278 17:—6 since received.

Remaining outstanding this present season.

**OUTSTANDING.**

Outstanding year 1855	£266 5 9
do present year 1856	96 18 7
Total outstanding	363 4 4

**C.—STATEMENT of Fees paid to Cullers in their respective Departments, for work performed during the season of 1856:**

Department.	Culler's Name, &c.	Voucher.	Amount.			Total.						
			£	s.	d.	£	s.	d.				
Sq. Timber. .... Masts, Spars, &c. }	Ig. A. Dorval. ....	1	343	1	2	862	9	4				
	Olivier Gaboury. ....	2	278	11	10							
	Alexis Dorval. ....	3	240	16	4							
Sq. Timber. ....	Joseph Larose. ....	4	229	8	11	4484	0	1				
	Pierre McNeil. ....	5	213	17	0							
	Olivier Gauvreau. ....	6	211	5	2							
	Denis Cantilloa. ....	7	209	4	1							
	J. S. Waterson. ....	8	200	4	5							
	Thomas Redmond. ....	9	196	5	7							
	Edward Verreault. ....	10	194	16	9							
	James Scott. ....	11	189	18	11							
	N. Valin. ....	12	181	14	11							
	Peter Gilgan. ....	13	179	18	3							
	J. B. Vachon. ....	14	172	12	10							
	Jas. Lynch. ....	15	171	5	2							
	William Duggan. ....	16	168	15	0							
	John Clark. ....	17	168	1	0							
	Joseph Lockquell. ....	18	167	1	5							
	John O'Sullivan. ....	19	163	10	9							
	Louis Dorion. ....	20	161	2	11							
	Pierre Jennest. ....	21	159	2	11							
	William Bee. ....	22	158	13	6							
	Denis Dnggan. ....	23	155	1	8							
	Jacques Jobin. ....	24	154	0	11							
	Henry McPeak. ....	25	146	1	2							
	F. X. Béland. ....	26	137	7	6							
	Robt. Russell, part of season. ....	27	107	0	2							
	Stephen Lambert, do. ....	28	105	17	7							
	Thomas Murphy, do. ....	29	85	18	11							
	John Miller, Shipp. Culler. ....	30	50	4	6							
	George Miller, do. ....	31	44	18	0							
	Ml. Quirk, do. ....	32	0	10	2							
	Sq. timber, deals, boards, blanks and lathwood. }	Jean Bornais. ....	33	116	18				9	224	19	4
		J. B. Jarnac. ....	4	108	0				7			
	Deals, boards, planks & lathwood }	F. X. Thompson. ....	35	340	1				8	5571	8	9
Thos. Wilson. ....		36	267	19	5							
Thos. Malone. ....		37	265	10	9							
Michl. Power. ....		38	232	4	1							
Michel Hamel. ....		39	230	18	9							
Benjamin Lockquell. ....		40	212	6	5							
James Myler. ....		41	188	0	10							
Patrick Malone. ....		42	172	0	5							
Charles Couture. ....		43	159	13	8							
William McKutcheon. ....		44	153	12	1							
Maurice Malone. ....		45	138	6	4							
Jean Couture. ....		46	112	2	3							
Peter Gilley. ....		47	98	12	2							
Jérôme Couture. ....		48	95	16	1							
Carried forward. ....	.....	2667	4	11	5571	8	9					

## STATEMENT of Fees paid to Cullers', &amp;c.—Continued.

Department.	Culler's Name, &c.	Voucher.	Amount.	Total.
Carried over.....			2667 4 11	5571 8 9
Deals, boards, planks & lathwood. }	Michl. Murphy.....	49	93 5 0	
	Thos. Clark, Shipg. Culler.....	50	12 18 4	2773 8 3
Staves.....	M. Gibbons.....	51	120 18 0	
	Jos. Frederick.....	52	103 14 4	
	Barthe. Chartier.....	53	91 16 1	
	Louis Myrand.....	54	83 8 2	
	Wm. O'Brien.....	55	82 19 10	
	Jacques Villeneuve.....	56	80 18 1	
	John Curtin.....	57	79 10 0	
	Chas. Corneau.....	58	78 17 10	
	Rob't. Boyle.....	59	76 14 6	
	Jos. Langlois.....	60	74 11 4	
	Clément Giroux.....	61	74 3 3	
	J. B. Philbert.....	62	73 2 7	
	Martin O'Brien, part of season...	63	14 6 3	
				1035 0 3
				9379 17 3

N. B.—The amount paid to Cullers, as per detailed Statement, is the gross amount of their respective earnings, out of which they have to pay agreeably to the 17th clause of the Act, their attendants and assistants, as all other expenses inseparable from the execution of their duties.

**D.—WOODS AND FORESTS—Statement of Salaries paid to Clerks employed in the Office of the Supervisor of Cullers, Quebec, for the year ending the 31st December 1856.**

Name.	Office.	Department.	Term of Engagement.	No. of Voucher.	Salaries.		Amount.
					£	s. d.	
Mathew Harbeson	Head Clerk & Deputy Supervisor		12 Months Salary ending 31st Dec. 1856.	64	360	0 0	2519 7 6
Charles S. Graddon	Cashier		do	65	300	0 0	
Alexander Fraser	Book-keeper		do	66	300	0 0	
John J. Cooke	Specification Clerk	Timber Department	Season 1st May to 20th November 1856.	67	181	5 0	
John O'Kane	do	do	do do 31st December 1856.	68	200	0 0	
Alexander McGillis	do	Deal Department	do do do	69	193	15 0	
James Prendergast	do	Timber Department	do do 15th November 1856.	70	150	0 0	
Pierre Miller	do	do	12 Months Salary ending 31st Dec. 1856.	71	171	17 6	
Francis Quinn	do	Deal Department	Season 1st May to do	72	137	10 0	
Oct. Vézina	do	Timber Department	do do do	73	125	0 0	
James O'Leary	do	do	do do do	74	125	0 0	
Thad Walsh	do	do	do do do	75	100	0 0	
W. A. Launière	do	do	do do to 8th Nov. 1855.	76	100	0 0	
L. Hearne	do	do	do do to 1st Dec. 1856.	77	75	0 0	
Edward Duggan			Casual as engaged from time to time	78	25	10 0	
Hy. Temple			do do	79	23	1 10	
P. H. Marchand			do do	80	18	17 6	
E. O'Brien			do do	81	14	1 6	
J. Galna			do do	82	6	1 10	
J. B. Charlton			do do	83	32	7 6	
							2639 7 8

**G.—WOODS AND FORESTS.**—AMOUNT of Bonus paid Clerks in Supervisor of Cullers's Office, Quebec, for the year 1854, as per letter of the Commissioner of Crown Lands, dated Toronto, 2nd December, 1856.

NAME.	Salaries,			Bonus		
	1854.			Now paid.		
	£	s.	d.	£	s.	d.
Mathew Harbeson.....	300	0	0	75	0	0
Charles Graddon.....	250	0	0	62	10	0
Alexander Fraser.....	250	0	0	62	10	0
John Y. Cooke.....	145	0	0	36	5	0
Edward Byrne.....	150	0	0	37	10	0
John O'Kane.....	160	0	0	40	0	0
Alexander McGillis.....	155	0	0	38	15	0
James Prendergast.....	120	0	0	30	0	0
Pierre Miller.....	110	0	0	27	10	0
Jeremiah Crolly.....	110	0	0	27	10	0
Francis Quinn.....	100	0	0	25	0	0
James Vaughan.....	100	0	0	25	0	0
Thomas Kelly.....	100	0	0	25	0	0
Octave Vézina.....	60	0	0	15	0	0
James O'Leary.....	60	0	0	15	0	0
Charles Miller.....	45	0	0	11	5	0
Thaddeus Walsh.....	30	0	0	7	10	0
Henry Temple.....	30	0	0	7	10	0
Charles Jordan, Messenger.....	80	0	0	20	0	0
Total.....	2355	0	0	588	15	0

These sums form a Bonus of one Quarter's Salary allowed for the year 1854.



WOODS AND FORESTS—Statement of Timber Measured, Culled and Counted at Lachine, through the Office of the Deputy Supervisor of Cullers, during the season of 1856.

QUANTITY AND DESCRIPTION OF TIMBER.

	Square.		Flatted.		Round.		Saw Logs.	
	Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.	Pieces.	Number.
	White Pine.....	5,286	250,417	2,932	92,829			
Red Pine.....	24	830						
Oak.....	321	16,645	121	3,427				
Elm.....	194	6,753	186	6,651				
Birch.....	10	343						
Ash.....	104	3,682	18	625				
Tamarac.....	155	4,691	319	11,038				
Basswood.....	10	484						
Maple.....	18	602	6	177				
Hemlock.....	20	598						
Cedar.....							2,042	68,577
Saw Logs.....								2,039
	6,142	265,045	3,582	114,747	2,042	68,577	2,042	2,089

Number of Rafts, 38.

## WOODS AND FORESTS.—Statement of Timber measured at Sorel, of 1856, and Section of the

SECTION OF PROVINCE.	White Pine.		Red Pine.		Oak.	
	Pieces.	Feet.	Pcs.	Feet.	Pcs.	Feet.
Ottawa—Allumette Island.....	1323	68216	103	3076		
Clarence Township.....	2194	91995			9	187
St. Lawrence—Lake Erie.....	6	529			103	9004
	3523	160740	103	3076	112	9191

through the Office of the Deputy Supervisor of Cullers, during the Season Province where produced.

Elm.		Ash.		Tamarac.		Birch.		Maple.		Basswood.	
Pcs.	Feet.	Pcs.	Feet.	Pcs.	Feet.	Pcs.	Feet.	Pcs.	Feet.	Pcs.	Feet.
										1	35
36	1197	49	1839	315	8635	17	363	12	435	30	1329
36	1197	49	1839	315	8635	17	363	12	435	31	1364

## WOODS AND FORESTS.—General Statement of Receipts and Disbursements for Measuring and Culling Timber at Sorel, through the Office of the Deputy Supervisor of Cullers, during the Season of 1856.

	A.	£ s. d.	£ s. d.
To Gross Receipts for Measuring Timber, per Statement.....			
3523 Pieces White Pine, 4018 $\frac{2}{10}$ Tons			
31 do Basswood, 344 $\frac{0}{10}$ do			
3554 Pieces 4052 $\frac{24}{10}$ Tons at 2 $\frac{1}{2}$ d.		46 8 9	
103 Pieces Red Pine, 763 $\frac{9}{10}$ Tons.			
112 do Oak, 229 $\frac{31}{10}$ do			
36 do Elm, 29 $\frac{7}{10}$ do			
49 do Ash, 45 $\frac{89}{10}$ do			
315 do Tamarac, 215 $\frac{35}{10}$ do			
17 do Birch, 9 $\frac{3}{10}$ do			
12 do Maple, 10 $\frac{35}{10}$ do			
644 Pieces 618 $\frac{18}{10}$ Tons at 3 $\frac{1}{2}$ d.		9 13 3	
			56 2 0
To Cash received from William Quinn, Supervisor of Cullers, Quebec, to balance account.....			298 5 4
			354 7 4

ments for Measuring and Culling Timber at Sorel, through the Office of the Deputy Supervisor of Cullers, during the Season of 1856.

	Vouchers.	£ s. d.	£ s. d.
By paid Culler's Fees—Robert Russell, Culler.....	1		38 2 0
By paid P. W. Ronald for services as Specification Clerk, as required.....	2		5 0 0
By paid Michael Morgan, rent of Office for Season..	3		7 10 0
By paid Middleton & Dawson, for Stationery.....	4		2 7 4
By paid sundry Charges and Expenses, as per Statement.....	5		1 8 0
By paid for my Salary for services as Deputy Supervisor of Cullers for Sorel, and for recording and reporting Crown Dues on Timber exported via Sorel, from 1st January to 31st December.....			300 0 0
			354 7 4

APPENDIX

Return of the number of Acres Sold, and the amount received of the one Million Acres

Date.	Acres.	Price.	RECEIPTS.					Government. Principal.
			Principal.	Rent.	Interest.	Saugeen Road Fees.		
1851.....	52611	s. d. 12 6	£ s. d. 5561 7 10	£ s. d. 7 8 9	£ s. d. 13 4 10	£ s. d. .....	£ s. d. 1025 16 4	
1852.....	61243	12 6 to	7204 18 11	5 5 1	122 19 11	.....	4428 0 0	
1853.....	177483½	10 0	21605 0 0	35 0 3	424 19 7	105 0 0	17423 15 6	
1854.....	304985½	10 0	25212 15 11	226 11 0	642 11 2	.....	23493 16 4	
1855.....	312393	10 0	40700 1 8	24 1 11	2096 9 11	.....	37404 14 8	
1856.....	47725	10 0	22487 5 0	643 3 6	1906 1 0	.....	19928 9 3	
Town & Park lots }	956441 4421½		122771 9 4	941 10 6	5206 6 5	105 0 0	103704 12 1	
	960862½							
	39137½		Balance remaining unsold.					

RECAPITULATION

RECEIPTS.

Principal.....	122771 9 4
Rent.....	941 10 6
Interest.....	5206 6 5
Saugeen Road Fees.....	105 0 0
	£129024 6 3

Crown Lands Department,  
Toronto, 31st December, 1856.

Q.

on Sale of School Lands under 12 Vic. cap. 200, being part appropriated for Common Schools.

PAYMENTS.							
Government. Rent.	Government. Interest.	Saugeen Road.	Surveys.	Commis- sion. Principal.	Commis- sion. Rent.	Commis- sion. Interest.	Disburse- ments and Sundries.
£ s. d. 6 19 10	£ s. d. 12 9 0	£ s. d.	£ s. d. 4183 5 4	£ s. d. 333 13 8	£ s. d. 0 8 11	£ s. d. 0 15 10	£ s. d. 18 12 6
4 18 11	115 12 0		2342 17 11	432 5 8	9 6 2	7 7 11	1 15 4
32 18 3	399 9 8	1888 5 9	1093 9 9	1303 7 0	2 2 0	25 9 11	1 2 0
212 19 2	604 0 2		154 17 0	1512 15 4	13 11 10	38 11 0	51 7 3
22 13 1	1969 4 2		818 4 11	2442 0 1	1 8 10	125 15 9	36 12 0
604 11 9	1791 13 8		984 11 2	1349 4 7	38 11 9	114 7 4	225 0 0
885 1 0	4892 8 8	1888 5 9	9577 6 1	7373 6 4	56 9 6	312 7 9	334 9 1

TOTAL.

PAYMENTS.

Amount transferred to Government on account of Principal.....	103704 12 1
“ “ “ “ Rent.....	885 1 0
“ “ “ “ Interest.....	4892 8 8
Total transferred to Government.....	109482 1 9
Amount paid on account of Saugeen Road.....	1888 5 9
“ “ Surveys.....	9577 6 1
“ “ Commission—Principal.....	7373 6 4
“ “ “ Rent.....	56 9 6
“ “ “ Interest.....	312 7 9
“ “ “ Disbursements.....	334 9 1
	£129024 6 3

JOSEPH CAUCHON,  
Commissioner of Crown Lands.

## APPENDIX R

SIR,

I have the honor to lay before you the following report of my progress upon the base or exploratory line, on the North shore of Lake Huron, performed by me under your instructions, extending from Sturgeon River, emptying into Lake Nipissing, to the Spanish River, emptying into Lake Huron, the most Westerly point reached this season.

In my report of September 26th, I mentioned to you that my progress had been seriously retarded by the inclemency of the weather, the season having been unusually wet. This continued to the morning of the third of October, when a change for the better enabled me to proceed more expeditiously with my work. In the same report I stated that I intended, provided it met with your approval, to prosecute this service during the winter; but not being able to engage men to accompany me, I was reluctantly compelled to abandon the undertaking.

In laying my report before you I shall first give a general sketch of the proceedings of the party during the summer, and then describe as accurately as my abilities will allow me, the nature of the country surveyed and explored, its natural resources, and its adaptation to purposes of settlement.

In my report of last year I stated that I felt confident a country, possessing such vast natural advantages, would not long remain in a state of primeval wildness, but that it would soon become a source of revenue to our Province. To this opinion, Sir, I still adhere, as although traversing and examining, this season, a different section from that crossed and explored in 1855, I yet see no reason to change the opinion I then formed.

On the tenth of June, leaving Penetanguishine, the extreme point of civilization at present in this section, I reached French River on the 16th of that month, where discharging my supplies from the bateau, and sending an officer in charge of her to Penetanguishine, for further necessaries, with orders to meet me at Waddell's Mill on the 1st of July, I ascended French River, crossed Lake Nipissing, and proceeded up Sturgeon River to the point from which I had been instructed to commence my survey. I was here detained several days arranging my party, during which time I was engaged in taking a series of astronomical observations for the purpose of obtaining the Latitude and regulating my watches, and on the twenty-sixth of the month, with the kind assistance of Mr. Murray, Assistant Provincial Geologist, I was enabled to get a set of lunar observations, from which I hope to be able to deduce the Longitude of the mouth of the Sturgeon River.

From the point of commencement in Latitude  $46^{\circ} 22' 9''$  N., by observation, immediately below the first fall which impedes the navigation of the Sturgeon River, I produced the line West, noting at intervals the variation of the magnet, and planting a post of cedar at the end of six miles, with the distance from the post at the point of commencement marked thereon, and this system, I would here remark, was adopted throughout the survey, cairns of stone, where practicable, being piled round them, and the bearings and distances of trees taken.

On reaching the River Bueve, seven and a quarter miles from Sturgeon River, I left Mr. Johnston, with an explorer, two chain bearers and eight axe and packmen, instructing him to push forward as expeditiously as possible; and with two canoes proceeded to the extreme North-westerly end of Lake Nipissing, whence running a loose line into the required Latitude I deposited a supply of provisions. From this descending the French River I proceeded to Waddell's Mill on the River Mah:zenazing, a small stream emptying into "Collin's Inlet," and here taking from my bateau a further supply of provisions, I again pushed into the interior, exploring the river and chain of lakes as far as practicable, and on reaching the Latitude of the Base line, about twelve miles from canoe navigation, I made another depot of supplies and returned to the front, having previously despatched Mr. Mitchell one of my chain bearers, who had been in charge of the bateau, to Shebahonahning to discharge at that post, and from thence to proceed to the Spanish River, and wait further instructions.

Taking a further supply in my canoes from Shebahonahning, I proceeded up the White-fish River, and reached Round Lake on Monday, July 28th, depositing my supplies in the store of the Hon. Hudson's Bay Company, kindly furnished me for that purpose, I commenced the survey of the first Meridian line from Round Lake, in Latitude  $46^{\circ} 20' 25''$  N. This line I produced to Latitude  $46^{\circ} 32' 27''$  N., or to the depth of twelve miles, or two ranges of Townships north of the point at which the Base line, produced from Sturgeon River, would strike the Meridian, taking careful observations to check the bearing, and to determine the variation of the compass. The survey of this line I completed on Tuesday, August 26th, and returned to White-fish Lake. Mr. Johnston not having arrived, I proceeded to the Spanish River, and having secured the provisions taken there by Mr. Mitchell, I returned to the White-fish Lake.

Having now a full party I ran a loose line Eastward from the Meridian line, for eleven miles, carrying in supplies with me, being apprehensive that Mr. Johnston had met with some accident. Not meeting the party at the end of this line, I again returned to the White-fish Lake, and sending Mr. Williams, one of my Assistants with a portion of my party to Waddell's Mill, with instructions to push on to the provision depot, I proceeded with Mr. Mitchell and the remainder of my party, guided by an Indian, through a chain of lakes, towards Nipissing, having, on my return from running the loose line, been informed by an Indian, that Mr. Johnston had run short of supplies. On Friday the 12th September, I met Mr. Jones guided by an Indian lad, advancing in search of me, and joined Mr. Johnston on the Wah-na-pi-ta-siber, a fine River flowing southerly and emptying into French River, on the following evening. For an account of Mr. Johnston's proceedings from the time I parted from him on the River Bueve to this, I beg to refer you to his report, and also to that of Mr. Jones the Explorer, forwarded herewith.

Here taking charge of the line I pushed forward with all expedition to the White-fish Lake, which point I reached on Friday, September 26th. I here discharged Mr. Johnston's chain bearers and three of the party who had been employed.

On Monday, September 29th, we proceeded to the Northerly extremity of the Meridian, and having, by observation again checked the work, I

continued the line west for four miles, here again leaving Mr. Johnston in charge I ascended the Vermillion River, a large tributary emptying into the east branch of Spanish River and supplying Mr. Johnston's party with provisions, I explored this River for several miles, making short excursions inland upon either side. On this service I was employed until October 13th. From this I proceeded to the main branch of the Spanish River and explored it for several miles above the last point laid down by Mr. Murray.

The river being much swollen by the excessive rains of August and September, I could make but slow progress, having only two men, to manage two heavy canoes, aided by Mr. Williams and myself, and on Monday 20th abandoning our canoes I struck inland north, and intersecting the Base line on Friday 24th, reached Mr. Johnston's camp on the same afternoon. The weather which from the 3rd of October, had been most beautiful, again becoming broken and stormy as mentioned in my report of September 26th, I determined to close my work for the season, and sending the party, with the baggage, down the River on a raft, I walked back to my canoes, and proceeding down the Spanish River to the first fall, at which point the bateau had been left by Mr. Mitchell, I secured my canoes for the next season, and reaching Penetanguishine, on Sunday night, November 9th, discharged my party, and arrived at Chatham on Saturday 16th November.

The topographical features, of the section of the country surveyed and examined this season, are very similar to those described in my report of last year, being composed of valleys of good land, varying in width, crossed by ridges of rock.

In the valleys, the soil as before described was of good character being either a fine sandy loam, or a deep deposit of decomposed vegetable matter, with a subsoil of white or blue clay. The ridges varying in height from 40 to 150 feet, were at times clothed with a fine growth of pine and poplar, mixed with birch, maple and hemlock, at others covered with a stunted growth of pine, cypress and red oak, or entirely destitute of vegetation.

Leaving the Sturgeon River, westward, for nine miles, the surface is low and level, but the soil is of good character, being a deep vegetable mould, resting on a whitish blue clay. The timber is mixed and consisting of black and white birch, cedar, tamarac, hemlock, balsam, spruce, black ash, soft maple and elm, with here and there groves of fine red and white pine. But two rock ridges were crossed on this route, their elevation above the level of the plain being slight, the one about one mile Westward, the other two miles eastward of the River Bueve.

For nine miles west from this point the surface of the country is much broken by two ridges of rock; and although the soil in the valleys is of good quality and deep, the frequent occurrence of the ridges renders it less favorable for cultivation; the valleys having a maximum width of sixty chains.

On the next six miles the surface is undulating, the soil a fine sandy loam with a subsoil of clay, and the timber black birch, maple, spruce, ironwood, cedar and balsam, with scattered groves of fine pine. This section I take to be a continuation of the tract I explored last year, lying north from "Owl Point" on French River, and referred to in my report.

Westward from this, for seventeen miles, the surface of the country is rugged and barren, and much broken by rock ridges. The valleys are

narrow, and covered to a great extent with scattered boulders. The rock ranges are higher than those previously crossed, and more difficult of access and as a whole, this section is forbidding and unfavorable for settlement.

From this point to White-fish Lake a distance of 18 miles, the surface, though broken here and there by rock ridges, presents no serious obstacles in the way of settlement. The ridges were generally lofty but easy of approach, and for the most part well timbered; pine of a very fine character being seen throughout the entire route. The valleys were broader than before, the soil being a rich sandy loam, resting on clay, and the timber the same as already described, but generally larger and more thrifty. On this section several lakes and water courses were crossed, the same being a portion of the inland canoe route from Lake Nipissing to the White-fish Lake. The margin of these lakes is generally bold and declivitous, but fringed to the water's edge with a thick and thrifty growth of timber.

The character of the country, on the Meridian line, closely resembles that of the last section of the Base line, from the Wah-na-pi-ta River to White-fish Lake, with the exception that the valleys were broader, and the soil generally lighter in character. Two prairies bearing fine grass were crossed. Between the 5th and 8th mile on this line I discovered considerable local attraction, the needle varying from  $4^{\circ}$  to  $14^{\circ}$  westerly. The existence of iron was plainly discernible on the rock.

Westward from the Northern extremity of the Meridian line for twelve miles the soil was of good character, and the timber chiefly hardwood, and both the one and the other much the same as that described as existing in the fertile tracts. The hills crossed on this section, differed from those previously met, being of a slate formation. At the distance of ten miles from the offset I struck the Vermillion River, above spoken of, a fine broad stream, with deep water and a rapid current, which flowing generally south-westerly, empties into Vermillion Lake, and thence running southerly joins the east branch of the Spanish River, about 5 miles east of White-fish Lake. The banks of this River present a very inviting appearance both as regards soil and timber, the former being a rich alluvial deposit with a subsoil of reddish blue clay, and the latter principally hardwood fine and thrifty. Inland for a considerable distance the same appearance prevails, white oak, elm and white ash being abundant.

This River, as I was informed by an Officer of the Hudson's Bay Company, takes its rise near the height of land, and unlike most of the streams in this country, is unbroken save by the one lake above spoken of.

Vermillion Lake is a long narrow sheet of water, timbered to the waters edge with birch, poplar, maple and oak, and from the peculiarly beautiful colour of the foliage in the autumn, the Indians have given it the names it bears. At its extreme westerly end, I observed extensive gardens, which produced, in abundance, corn and potatoes. Of the remaining portion of the Base line surveyed, for 15 miles the surface, though considerably broken, presented many tracts of land fit for settlement. The ridges being neither high or rugged. For the last 4 miles the surface was very rough and broken, the valleys narrow and having a very slight depth of soil; and the ridges, broken, abrupt and barren.

On running the exploratory line in rear of Waddell's Mill, for the purpose of carrying in provisions, many fine tracts of good cultivable land were crossed, similar both as regards soil and timber to the fertile sections already described, and groves of pine very fine and thrifty were very abundant.

I have thus, Sir, endeavoured without being tedious, to give you a minute description of the several sections of country crossed during my field operations of the past season.

Of the resources of the country, I have but to repeat what I, last year, had the honor of reporting to you.

That there are extensive tracts of land fit for settlement is undeniable, and with equal truth it can be urged that extensive forests of valuable timber exist in the country; and these facts added to one of equal importance, viz: that the climate is salubrious, will shew that it requires but the energy of man to render what is now a vast wilderness a comfortable home for the Emigrant.

The method of developing the resources of the country is a problem far more difficult of solution, and on this point I would beg, respectfully, to offer a few suggestions, which though perhaps, at present premature, may be of some slight service in effecting an object so much to be desired.

The principal obstacles in the way of settling this country, are, I apprehend, its present isolated situation as regards the inhabited and cultivated portion of the Province, and the difficulty of communication with the interior, where the tracts of fertile land are principally situated.

To lay down a general rule for the construction of means of communication in a country so varied by hill and valley, and so interspersed with lakes, is a difficult task, particularly when, as yet, so little is known of it; but I am of opinion that by opening up one or more highways, navigable or otherwise, from the shore of Lake Huron, to such a distance into the interior as may be deemed advisable, and from certain points on these main arteries constructing roads Eastward and Westward, as a means of ingress and egress for settlers, the chief difficulty will, for the present be overcome. To effect this at as little cost as possible, I would respectfully suggest that from such points on the present surveyed base line, as may be deemed necessary for a through exploration of the country, Meridian lines should be produced Northward for 30 miles and Southward to the shore of Lake Huron; the country lying between them being carefully examined by explorers, attached to the surveying parties for that purpose. I would advise that these Meridian lines should not be more than 18 miles apart, for two reasons—First, that by this means the country can be thoroughly examined, and secondly, in case of need, the chiefs of the parties can readily communicate with one another, which, at times, in this uninhabited region is absolutely necessary as well for the safety of the party as for the advancement of the service.

In the performance of my duty I received every assistance from the officers of the Hudson's Bay Company in charge of the several posts passed, who in addition to giving me every information in their power, relative to the nature of the country I was about to traverse, most kindly and readily furnished my party, when in want, with supplies, and procured for Mr. Johnson and myself Indian guides and canoes, to enable us to communicate with one another.

In conclusion, Sir, I beg to state that to Mr. Johnston, my Assistant, to Messrs. Jones, Williams and Mitchell, my Explorer and Chain bearers, I am deeply indebted for the promptitude with which they at all times obeyed my instructions, and for the readiness they invariably evinced to assist me in forwarding the service upon which we were engaged, which rendered in a great measure, light, that, which without this assistance, would have been an extremely arduous undertaking.

I have the honor to be,

Sir,

Your very obedient servant

(Signed,) ALBERT PELLEW SALTER,  
Prov. Surveyor.

To the Honorable  
The Commissioner of Crown Lands,  
Toronto.

Sir,

In compliance with your wishes, I beg to lay before you the following report of the progress of the party under my charge from the 1st July, the day on which you left me on the River Bueve to the 15th September, when you again joined me at the Wahnapita River, together with as accurate an account of the country traversed, as I have in my power to supply.

From the 1st to the 10th July, ran miles. The surface becomes broken with rock ridges about a mile west of the River Bueve, and continues so throughout the entire route. These ridges are generally low and flat and cut the line nearly at right angles. The soil in the valleys is much the same as that on the east side of the River, being generally a sandy loam of a good quality, with a clay subsoil. The timber thrifty and composed of white and black ash, birch, hemlock, cedar, tamarack, balsam and spruce, with occasional groves of white and red pine.

On the 10th my provisions being nearly exhausted, I despatched Mr. Jones, with one man, to search for the cache as you had directed, which he succeeded in finding about 3 miles in a south-easterly direction, from our camp, and I continued the line as before.

From the 11th to the 14th I had all hands employed packing provisions from the cache to end of previous day's work. From the 15th of July to the 16th of August, ran  $15\frac{1}{4}$  miles. The first 6 miles of which is good rolling land, soil, sandy loam and clay subsoil; timbered with poplar, birch, pine, tamarack, balsam, maple and ironwood, the white pine being the prevailing timber, on the high ground and of a superior quality. The remaining  $9\frac{1}{4}$  miles is a broken rocky country, the ridges being much higher than any previously met, timber scrubby, pine, spruce, cypress and balsam.

Finding at this time that my supplies were insufficient to last until I would arrive at the cache on the exploratory line, running north, from Waddell's River, and being very short handed, 3 of my men having deserted on the 5th August, and one being seriously ill, I determined on returning to the Hudson Bay Company's post at Lake Nipissing, where I hoped to find supplies and assistance.

I arrived there on the 21st of August, and having got supplies of provisions and hired an Indian guide, we left the post on the 23rd, in two canoes lent us by Mr. Ironside, the Hudson Bay officer, who kindly rendered me every assistance while there. Thence taking a south-westerly course across Lake Nipissing to an Inlet called Amatchewakebing, which my Indian guide informed me would bring us to Lake Kepepawasing, where we had left off work. I followed the Inlet, taking the bearings and distances and arrived at the Base line on the 26th. The banks of this Inlet are in general low and rocky, but from the character and healthy appearance of the timber inland, I concluded the land became better. The timber being chiefly birch, pine, spruce, poplar, hemlock and maple. On the 27th, I sent Mr. Jones with 2 men back to Lake Nipissing, with the canoes, instructing him to return by the River Bueve, exploring it and describing the country he passed through; my Indian guide informing me it was part of the water communication to White-fish Lake, and had a branch from Lake Kepepawasing.

I then continued the line as before for 9 miles, through a country broken frequently with rock ridges, timbered with pine, cypress, balsam, tamerack and birch, of an inferior quality, the country presenting altogether an unfavorable appearance for settlement. This took until the 13th of September, the day on which you again joined me at the river Wahnapita.

Mr. Jones returned from Lake Nipissing, on the 5th of September, having satisfactorily explored the River Bueve. From his return, until the 10th, I employed him as Picketman, when I again sent him to explore Elbow Lake, and afterwards to proceed to White-fish Lake, for another supply of provisions, on which service you found him before joining me at River Walmepeta. From this time to the 2nd of October, being yourself in charge of the party, it is unnecessary for me to speak. On this date you again left me, instructing me to carry on the Base line west of White-fish Lake Meridian line to Spanish River. For  $11\frac{1}{2}$  miles it is first-rate rolling land, of a superior quality, being mostly a rich sandy loam, timbered with poplar, birch, maple, cedar, pine, spruce, ash and elm, crossed in a few places by small slate ridges. This brings me about 1 mile and a quarter west of Vermillion River, where you met me with a supply of provisions, the next 3 miles was through a second growth thicket of balsam, spruce, cedar and birch; soil light sandy loam. The next 2 miles, good land slightly broken with rock ridges, soil a good clay loam, timbered with poplar, birch, cedar, spruce, pine and balsam. For the next  $4\frac{1}{2}$  miles, broken rocky country, with here and there some patches of good land, timbered with spruce, tamerack, balsam, birch and some good white pine; and then for  $6\frac{1}{2}$  miles, it is in general good rolling land, but very slightly broken with rock ridges; soil fine sandy loam, timbered with birch, poplar, pine, spruce and balsam. Then for 3 miles to the main branch of Spanish River, broken rocky country, timbered with spruce, balsam, tamerack and a large quantity of fine white pine.

Westward of the River for one mile, the land is a good sandy loam, timbered with black birch, pine, cedar, spruce, balsam and maple, making in all  $31\frac{1}{2}$  miles completed from the day on which you left me on the White-fish Lake Meridian line, until the 24th of October, the day on which you again met me at the main branch of Spanish River, and instructed me to close the work for the season.

I remain,

Sir,

Yours most obedient

JAMES JOHNSTON.

A. P. SALTER, Esq.

SIR,

I have the honor to lay before you an account of my daily work while serving under you as one of Mr. Johnston's party, in the capacity of Explorer, in the survey of the Base line on the North Shore of Lake Huron.

When not exploring, I was employed by Mr. Johnston, as Picketman, and as such, I continued to work until the 28th of July.

On the morning of the 28th of July, I left the party accompanied by one man to explore the country, north of the line and struck the River Bueve, at the distance of  $6\frac{1}{2}$  miles.

For the first 4 miles the land was of the best quality, the soil a rich clay loam of good depth, timbered with a large growth of black and white birch, cedar, spruce, balsam and some very fine white pine, and well watered by several brooks of excellent water.

For the next two and a quarter miles the land was poor and rocky, timbered with a stunted growth of cypress, pine and spruce, the last twenty chains were of good quality, being a strip following the course of the River Bueve.

After crossing the River, the land abruptly rose for several chains, being in nature rocky and poor, timbered with white birch and small pine. This same description of land continued for two miles, at which distance, not thinking it necessary to proceed further, I turned, and on a course of  $S. 25^{\circ} W.$ , my previous course having been north, reached Mr. Johnston's camp, on the afternoon of the 30th July.

The land passed over on my return was similar to that seen before. The underwood being very thick impeded our progress considerably.

After this I was employed on the Base line as usual, until the 17th August, the day on which Mr. Johnston, ceased work, in order to go back to Lake Nipissing, for a fresh supply of provisions.

After returning to our work, which we did on the 26th of August, by water in two canoes, kindly lent us by the Hudson Bay Company's officer Mr. Ironside, I was again sent, accompanied by one man and an Indian guide, by Mr. Johnston to Lake Nipissing, to return the canoes lent to us,

with instructions to procure, if possible, some old canoe, and proceed up the River Bueve, which we heard had connection with the lake at which I last left Mr. Johnston.

I arrived at the Fort on the 29th of August, and succeeded in procuring and repairing an old canoe, in which I left the Fort to join Mr. Johnston's party, this time by way of the River Bueve, noting its bearings and characteristics as I went.

The river's width at the mouth is about three chains, but this gradually diminishes to a width of one chain, until within 7 miles of the lake from which it runs; here it assumes its first width, deep water, and moderate current.

The appearance of the country on either side of the river, with few exceptions, is good.

Banks about ten feet high, soil either clay or sandy loam, timbered with black and white birch, beech, ash, balsam, spruce, elm, soft-maple and white pine, the latter being generally of a good size and height; there were also in places some very fine white oak, averaging two feet in diameter and forty feet in height.

At about twenty miles from the mouth, a tributary stream, flowing westerly, enters this river, which my Indian guide informed me leads to White-fish Lake. I am inclined to think it connects with Elbow Lake, of which by and by I shall have occasion to speak.

The current of the Bueve, from this branch to within 7 miles of the lake from which it runs, is very strong, water shallow and stoney bottom; there are several falls and rapids which impede its navigation, besides several large drifts of logs, which seem to have been stationary for several years; round these we had to portage.

On the evening of the 4th of September, I arrived at the point at which the Base line crosses the lake. The next morning abandoning our canoe, we packed up, followed the Base line and arrived in Mr. Johnston's camp, about 2 o'clock p. m.

Up to the 10th of September, I was employed as usual on the line, when Mr. Johnston, finding that his stock of provisions would hardly be sufficient for the use of the party to carry on the work, determined on sending me forward in the canoe, which had been brought along the line to search for yourself and party, or failing in finding you to procure supplies at White-fish post.

My route was by way of Elbow Lake, on the banks of which we were then camped. Previous to going, I explored this lake to the northward of the line for about four miles, after which I returned to the party, took the greater amount of their provisions and two men into my canoe and proceeded down the lake, in a south-wardly direction, noting its course as I went.

After following its curved course for about four miles, I came to a fine river about 3 chains wide, deep water, and moderate current, flowing westerly; this I followed for about 2 miles, and found myself in another large river, flowing southwardly; down this river I went for about two and a half miles, where I left the provisions which I had brought so far by Mr. Johnston's directions, in order that the whole party might be actively engaged on the line, instead of packing, as we were very short handed. I

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also left one of my men here to walk back through the woods to Mr. Johnston; myself and the Indian being sufficient to manage our little canoe.

After leaving the provisions, I followed up the river for about eight miles; at this distance I deviated from it, up a small creek for a quarter of a mile, and then made a portage of 12 chains into a small lake; from this Lake we portaged into another and so on to four more, in the last of which to my great pleasure, I met yourself and party coming towards us.

It is superfluous for me to further describe this route, as you yourself passed over the same ground on your return with me to Mr. Johnston's party. On my return to the party, I was never more actively employed than I then was in aiding you to push the work forward.

At White-fish Lake, you made me chain bearer, which capacity I filled for the remainder of the season.

Such, Sir, is as brief an account as possible of the work done

By your most obedient,

ARTHUR JONES.

A. P. SALTER, Esq.,  
Provincial Surveyor.

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APPENDIX S.

STATEMENT of Mining Locations on Lakes Huron and Superior.

No.	N A M E .	Locality of Tract.	Date of Location.	R E M A R K S .
1	Theodore Hart.....	North of St. Joseph's Island.....	30th April, 1847.	
2	James Cuthbertson, Bruce Mines.....	Copper Bay.....	24th Feby., 1847.	Patented 20th October, 1852.
3	J. W. Keating.....	Copper Bay.....	7th April, 1847.	
4	David Davidson.....	North of La Cloche Island.....	26th May, 1847.	
5	George Desbarats.....	Port Lock Harbor.....	10th April, 1847.	
6	Moses Saml. David.....	North of St. Joseph's Island.....	26th May, 1847.	
7	John Simpson.....	do .....	26th May, 1847.	
8	Ben. H. Lemoine.....	On St. Mary's River adjacent to Lake Huron.....	26th May, 1847.	Indian Reservation.
9	Henry Chapman.....	Spanish River.....	7th May, 1847.	Indian Reservation.
10	Henry Starnes, Assignee of Wm. Wilson.....	N. E. St. Joseph's Island.....	27th April, 1847.	
11	Hon. Francis Hincks, Assignee of Geo. Hendry.....	Northerly St. Joseph's Island.....	27th April, 1847.	
12	George S. Tiffany.....	Mouth of Spanish River.....	6th July, 1847.	
13	Thomas Brongeeest.....	Echo Lake.....	25th Octr., 1847.	
14	J. V. Delorme.....	N. W. of Point Thessalon.....	3rd August, 1847.	
15	James Ferrier, junior.....	Point Thessalon.....	31st August, 1847.	
16	George Ferrier.....	Point Thessalon.....	31st August, 1847.	
17	Michael Meighan.....	Spanish River.....	9th August, 1847.	
18	Wm. S. McFarland.....	Thessalon River.....	31st August, 1847.	
19	Oliver Tiffany.....	North of La Cloche Island.....	4th August, 1847.	
20	H. B. Wilson.....	do do .....	9th Decbr., 1847.	
21	Francis Bellanger.....	Thessalon River.....	31st August, 1847.	
22	William H. Boulton and others.....	North of La Cloche River.....	30th Sept., 1847.	Indian Reservation.

23	Charles Thompson.....	Spanish River.....	11th Nov., 1847.	
24	John F. Elliott.....	St. Mary's River and Little Lake George.....	9th Dec., 1847.	Indian Reservation.
25	F. C. Clarke.....	River St. Mary.....	27th Nov., 1847.	Indian Reservation.
26	John Prince.....	North West Shore L. Superior.....	8th April, 1847.	Patented 21st April, 1853.
27	Alexander D. McLean.....	North East of Pigeon River.....	16th March, 1848.	
28	Allan McDonell.....	Maimanse.....	29th Feby., 1848.	
29	Wm. C. Meredith.....	do .....	29th Feby., 1848.	
30	James Ferrier.....	N. part of St. Ignace Island.....	27th May, 1847.	Patented 21st April, 1853.
31	John Ewart.....	Neepigon Strait.....	7th May, 1847.	{ Under Patent to Montreal Mining Company, 1856.
32	James Hopkirk.....	Flour Islands.....	8th May, 1847.	do do
33	George K. Smith.....	S. W. Part St. Ignace Island.....	16th May, 1847.	do do
34	Arthur Rankin.....	Pointe aux Mines.....	29th Feby., 1847.	
35	John Stuart.....	Pigeon River.....	8th May, 1847.	{ Under Patent to Montreal Mining Company, 1856.
36	Samuel B. Harrison.....	E. St. Ignace Island.....	7th May, 1847.	do do
37	Thomas Ryan.....	Cape Gargantua.....	6th May, 1847.	{ Under Patent to Montreal Mining Company, 1856.
38	William H. Merritt.....	N. E. Neepigon Strait.....	8th May, 1847.	do do
39	Abner and Stanley Baggs.....	S. W. " .....	8th May, 1847.	do do
40	Joseph Woods.....	N. E. Thunder Bay.....	7th May, 1847.	
41	Edward Ryan.....	S. of Pointe aux Mines.....	16th April, 1847.	
42	James Bell Forsyth.....	Mainland N. E. of Pigeon River.....	8th April, 1847.	
43	Hon. P. McGill and others.....	S. Part Simpson's Island.....	7th May, 1847.	{ Under Patent to Montreal Mining Company, 1856.
44	Stewart Derbshire.....	Black Bay.....	7th May, 1847.	do do
45	S. Jones Lynan.....	Opposite Verte Island.....	7th May, 1847.	do do
46	William B. Jarvis and others.....	Mainland opposite Vict. Island.....	6th March, 1847.	do do
47	John Douglas.....	Maimanse.....	March, 1850.	
48	Alexander McDonell.....	Centre Part of Michipicoton Island.....		{ Under Patent to Montreal Mining Company, 1856.
49	James Hamilton.....	S. E. Part of Island St. Ignace.....	6th June, 1846.	do do
50	Charles Jones.....	S. W. Part Michipicoton.....	9th July, 1847.	do do
			23rd July, 1847.	



APPENDIX

TABULAR View of the River Ottawa and its tributaries and the (now Ottawa

NAME OF RIVER.	Distance of confluence into the Ottawa above Bout de l'Isle.	Length of course in Miles.	Length of it surveyed in Miles.	Area of Valley drained in square Miles.	Area licensed as Timber Berths in square Miles.	Number of Licensee.
<b>NORTH SIDE.</b>						
The Gatineau.....	128	340	262½	9820	2746½	94
do Qyon.....	160	39	39	260	116½	8
do Swego.....	259	38	38	187	78½	3
do Coulonge.....	200	160	90	1800	973	27
do Black River.....	209	128	120	1120	680½	23
River du Moine.....	283	120	51	1600	879	25
do St. Sire.....	268	13	13	uncertain.	100	2
do Beauchêne.....	356	40	.....	153	.....	.....
do Maganassippi.....	307	40	33	150	150	5
The Kepawa.....	390	160	.....	5500	400	8
do Ottertail.....	425	35	.....	uncertain.	.....	.....
do Quinzes.....	430	350	.....	15000	.....	.....
<b>SOUTH SIDE.</b>						
The Rideau.....	129	116	116	1350	25½	3
do Mississipi.....	156	101	101	1150	687½	37
do Madawaska.....	169	255	225	4100	2660	75
do Bonnechere.....	180	110	110	975	811½	37
do Indian River.....	235	40	40	550	273	9
do Petewawe.....	245	138	138	2200	1017	36
Chalk River.....	253	28	28	130	130	10
Matawin & Amable Du Font.....	327	60	60	950	278	13
River Jacko.....	350	50	.....	500	200	4
The Metabechewan.....	396	45	.....	400	.....	.....
do Montreal River.....	396	200	.....	3800	50	3
do Katakamana.....	426	50	.....	unascertained	.....	.....
River Blanche.....	430	90	.....	1000	.....	.....
Main River, Ottawa.....	.....	.....	.....	2789	2789	136
Immediate Banks.....	.....	.....	.....	8916	.....	.....
Undetermined, and unknown.....	.....	.....	.....	.....	.....	.....
Totals within the Bytown Agency.	.....	2686	1494½	64400	15095½	565

Crown Lands Department,  
Toronto, 30th January, 1857.

T.

Timber Limits upon them, from the Gatineau opposite Bytown, (City,) upwards.

Probable length of i remaining un-survey ed in Miles.	Timber sent to Market from each Stream during the year 1854.					Saw Logs No.	REMARKS.
	White Pine pieces.	Cedar & Basswood pieces.	Red Pine pieces.	Elm. Ash &c. pieces	Oak and Walnut pieces.		
77½	574	.....	2000	.....	.....	325756	The year 1854 is taken as best shewing the distribution by streams besides the tributaries included in this sheet, the Ottawa receives below Bytown the River du Lièvre, 260 miles in length, the River Petite Nation, the South Nation and the River Rouge, each about 100 miles in length, the River du Nord about 180 miles long, and lastly the River l'Assomption about 130 miles in length near Bout de l'Isle, where the Main Branche of the Ottawa joins the St. Lawrence.
.....	3500	.....	.....	.....	.....	8338	
.....	1252	.....	13	.....	.....	1500	
70	.....	.....	.....	.....	.....	300	
8	13629	.....	2252	17	.....	.....	
69	3600	.....	510	.....	.....	.....	
40	.....	.....	.....	.....	.....	.....	
7	.....	.....	.....	.....	.....	.....	
160	.....	.....	.....	.....	.....	.....	
35	.....	.....	.....	.....	.....	.....	
350	.....	.....	.....	.....	.....	.....	
.....	7569	41	.....	9066	42	13755	
.....	15269	.....	1613	4078	33	22448	
.....	28338	13	17134	.....	3	7469	
.....	20716	.....	25961	.....	.....	5398	
.....	2197	.....	1809	.....	.....	.....	
.....	3676	.....	8659	.....	.....	.....	
.....	2575	.....	2513	.....	.....	.....	
.....	600	.....	1200	.....	.....	.....	
50	.....	.....	.....	.....	.....	.....	
45	.....	.....	.....	.....	.....	.....	
200	.....	.....	.....	.....	.....	.....	
50	.....	.....	.....	.....	.....	.....	
90	400	.....	.....	.....	.....	.....	
.....	101036	301	10043	9037	1091	.....	
1191	204928	355	73907	22198	1169	385764	

JOSEPH CAUCHON,  
Commissioner of Crown Lands.

## APPENDIX U.

## SAULT DE STE. MARIE.

17th November, 1856.

SIR,

It gave me much pleasure to hear by Mr. Jos. Wilson, of this place, of your intention to survey a tract of the country lying N. E. of Goulais Bay, Lake Superior, as I intend to be a purchaser of some of that land myself as soon as it is in market. In the month of September last, I took a party of 3 men out with me into that region, and made an extensive exploration there; having carried my pack for 18 days through those hills and valleys, I travelled, what I computed to be, about seventy miles back into the interior; the trip cost me something in money as well as in toil and exposure, but I felt myself well repaid by the beautiful country that I passed through. So different from the dreary storm beaten shores of the Lakes and of the River St. Mary. In fact it is completely sheltered from those cold damp winds by the lofty range of mountains lying to the N. W., which act as both screens and reflectors, throwing back the concentrated rays of the sun into the valleys along their southern flanks. The face of the country is undulating, forming level plateaus, sloping hill sides and extended valleys running far back into the mountains. The timber is nearly all maple, the largest and the finest I have ever seen. The soil is what is called volcanic; being formed chiefly from the *detritu* of decomposing trap rocks, with a deep layer of vegetable mould on the surface. The place is admirably adapted to farming and grazing purposes. I am an old farmer myself, have been 33 years in America, and seen the whole country from New Brunswick to Missouri, so that I can speak from experience on these matters: but the place will not depend wholly upon its agricultural resources—it is rich in minerals. Those explorers who have spent their time and money in searching for treasures along the lake shore, made a great mistake; (and all the parties who have ever come up from your part of the country to examine the north shore, have been of that number). Along the coasts of Lakes Huron and Superior, the rocks are all confusion; so disturbed and dislocated, that it would be impossible for a good vein to exist in them: for, if it be ever so good in one rock, it is speedily cut off by another, and there is the end of their vein. But back in the interior the rocks are settled, every thing is in place, the veins are regular and well defined, and may be traced continuously for miles, without a single break. In the part of the country that I passed over, the rocks in place are all a compact gray trap, intersected by numerous quartz veins running systematically about east and west, and many of them richly charged with ores of copper and lead. During my late exploration I found a number of beautiful lodes, which I intend to secure as soon as your Department will give me a chance to purchase on reasonable terms. The ores of copper which I saw, were yellow pyrites, with now and then some very rich varieties of purple and gray sulphurets. The ore of lead that I found is galena, and bears every appearance of being argentiferous; I believe it is generally the case that, an ore of lead occurring in trap rock, is apt to bear a good per centage of silver. The river which flows through this tract of country is just about the size and volume of the Thames in the Western district: it is navigable for a small steamboat,

a distance of 18 or 20 miles from the mouth at the head of Goulais Bay, and by an improvement of some trifling rapids it could be made navigable much further. It is a most beautiful stream, and the scenery on its banks is magnificent. This river I found nameless; the Indians simply call it "See-beeh," "the river." So as I was the first white man who had ever explored its banks, I felt it to be my privilege to christen it; I named it therefore (in honor of my countryman Will. Shakespeare, the Avon); and the country around I called "Avondale": these names are plain, simple, euphonious and easily remembered; and if they will suit you, they are at your service.

And now, Sir, I shall take the liberty of telling you another secret; I found that after I had got back a couple of days journey from the lake shore, that the country abounded in large game, such as carabo and red deer; and I am going back on snow shoes, to spend a part of the winter in their pleasant company. I shall spend about a month this winter in the region lying N. and N. E. of the river St. Mary. Travelling back far into the interior, and whilst I am engaged in the pursuit of wild animals, I shall keep a memorandum of the general features of the country; and, as this is the country through which the projected railroad (that we all hope to see crossing the frontier at the Sault) must pass, some knowledge of its topography may be useful to the Government and the public at large. This also shall be at your service, with much pleasure on my part. And now, Sir, to conclude, should you see proper to let out the Survey of Avondale, by contract, of course it will be a fair competition amongst surveyors. Now, Sir, I am not a professional surveyor myself, (although I could do the rough practical part of the work), but a friend of mine, Mr. Coatsworth, now residing at the Bruce mines, is an accomplished Surveyor and an able Mathematician, besides being an excellent Draftsman and Sketcher, particularly clever with the pencil; and if he should be a successful bidder for the contract, I should accompany and assist him; and we should carry with us a good Camera Lucida, to take landscape views, mountain and forest scenery, water falls and other grand and interesting scenes with which that region abounds. The apparatus would give us the true outlines of each scene, and Mr. Coatsworth, with his pencil, could fill up the picture according to nature. Thus our Survey would be accompanied by a regular set of coloured drawings, which could be lithographed at a trifling expense, and thus furnish the Crown Land Department with illustrations both ornamental and useful. Ornamental, to decorate the walls of your office and your private homes, and particularly useful to the purchasers of land, as affording them the best and truest descriptions of the country which they may intend for their future home. But perhaps I am trespassing too far on your time and patience, if so, pardon the freedom of

Sir,

Your very obt. hmble. servant,

WILLIAM H, PALMER.

Hon. JOSEPH CAUCHON,  
*Commissioner of Crown Lands.*

APPENDIX

STATEMENT of Official Surveys performed in Lower Canada

YEARS.	Subdivided into Lots.	Into Town and Park Lots.	Verification Surveys and Township Outlines.	Exploratory Line between Seignories and Town &c	Total Acres.	Cost.
	Acres.			Miles.		
1763.....	}		5000	13	5000	.....
1764.....						
1765.....			68100	1042	68100	.....
1766.....		1600	7220	10	8820	.....
1767.....			3000		3000	.....
1768.....						.....
1769.....						.....
1770.....						.....
1771.....				125		.....
1772.....						.....
1773.....						.....
1774.....						.....
1775.....						.....
1776.....				200		.....
1777.....				200		.....
1778.....				200		.....
1779.....				200		.....
1780.....				200		.....
1781.....			3000		3000	.....
1782.....			50	25	50	.....
1783.....				36½		.....
1784.....	12000	500	68600		81100	.....
1785.....	12500		1800	66	14300	.....
1786.....	9500		15000	135	24500	.....
1787.....	10500	1525	5000		17025	.....
1788.....	9750			173	9750	.....
1789.....	10250		3000	267	13250	.....

From the year 1764 to 1789 the average cost of Township Surveys, according to detailed accounts and payments made in the Surveyor General's Office, was about £2 5s. per mile. Deputy Surveyors being generally paid by the year. Surveys paid under warrant to the Surveyor General.

V.

since the Cession by the Treaty of 1763 to the year 1840 inclusively.

LOCALITY.
{ Survey of part of the Seminary Domain, shewing the division between it and the Crown Domain, City of Quebec, Murray Bay, Mount Murray, Port Daniel.
{ Different tracts in the Town of Quebec, Chaleurs Bay and Paspebiac, Grand River, Pabos, Trigonometrical Survey of the St. Lawrence, defining the Seignories on both shores, from Bic to the Gallops Rapids, Maglalen, Brian and Bird Islands, by Surveyor General Holland, the McLean Tract above the Cedars, Tract on the Missisqui.
Gaspé Bay, River du Loup, Bay of Chaleurs, Town Plots of Douglas and New Haldimand. Gaspé Bay Basin, McCord's Patent and O'Hara's Bluff, Sea Coast of Gaspé. Tracts in and about Quebec, King's Wharf and adjacent Crown Properties. Tracts in and about Quebec. Forts Chambly and St. Johns. Survey of the line between the Provinces at New York and Quebec.
{ Difficulties and War with the United States.
{ Continuation of Survey of River St. Lawrence by Mr. Surveyor General Holland and Staff of Surveyors and Assistants, (the Americans having evacuated the Province before the end of June in this year.
Continuation of Survey of the River St. Lawrence. Continuation of Survey of the River St. Lawrence. Continuation of Survey of the River St. Lawrence. Close of Survey of the River St. Lawrence, from Bic upwards to the Galop Rapids. Tracts in the City of Quebec, Town Plot of New Carlisle. Tracts in the City of Quebec, Crown Property of Mount Pleasant for Military Purposes. Coteau du Lac, Temiscouata Road Line.
{ Front bounds of Townships from No. 1 to No. 9 in the Bay de Chaleur projected—terminated 1785 and 1786, Town of Haldimand, Douglas Town, Outlines of Godmanchester and boundary with St. Regis Lands (by Chewitt.)
{ Gaspé Bay, Limits of Seignories of Ristigouche, Cloridon and Port Daniel, New Richmond, Hope, City of Quebec, Laying of Meridian at Quebec, Three-Rivers and Montreal, agreeably to the Ordinance of 30th April, 1785, Township of Cox.
{ Paspebiac, New Carlisle, River Ristigouche, Continuation of Survey of Quebec, Close of laying down Meridians, Carleton, Maria, Richmond and Hamilton.
Fishing lots, Paspebiac, Port Daniel, Cox, Town of Sorel. Grand or Ottawa River, by McNiff, Godmanchester, Limits of Seignior De Léry.
{ New Longueuil, Rigaud, Grand or Ottawa River, by Smith, Rawdon, Argenteuil, Check Line from the Ottawa to the St. Lawrence, Road from Montreal to Kingston.

STATEMENT of Official Surveys performed in Lower Canada since the

YEAR.	Subdivided into Lots.	Into Town and Park Lots.	Verification Surveys and Township outlines inclosing a space.	Exploratory Lines between Seignories and Crown.	Total Acres.	Cost.	LOCALITY.
				Milles.			
1790.....	29900	100	.....	.....	30000	.....	Fishinglots in Town of Perceé, Township of Chatham During 1790 and 1791, about 30 Townships and Town Plots were laid out in the Districts of Lumberland, Mecklenburg and Nassau, Divisions of the then Province of Quebec, by Mr. Deputy Surveyor General Collins; Lots in rear of Fishing Banks—Perceé. Part of the South Shore of the St. Lawrence, (by Charland,) Part of River St. Lawrence, (by McCarthy,) River Yamaska, (by Dupincier,) River St. Francis, (by Pennoyer,) New Richmond, Fishing Town of Perceé, Seigniorics on the River Chaudière, (F. Legendre,) Township Cox, Town of Perceé, (by Vondenvelden) General Survey of the River St. Lawrence, (by McCarthy,) Survey of the Ottawa from Carrillon to Repentigny, (by Peachy,) Township of Rawdon, Country Lots of New Carlisle River St. Francis, (by J Rankin,) River Bécancour, Triangulation of South Shore of the River St. Lawrence, Outlines (in part or whole) of the Townships of Hinchinbrooke, Simpson, Hereford, Auckland, Rawdon, Sutton, Potton, Newton, Clifton, Tring, Shenley, Brome, Hunterstown, Watford, Barford, Barnston, Hatley, Compton, Broughton, Kingsey, Durham, Shipton, Stanstead, Hemmingford, Blandford, Wickham, Grantham, Upton, Kildare, Bolton, Maddington, Windsor, Stoneham, Tewkesbury, Orford, Stukely, Alton, Stanbridge, Dunham, Ashford, Ascot, Eaton, Newport, Ely, Stoke, Melbourne, Ditton, Brompton, Roxton, Stanfold, Aston.  Montreal Section of the River St. Lawrence, Cul-de-Sac Harbour, Quebec, Shewing the line of high water. Dunham, Boundary of the Seigniorie of Rigaud, Seigniorics of Lussaudière, Pierreville and St. François for delimitation of Indian Lands. Brome, Bolton, Seigniorie of St Ours, Beach and Water Lots at Quebec, Boundary between Seigniorics of Monnoir and Rouville, St. Ours and Contrecoeur, St. Hyacinthe and St. Ours, Part of Montreal and Line of Water Mark in the Harbour. Farnham, Chatham. Dorset, Arinagh, Buckingham. Townships of Broughton, Stanstead, Eaton, Upton, Grantham, Hunterstown, Stukely, Stanbridge, Stoneham, Tewkesbury, Seigniorie of St. Hyacinthe, Part of the Town of Montreal. Townships of Barnston, Ireland, Leeds, Shefford, Orford, Bury, Farnham, Shenley, Hinchinbrooke, Granby and Milton, Marston. Townships of Arthabaska, Barford, Chester, Durham, Ely Halifax, Inverness, Thetford, Wickham, Stoke, Sutton, Wolfestown, Portland, Marston, Clifton, Tring, Hull, Kildare, Abercrombie, Melbourne, Seigniorics of Nicolet, Bécancour, Gentilly, St. Pierre Les Becquets, Fief Godfroi, Cournoyer, Rouville, Lotbinière, D'Aillebout, De Ramsay, D'Autré, La Norraye, St. Croix, St Jean Deschailions, Line between Nelson and St. Croix, Sherrington and La Salle. Townships of Ascot, Bury, Bulstrode, Brompton, Clinton, Compton, Ditton, Hatley, Kildare, Kingsey, Potton, Shipton, Dudswell, Buckingham, Halifax, Chatham, Sherrington, Kilkenny, Wentworth, Templeton, Chester, Westbury, Nelson, Somerset, St. Hyacinthe, Pierreville, Lotbinière, Townships on north side of Ottawa. Townships of Acton, Wendover, Tingwick, Westbury, Warwick, King's Domain, Lower Town of Quebec, and Division Line between it and the Seigniorie. Townships of Brandon, Buckland, Eardley, Newton, Onslow, Melbourne, Kingsey, Line between Lotbinière and Nelson, and between St Jean Deschailions and Somerset. Forges Tract on the St Maurice, Roads on Eastern Townships, Pointe du Lac, Townships of Auckland, Frampton, Hereford, Hull, Acton.
1791.....	9600	150	.....	.....	9750	.....	
1792.....	1000	100	.....	180	1100	.....	
1793.....	45000	500	.....	250	45500	.....	
1794.....	5000	.....	1100000	712	1105000	.....	
1795.....	.....	.....	.....	.....	.....	.....	
1796.....	40895	.....	.....	18	40895	.....	
1797.....	104370	.....	.....	40	104370	.....	
1798.....	23000	.....	.....	.....	23000	.....	
1799.....	53000	.....	.....	.....	53000	.....	
1800.....	266675	.....	.....	20	266675	.....	
1801.....	195500	.....	.....	.....	195500	.....	
1802.....	249384	.....	200000	75	449384	.....	
1803.....	305785	.....	250000	95	555785	.....	
1804.....	259932	.....	50000	1	309932	.....	
1805.....	251385	.....	100000	20	351385	.....	
1806.....	116033	.....	100000	120	216033	.....	

From 1790 to 1800 Township Surveys cost from £2 10 to £3 per mile. Town and Park Lots cost more.  
 From 1801 to 1822 Township Surveys including Plan and Returns of the Surveyor cost on an average £3 per mile. (Surveys paid on Report of the Auditor General.)

Cession by the Treaty of 1763 to the year 1840 inclusively—Continued

YEAR.	Subdivided into Lots.	Into Town and Park Lots.	Verification Surveys and Township outlines inclosing a space.	Exploratory Lines between Seignories and Crown.	Total Acres.	Cost.	LOCALITY.
1790.....	29900	100	.....	.....	30000	.....	Fishinglots in Town of Perceé, Township of Chatham During 1790 and 1791, about 30 Townships and Town Plots were laid out in the Districts of Lumberland, Mecklenburg and Nassau, Divisions of the then Province of Quebec, by Mr. Deputy Surveyor General Collins; Lots in rear of Fishing Banks—Perceé. Part of the South Shore of the St. Lawrence, (by Charland,) Part of River St. Lawrence, (by McCarthy,) River Yamaska, (by Dupincier,) River St. Francis, (by Pennoyer,) New Richmond, Fishing Town of Perceé, Seigniorics on the River Chaudière, (F. Legendre,) Township Cox, Town of Perceé, (by Vondenvelden) General Survey of the River St. Lawrence, (by McCarthy,) Survey of the Ottawa from Carrillon to Repentigny, (by Peachy,) Township of Rawdon, Country Lots of New Carlisle River St. Francis, (by J Rankin,) River Bécancour, Triangulation of South Shore of the River St. Lawrence, Outlines (in part or whole) of the Townships of Hinchinbrooke, Simpson, Hereford, Auckland, Rawdon, Sutton, Potton, Newton, Clifton, Tring, Shenley, Brome, Hunterstown, Watford, Barford, Barnston, Hatley, Compton, Broughton, Kingsey, Durham, Shipton, Stanstead, Hemmingford, Blandford, Wickham, Grantham, Upton, Kildare, Bolton, Maddington, Windsor, Stoneham, Tewkesbury, Orford, Stukely, Alton, Stanbridge, Dunham, Ashford, Ascot, Eaton, Newport, Ely, Stoke, Melbourne, Ditton, Brompton, Roxton, Stanfold, Aston.  Montreal Section of the River St. Lawrence, Cul-de-Sac Harbour, Quebec, Shewing the line of high water. Dunham, Boundary of the Seigniorie of Rigaud, Seigniorics of Lussaudière, Pierreville and St. François for delimitation of Indian Lands. Brome, Bolton, Seigniorie of St Ours, Beach and Water Lots at Quebec, Boundary between Seigniorics of Monnoir and Rouville, St. Ours and Contrecoeur, St. Hyacinthe and St. Ours, Part of Montreal and Line of Water Mark in the Harbour. Farnham, Chatham. Dorset, Arinagh, Buckingham. Townships of Broughton, Stanstead, Eaton, Upton, Grantham, Hunterstown, Stukely, Stanbridge, Stoneham, Tewkesbury, Seigniorie of St. Hyacinthe, Part of the Town of Montreal. Townships of Barnston, Ireland, Leeds, Shefford, Orford, Bury, Farnham, Shenley, Hinchinbrooke, Granby and Milton, Marston. Townships of Arthabaska, Barford, Chester, Durham, Ely Halifax, Inverness, Thetford, Wickham, Stoke, Sutton, Wolfestown, Portland, Marston, Clifton, Tring, Hull, Kildare, Abercrombie, Melbourne, Seigniorics of Nicolet, Bécancour, Gentilly, St. Pierre Les Becquets, Fief Godfroi, Cournoyer, Rouville, Lotbinière, D'Aillebout, De Ramsay, D'Autré, La Norraye, St. Croix, St Jean Deschailions, Line between Nelson and St. Croix, Sherrington and La Salle. Townships of Ascot, Bury, Bulstrode, Brompton, Clinton, Compton, Ditton, Hatley, Kildare, Kingsey, Potton, Shipton, Dudswell, Buckingham, Halifax, Chatham, Sherrington, Kilkenny, Wentworth, Templeton, Chester, Westbury, Nelson, Somerset, St. Hyacinthe, Pierreville, Lotbinière, Townships on north side of Ottawa. Townships of Acton, Wendover, Tingwick, Westbury, Warwick, King's Domain, Lower Town of Quebec, and Division Line between it and the Seigniorie. Townships of Brandon, Buckland, Eardley, Newton, Onslow, Melbourne, Kingsey, Line between Lotbinière and Nelson, and between St Jean Deschailions and Somerset. Forges Tract on the St Maurice, Roads on Eastern Townships, Pointe du Lac, Townships of Auckland, Frampton, Hereford, Hull, Acton.
1791.....	9600	150	.....	.....	9750	.....	
1792.....	1000	100	.....	180	1100	.....	
1793.....	45000	500	.....	250	45500	.....	
1794.....	5000	.....	1100000	712	1105000	.....	
1795.....	.....	.....	.....	.....	.....	.....	
1796.....	40895	.....	.....	18	40895	.....	
1797.....	104370	.....	.....	40	104370	.....	
1798.....	23000	.....	.....	.....	23000	.....	
1799.....	53000	.....	.....	.....	53000	.....	
1800.....	266675	.....	.....	20	266675	.....	
1801.....	195500	.....	.....	.....	195500	.....	
1802.....	249384	.....	200000	75	449384	.....	
1803.....	305785	.....	250000	95	555785	.....	
1804.....	259932	.....	50000	1	309932	.....	
1805.....	251385	.....	100000	20	351385	.....	
1806.....	116033	.....	100000	120	216033	.....	

## STATEMENT of Official Surveys performed in Lower Canada since the

YEAR.	Subdivided into Lots.	Into Town and Park Lots.	Verification Surveys and Township Outlines.	Exploratory Lines between Seignior and the Crown.	Total Acres.	Cost.
1807.....	Acres. 62670		150000	81	212670	.....
1808.....	6005		54000		60005	.....
1809.....	52366		78000	10	130366	.....
1810.....	70000			60	70000	.....
1811.....	21600			25	21600	.....
1812.....	12500			15	12500	.....
1813.....						.....
1814.....				50		.....
1815.....	55000			38	55000	.....
1816.....	40000			20	40000	.....
1817.....	15000			20	15000	.....
1818.....	57500		75000	70	132500	.....
1819.....	93800		40000	15	133800	.....
1820.....	155000			30	155000	.....
1821.....	109200	210		10	109410	.....
1822.....	157717				157717	.....
1823.....	105000			50	105000	.....

War with U. S.

From 1801 to 1822 Township Surveys including Plan and Returns of the Surveyor cost on the average £3 per mile. (Surveyors' Accounts referred to the Auditor General or Committee of Council.)

## Cession by the Treaty of 1763 to the year 1840 inclusively—Continued.

LOCALITY.
{ Townships of Lingwick, Lochaber, Templeton, Road Line from Wolfestown to the Connecticut, (by Pennoyer.)
{ Maddington, Seignior of Beauharnois and Hemmingford, (by Sax,) Public Reserves of the Cascades Canal.
{ Roxton, Brandon, Wentworth, Farnham, Line between the Seignior of St. François and Wendover, and between Pierreville and Upton, Deguire and Upton.
{ Grenville, Craig's Road Lots, Verification (lineal) of Road to rear of Shipton, Survey of the Beach of St. Roch, Quebec.
{ Leeds, Seignior of Ste. Croix, Survey of the Beach at Wolf's Cove, and of Channels of the River St. Charles, Augmentation of Newton.
Tingwick, Fief Francheville, St. Jean D'Eschailions, Sherrington, Lasalle.
{ Laying off the lands for disbanded soldiery on Temiscouata Portage, Lake Temiscouata and River Madawaska.
Grantham, Wickham, Upton, Road Line from Trois-Pistoles to Rimouski, (by F. Fournier.)
Wendover, Pierreville, Nouvelle Longueuil and Rigaud, Molson's Water Lot.
Kingsey, Wendover, Ottawa River opposite Terrebonne, (by Adams.)
{ Weedon, Frampton, Cap Chat, Part of the City of Quebec, defining the Line between the Crown and the Seignior Domain, Fabrique Street, Measurements on Boundary Line from St. Régis to Connecticut.
Settrington, Jersey, Matane, Peninsula, Grand Grève, Fox River Settlements.
{ Frampton, Chester, Halifax, Ireland, Blandford, Maddington, Wolfstown, Ham, Cape D'Es- poir and Anse à Beaufile, Island Bonaventure, Gaspé Bay, N. W. Arm., Road Line from La- chine to the Cross, below Montreal, (by Adams.)
{ Grantham, Rawdon, St. Denis, Settrington, Village of Grenville (7 in 2), Ashford, Augmen- tation of Aston.
{ Horton, Grenville, Augmentation of Kildare, Cranbourn, Buckland, Godmanchester, Bland- ford, Beach at Point Levi.
{ Nouvelle Longueuil, Pierreville, Wendover, Cranbourne, Brandon, Warwick, Stanfold, Fief Ga- tineau and Dumontier, Laprairie, St. Denis and Matane, Water and Beach Lots at Three- Rivers, (35,518 feet.)

## STATEMENT of Official Surveys performed in Lower Canada since the

YEARS.	Subdivided into Lots.	Into Town and Park Lots.	Verification Surveys and Township Outlines.	Exploratory Lines between Seigniories and the Crown &c. &c.	Total Acres.	Cost.
	Superficial Acres.	Superficial Acres.	Superficial Acres.	Lineal Miles.		
1824.....	140000	.....	4000	55	144000	.....
1825.....	47800	.....	.....	20	47800	.....
1826.....	153200	.....	.....	30	153200	.....
1827.....	72000	.....	100500	.....	172500	.....
1828.....	12000	.....	103000	160	115000	.....
1829.....	17400	.....	.....	61	17400	.....
1830.....	145700	.....	.....	76	145700	.....
1831.....	64500	.....	44500	20	109000	.....
1832.....	95600	.....	70000	20	165600	.....
1833.....	120000	.....	85000	225	205000	.....
1834.....	215000	.....	.....	123	215000	.....
1835.....	203197	.....	666000	56	809197	.....
1836.....	147000	.....	.....	25	147000	.....
1837.....	181200	.....	.....	49	181200	.....
1838.....	30000	.....	.....	10	30000	.....
1839.....	70000	.....	200000	69	270000	.....
1840.....	82000	100	79000	26	161000	.....

From 1823 to 1836 the cost of Township Surveys was regulated by the Tariff of rates authorised by the Governor in Council, viz: £5 per 1000 acres including Reserves for Crown and Clergy. The Lineal Surveys averaged £210 per mile. From 1837 to 1840 the system of paying the Surveyor and party by the day was resumed in certain cases, the average cost per mile Lineal being about £5 to £4 10. The cost of future Crown Surveys is regulated by Order in Council of July, 1841.

## Cession by the Treaty of 1763 to the year 1840 inclusively—Continued.

LOCALITY.
Standon, Ixworth, Le Bouthillier, Caxton, Standon, Upton, Kilkenny, Part of Three-Rivers, Determination of the Water Line at Montreal in connection with the proposed improvements, Boundary of the Seigniorie of Matane with adjacent Crown Lands, Water and Beach Lots at Quebec and Three-Rivers, Town Lots at Sorel.
Gore of Lochaber, Cap Chat, Tring, Brandon and Lanaudière.
River du Loup, Exploration between Tring and Lake St. Francis, Augmentation of Ashford, Clarendon, Ashford, Upton and De Rosier, (De Ramsay,) Hamilton and New Richmond, Grenville and Augmentation, Jersey.
Ixworth, Buckingham, Milton, Alton, Rawdon, Ladurantaye, Indian Reserve in rear of Isle Verte.
Boundary Line Exploration, (by J. Bouchette, Weiss and Ware), Grand River Seigniorie, Chaleur Bay, Fiefs Cumberland and Watford, Laprairie, Maddington, Tract for Amalacite Indians, in rear of Isle Verte and River-du-Loop, Augmentation of Wendover and Courval. Tract for George Pozer in Shenley, Grand Pré and Dumontier, Road from St. Francis to Duds-well, and from Rocher de la Chapelle to River du Sud.
Acton, Bulstrode, Cranbourne, Hemmingford, Augmentation of Caxton, Grosbois, Dumontier, Hunterstown, Cap de la Magdeleine and Exploration therein, Backland, Grandpré, Glasgow, King's Domain, Jesuits' and other property in Three-Rivers, Stoneham and Tewksbury, Beauharnois, Hemmingford, Standon, Seigniorie of Grand River and Crown Lands.
Chatellanie de Coulonge and Crown Domain, Fiefs Dumontier and Hunterstown, Tring, N. W. Augmentation of Kildare, Inverness, Gore.
Fief Sault au Matlot, Quebec, Standon, Alton, Bristol, Wotton, Deschambeault and Exploration in rear thereof, Nicolet and Wendover, Gore of Wendover, Arthabaska, Woodbridge, Crown Domain and Fief Coulonge, Point à Cury, Quebec, Market Ground, Montreal.
Armagh, Jersey, Exploration behind Isle Verte and Villeray, Abercrombie, St. Giles and Augmentation of Leeds, Wotton, Road from Restigouche to Lake Matapédia, Three-Rivers (Ursulines), Ware, Kempt and Mitis Road Lots, Seigniorie of Mitis, Township of Mitis, Woodbridge, Lac des Deux-Montagnes and Argenteuil, Bristol, Litchfield, Deep, Water Lots opposite Montreal, Bounds of Seigniories of Two-Mountains, Augmentation of Mille Isles and Terrebonne, Lessard.
Upper St. Francis, Harrington, Hemmingford, Lacolle, Hinchinbrooke, Ware, Augmentation of Standon Armagh and La Durantaye, Lessard, Mille Isles, MacNider.
British American Land Company's Tract, Eastern Townships, Champlain, Lessard, Islet du Portage, Buckingham, Orford, Faussambault, Whitworth, Wakefield, Standon, Beach and Wolfe's Cove, Road Line from Port St. Francis to Richmond.
Newport and Port Daniel, (not completed till 1837,) Cox, Portland, Grantham and Wickham, Augmentation of Wendover, Wakefield, Line between Gosford and Faussambault, Line between Gosford and Bourglouis, and St. Gabriel and Gosford, Coves west of Diamond Harbour, Quebec, Mitis, Islet du Portage.
Ditton, Hemmingford, Hinchinbrooke, Nicolas Rioux, Acton, Port Daniel, Newport, Hamilton, Durham, Gosford.
Mont Louis, Limit Line for Beach Grants near Quebec, Stanfold, Arthabaska, Division Lines between the Crown and the Seigniories of Rimouski, Lessard, Lepage, Thibierge and Pachot, Augmentation of Somerset, Aylmer, Forsyth, Beach in front of Notre-Dame des Anges, Adstock, Price, Colrairie, Gayhurst, Trois-Pistoles.
Alton and Grondines, Hope, Durham, Horton, Abercrombie, Perthuis, Vil. of Godmanchester

JOSEPH CAUCHON,  
Commissioner.

## APPENDIX W.

STATEMENT of Official Surveys of Public Lands made in Upper Canada from the year 1792 to 1840 inclusive.

Years.	Acres Surveyed.	Amount paid for Surveys.	LOCALITIES.
1792	19,950		Cramahe, Scarborough, York.
1793	162,400		Barton, Beverley, Blandford, Blenheim, Burford, Burlington Bay, Camborough, Caistor, Delaware, Dorchester South, Dundas Street, Edwarsburgh, Flamborough East, Flamborough West, Glanford, Hope, Huntingdon, Lancaster, Lochiel, Oxford West, Picketing, Rawdon, Thames River, Trent River, Williamsburgh, Yonge Street, Scarborough.
1794	169,300		Bastard, Bertie, Burgess, Caistor, Flamborough West, Gainsborough, Humberstone, Huntingdon, 6 Nation Indian Lands, Kitley, Markham, Montague, Mountain, Murray, Matilda Rear Line, Newark
1795	434,400		Pelham, Rawdon, Welland, Yonge, Yonge Street, York Harbour, Finch, Williamsburgh, Winchester.
1796	433,800		Augusta, Bastard, Bertie, Blenheim, Burgess, Cramahe, Crosby North, Crowland, Cornwall, Escott, Etobicoke, Gainsborough, Grimsby, Hamilton, Hope, Humberstone, Kitley, Nepean, Osgoode, Pelham, Rainham, Scarborough, Vaughan, Walsingham, Wainfleet, Walpole, Whitby, Willoughby, Wolford, Woodhouse.
1797	588,800		Ancaster, Barton, Bastard, Belle Rivière, Dover East and West, Gosfield, Grand River, Haldimand, Hamilton, Kitley, Landsdowne, Leeds, Malden, Marysburgh, Mersea, Oakland, Percy, Raleigh, Rochester, Willoughby, Winchester.
1798	623,900		Aldborough, Alfred, Bastard, Blandford, Charlotteville, Clarke, Dover, Etobicoke, Harwich, Hawkesbury, Hope, Kitley, Malden, Montague, Mountain, Rainham, Raleigh, Sandwich, Sidney, Southwold, Thames River, Beverly, Blenheim, Burford, Delaware, Etobicoke, Flamborough East, Harwick, Ameliasburgh, Houghton, Howard, Orford, Raleigh, Rincom River, St. Clair Lake, Vaughan, Wal-
1799	182,800		singham, Walpole, Winchester, Woodhouse.
1800	164,800		Binbrook, Dunwich, Dorchester North and South, Dereham, Elizabethtown, Glandford, Thames River, Yarmouth.
1801	.....		Gwillimbury East and West, Hope, King, Whitechurch, Woodhouse.
1802	.....	125 11 0	No survey.
	.....		Whitchurch.

1803	223,600	383 9	6 Aldborough, Dunwich, Finch, Gwillimbury East and West, Elmsley
1804	19,000	5 97 6	6 Dover East and West.
1805	26,000	5 10 9	7 Uxbridge, Oford.
1806	249,300	871 10 10	10 Colchester, Crosby North and South, Etobicoke, Gosfield, Mersea, Nelson, Ontario Lake, Sixteen Mile Creek, Toronto, Trafalgar.
1807	182,300	1,172 6	3 Camden East, Caledonia, Pitsburg, Scott.
1808	38,000	563 19 3	3 Penetanguishine Road, Portland.
1809	295,900	245 13 3	3 Yarmouth, Walsingham, Talbot Road, Southwold, Reach, Portland, Niagara River, Middleton, Houghton, Dover East and West, Chatham, Malahide.
1810	307,300	1,548 5 2	2 Augusta, Bayham, Dorchester South, Dereham, Elizabethtown, Hallowell, London Town, Leeds, Malahide, Middleton, Talbot Road, Westminster, York.
1811	242,000	1,073 0 9	9 Aldborough, Dunwich, Ameliasburgh, Escott, Gainsborough, Penetanguishine Road, Talbot Road North, Talbot Road West, Tyny, Toronto, Toronto Government Reserve, Wainfleet, Yonge Street, Yonge, Gwillimbury Village.
1812	53,200	523 14 4	4 Burgess.
1813	.....	.....	No survey.
1814	.....	5 12 9	9 Road from Cooper's Mills, Etobicoke.
1815	53,400	.....	Drummond, Lancaster, Walsingham.
1816	318,900	4,459 1 11	11 Ameliasburgh, Bastard, Bathurst, Beckwith, Belleville, Burgess, Cartwright, Charlottenburgh, Drummond, Goulburn, Hawkesbury, Gore Howard, Kitley, Lancaster, Mauvers, Mersea, Murray, Oxford, Petite Nation River, Raleigh, Talbot Road.
1817	401,200	2,011 0 0	0 Brock, Cavan, Kingston Town, Thurlow, Sherbrooke South, Perth, Cartwright, Beckwith, Bathurst.
1818	275,300	1,434 17 9	9 Ameliasburgh, Elizabethtown, Emily, Georgia, Goulburn, Monaghan, Smith.
1819	1,089,000	702 18 0	0 Albion, Caledon, Chingacousy, Cornwall, Emily, Eramosa, Esquesing, Gwillimbury West, Hallowell, Houghton, London Town, Marmora, Nasagaweya, Nelson, Nissouri, Otonabee, Rice Lake, Seymour, Southwold, Tecumseth, Toronto, Toronto Gore, Trafalgar, Yarmouth.
1820	1,314,550	.....	Asphodel, Adjala, Alfred, Amherstburgh, Caledon, Carradoc, Dalhousie, Eckfril, Essa, Huntley, Innisfil, Lanark, Lobo, Madoc, Mariposa, March, Mono, Moss, Murray, Oro, Orillia, Plantagenet, Richmond, Sombra, Tay, Thorah, Vespra, Westminster, Zorra.
1821	421,840	316 5 0	0 Carradoc, Clarence, Elzevir, Garafraxa, Murray Eastern Outline, Plantagenet, Ramsay, Sherbrooke North, Sidney Gore, Simcoe Lake, Kingston, Mono, Monaghan, Toronto, Westminster, Tyendinaga.
1822	1,031,200	24 0 0	0 Amaranth, Burleigh, Ennismore, Fios, Fredericksburgh, Grand Island, Haldimand, Harvey, Howart, Hungerford, Kaladar, Lancaster, Lochiel, Mono W. H. Osgoode, Palmerston, Plantagenet, Russell, Sicfield, Torbolton, Tosoronto, Zone, Osgoode.
1823	682,800	25 18 6	6 Belmont, Darling, Douro, Dummer, Fitzroy, Lancaster, Lavant, Methuen, Packenham, Raleigh, Romney, Thames River, Chatham, Gosfield, Lochiel.
1824	531,600	826 9 3	3 Beckwith, Bedford, Blandford, Cramahe, Fenelon, Gower North, Gwillimburytown in North Hinchinbrooke, Kennebec, McNab, Maidstone, Murray Western Outline, Nepean, Rochester Sandwich, Tilbury, East and West, Westminster, Wilmot.

## STATEMENT of Official Surveys of Public Lands made in U. C. from the year 1792 to 1840 inclusive—Continued.

YEARS.	Acres Surveyed.	Amount paid for Surveys.	LOCALITIES.
1825	256,100	41 19 0	Adolphustown, Bertie, Eldon, Fredericksburgh Village, Humberstone, Melancthon, Middleton, Ops, London, Peterborough, Thurlow, Vespra, Orford.
1826	68,600	354 16 0	Alnwick, Chippawa Indian Reserve, Hinchinbrooke, Indian Reserve London Town Plot, Oso.
1827	203,400	169 15 3	Guelph, Olden, Roxborough, Thorah.
1828	303,100	694 4 3	Aboukir Road, Brock, Burlington Beach, Caledonia, Emismore, Etamosa, Indian Purchase Barwell Osnabrock, Puslinch, Road through Puslinch, Rivière au Sable, Toronto, Towusend, Wilnot.
1829	145,298	780 3 10	Caledonia, Goderich, Plympton, Rainham, Penetanguishine.
1830	189,060	168 8 6	Brantford Town, Carradoc, Charlottenburgh, Cayuga, Federicksburgh, Gower South, Guelph, Moore, Matchedash Bay, Penetanguishine, Rainham, Saltlee, Sarina, Smith, Southwold.
1831	392,800	869 14 9	Bexley, Brantford, Cornwall, Dummer, Edwardsburgh, Flamborough East, Harwich, Kingston East part of South Boundary, Luther, Pembroke, Pickering, Puslinch, Ross, Richmond, Townsend, Westmeath Whitby, Woodhouse.
1832	502,800	1,355 14 8	Aldborough, Clinton Gore, Colchester, Derham, Dunwich, Grimsby Gore, Huntingdon, Loughborough Malden, Mountain, Murray, Eastern Outline, Nottawasaga, Oxford Town Plot, Puslinch, Puslinch Gore, Presqu'Isle, Sydney Gore, Sophiasburgh, Tecumseth, Thurlow, Warwick.
1833	553,550	3,187 3 10	Adelaide Village, Barrie Town Plot, Big Island, Brooke, Brantford Town, Caunden West, Carradoc Charlottenburgh, Collingwood, Enniskillen, Hawkesbury, Howe Island, Hythe, Indian Lands, London London Town, Lindsey Town, Medonte, Nottawasaga, Ops Town, Orillia, Pickering, Plympton Scarborough, Seymour, St. Vincent, Sunnidale, Toronto, Woodstock.
1834	287,040	1,955 0 3	Barton, Burlington Heights, Beverley, Big Island, Blandford, Buileigh, Bronté, Cambridge, Carradoc Cayuga, Cayuga Town, Dunn, Etobicoke, Harvey, Huron Tract, Military Reserve at Niagara, Nottawasaga Town, Rama, Stamford, Sunnidale, Tratalgar, Trent Port.
1835	246,400	2,578 19 7	Alnwick, Anderdon, Balsam Lake, Beverley, Bosanquet, Coborne, Erroll, Grand River, Hamilton, Huron Reserve, Kenyon, Norwich Gore, Orillia, Pembroke, Plympton, Point Ann, Rivière au Sable, Ross Somerville, St. Vincent, Thurlow, Vespra, Westmeath.
1836	290,010	2,835 12 2	Alfred, Ashfield, Chatham Town, Corunna, Eidon, Etobicoke, King, London Town, Mara, Matchedash, Marlborough, Mersea, Mountain, Oxford, Tyendensaga, Warwick Town Plot.
1837	55,028	310 6 9	Adolphustown, Chatham Town, Corunna, Gloucester, Harvey, Howard, Hungerford, Rawdon, Rokeby Verulam.
1838	31,248	1,057 16 10	Ashfield, Charlotteville, Edwardsburgh, Etobicoke, Zone.
1839	.....	.....	No survey.
1840	.....	721 14 1	Ashfield, Derby, Orillia Town, Sydenham.
	14,174,777	34,502 19 4	

1,000,000 Canada Company Huron Tract.  
330,000 Townships on the Grand River surveyed by the Proprietors.

30,280 St. Regis Indian Lands in Glengarry.  
1,650,752 Surveyed previous to 1792.

17,185,809 Total surveyed in Upper Canada to 31st Dec. 1840.

Between the years 1819 and 1829 inclusive, \$623,657 acres of land were surveyed in Upper Canada by Contract. These

Surveys were paid for in lands at an average rate of 4½ per cent.

The Average cost of the surveys from 1802 to 1840 inclusive, is about one penny an acre.

The Amount paid for surveys during any given year is not the cost of the surveys of that year, as payments were made for surveys performed during the previous year; also from 1819 to 1829 inclusive, most of the surveys were paid for in land.

JOSEPH CAUCHON,  
Commissioner of Crown Lands.

Crown Lands Department,  
Toronto, 30th January, 1857.

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### METHODS OF SURVEY.

The settlement of lands in Canada under the tenure of free and common soccage commenced in the year 1783, when the U. E. Loyalists were located on the Bay of Chaleurs in Lower Canada, and on the banks of the St. Lawrence and its lakes in Upper Canada, the surveying establishments being on a very limited scale, they could not survey townships regularly, but could only lay out the front lots as they were required by the settlers.

The concessions in the rear were afterwards surveyed as occasion required or opportunity permitted.

The townships were originally intended to be six miles square, (as in the United States), and the lots 19 chains in front by 63 chains 25 links in depth, containing 120 acres each, but by the royal instructions of the 23rd August, 1786, to Lord Dorchester, townships fronting on navigable rivers and lakes were ordered to be laid out 9 miles in front by 12 miles in depth, containing 108 square miles each (equal in area to three townships of six miles square), and subdivided into 12 concessions or ranges of 28 lots each; the lots 26 chains in breadth by 80 chains 80 links in depth, containing 200 acres each, with an allowance of 5 per cent for highways. Inland townships were to be 10 miles square and subdivided into 11 concessions of 28 lots each; the lots 28 chains 75 links in breadth by 73 chains 5 links in depth, each lot containing 200 acres and the allowance of 5 per cent for roads.

In Upper Canada road allowances were laid out or reserved on the township and concession lines, and on certain side lines between the lots; but as no uniform mode was adhered to in laying out these road allowances in the older surveys, much uncertainty exists as to their true position which has given rise to many law-suits, and to repeated references to the Surveying Department, and has seriously retarded the improvement of the roads. Owing to the use of the magnetic needle and the inferiority of the surveying instruments used, and to the unskilfulness of some of the surveyors, who did not make allowance for the difference in the variation of the compass at different places, nor for the progressive change in the variation at the same place, and especially owing to the want of check lines, many gross errors were made in the older surveys.

In the year 1818, an attempt was made to ensure greater accuracy in the township surveys in Upper Canada, by instructing the surveyors to ascertain the latitude and the variation of the magnetic needle at certain points in the survey; but in consequence of the surveys of that period having been performed by contract and paid for in land, the attempt was not successful, for of all the older surveys none have been found to be so irregular and defective as these.

No system of check lines was introduced into Upper Canada surveys until the year 1829, when on the report of the late William Chewitt, then Surveyor General, an order in Council was passed authorizing the drawing of lines across the concessions in the middle of the road allowances between every sixth lot. The sections, however, into which this mode of survey divided the townships were too large,  $2\frac{1}{4}$  miles by  $1\frac{1}{4}$ , containing nearly 4 square miles each, subdivided into 12 lots of 200 acres each, 30 chains in breadth by 66 chains 67 links in depth, and they were subsequently reduced

to 100 chains square, subdivided unto 10 lots, each 20 chains in breadth by 50 chains in depth, and containing 100 acres each. The areas of the lots were reduced to 100 acres to avoid the errors which had formerly arisen in subdividing them. Since the year 1818 the limits of the road allowances have been defined by a double row of posts.

As all the outlines of every section are now surveyed in the middle of the road allowances, the uncertainty as to the true position of the roads and the errors in the areas of the lots so frequent in the older surveys, are avoided.

Crown Lands Department,  
Toronto, 30th January, 1857.

JOSEPH CAUCHON,  
Commissioner of Crown Lands.

## APPENDIX X.

(Circular.)

### UPPER CANADA BOARD OF EXAMINERS OF PROVINCIAL LAND SURVEYORS.

*Toronto, 24th December, 1856.*

SIR,

In compliance with Resolutions of the Board, I have to address you on the following subjects :

1st. To direct your attention to the Provincial Statute 19th and 20th Vic. cap. 13 sec. 3, and to request you to inform your apprentices, "that all persons who, after the 1st January, 1858, may apply to be admitted as Provincial Land Surveyors, shall be examined in the rudiments of Geology."

2nd. Complaints having been received by the Board, that many persons not duly authorized, are practising as Land Surveyors, I have to inform you, that notwithstanding the repeal of the 2nd sec. of the 12th Vic., cap. 35, which imposed a penalty of £10, for such infringement of the Act, the offence is by the 15th clause of the 5th section of the 12th Vic., cap. 10, and 2nd sec. of the 18th Vic., cap. 83, a "misdemeanour," and punishable accordingly; and to beg you to aid the Board in its endeavours to put a stop to a practice so injurious both to the public and the profession.

3rd. I am also to express the regret with which the Board has learned from the most reliable sources, that apprenticeships are in several instances only *nominal*; the Surveyor in some cases has ceased to practise, and in others, the student does not reside with the Surveyor, nor even in the same locality, consequently is not *bonâ fide* serving with him. This breach of the law is in some cases aggravated by the Surveyor allowing his apprentice to practise as a Land Surveyor for him, without his supervision, to the injury of the duly admitted practitioner.

As the periods of service and actual practice in the field with a duly admitted and practising Land Surveyor, prescribed by law, are not longer

than are necessary to acquire a thorough practical knowledge of Canadian land surveying and of the laws which regulate it, (without which the best theoretical Surveyors will be liable to make most erroneous and illegal surveys,) the Board will use its utmost endeavours to ascertain the nature and extent of the field practice of every candidate, in accordance with the provisions of the 4th section of the 12th Vic., cap. 35, and will exercise the powers conferred on it by the 10th section of that Act, by suspending or dismissing Provincial Land Surveyors guilty of granting false certificates.

4th. I am directed to request you not to take as an apprentice, any person claiming to have been duly admitted to practice in any of Her Majesty's Dominions other than this Province, until you have submitted the documents he produces in proof of his having been so admitted for the opinion of the Board, and have received its decision thereon.

To aid the Board in the performance of its duties, you will have the goodness to enter replies to the enclosed list of questions, and return it to me as soon as possible.\*

I have the honor to be,

Sir,

Your most obedient servant,

F. F. PASSMORE,

*Secretary.*

\*Note These questions had reference to the Surveyor's professional practice and the attendance of his apprentices.

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UPPER CANADA BOARD OF EXAMINERS OF PROVINCIAL  
LAND SURVEYORS.

*Toronto, 29th January, 1857.*

Sir,

I am directed to inform you that the Board has adopted the following course of examination, in pursuance of the 19th and 20th Vic. cap. 13, sec. 3, and have to request you will please call the attention of your apprentices thereto.

I have the honour to be,

Sir,

Your most obedient servant,

F. F. PASSMORE,

*Secretary.*

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GEOLOGICAL EXAMINATION OF PROVINCIAL LAND  
SURVEYORS.

Candidates for examination in the department of Mineralogy and Geology, will be required to possess a certain knowledge of the following subjects :

1. The more common characters by which mineral bodies are distinguished from one another, as: structure, hardness, specific gravity, effects produced by action of acids, &c.

2. The general properties and conditions of occurrence of some twenty or thirty minerals which enter into the composition of rocks, or which are of importance in a geological point of view, as: quartz, various feldspars and micas, talc, serpentine, augite, hornblende, tourmaline, calcareous spar, sulphate of baryta, sulphate of lime, &c.

3. The ores of the common metals, such as: silver, copper, lead, tin, iron, &c.

4. The classification of rocks; and the more common varieties of igneous, metamorphic and sedimentary products.

5. The sub-divisions, with characteristic fossils, of the Silurian and Devonian rocks of Canada.

6. A general knowledge of Canadian geology; comprising the geographical distribution of the various formations occurring in the Province; their economic contents, &c.

Candidates are recommended to attend the Elementary Course of Lectures, given (with a special view to their requirements) by Professor Chapman, in University College, Toronto; or, otherwise, to have recourse to the following publications: Dana's Manual (not System) of Mineralogy; Hitchcock's or Page's Elementary Geology; Logan and Hunt's sketch of the Geology of Canada.

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## EXTRACT FROM PROFESSOR CHAPMAN'S SYLLABUS.

UNIVERSITY COLLEGE, TORONTO.

MINERALOGY AND GEOLOGY.

PROFESSOR—E. J. CHAPMAN.

*(Late Professor in University College, London, England.)*

Three separate Courses of Lectures are given on these subjects: an Elementary Course for University Students of the first year, and occasional students, generally; and two advanced Courses for students of the fourth year. The Elementary Course is also specially adapted for gentlemen intending to qualify themselves for the examination appointed for Provincial Surveyors. In each division, the Lectures are illustrated by numerous diagrams, specimens and models; and printed tables and other aids to study are furnished to the students, free of charge.

---

**1.—A MIXED ELEMENTARY COURSE ON MINERALOGY AND GEOLOGY, INCLUDING THE LEADING PRINCIPLES OF PHYSICAL GEOGRAPHY.**

[*Tuesdays and Thursdays, throughout the Session, 1 to 2 o'clock, with Examinations (optional on the part of private students) on the alternate Fridays, at the same hour. Fee, for occasional or private students, Ten Shillings.*]

This course, comprising about Forty Lectures, is discussed in the following order:

1. General nature and connexion of these sciences; method of study adopted for the course. 2. Characters by which the discrimination of minerals is effected. 3. Practical application of these characters. 4. Principal rock divisions; minerals present as constituents in rock masses, or of common occurrence in the same. 5. Igneous and crystalline rocks; metamorphic theory. 6. Metallic veins. 7. Metals and metallic ores. 8. General ideas on the chemical nature and classification of minerals. 9. Sedimentary or stratified rocks; their modes of formation, varieties of structure, and other kindred questions. 10. Organic remains; principles of zoological and botanical classification. 11. Sketch of the earth's physical history; geological epochs. 12. Existing geological phenomena; rock formations now in progress; applications of physical geography.

Gentlemen wishing to attend any of the above Courses, as occasional or private students, have merely to obtain an admission card from the Professor. There are no forms or examinations of any kind to go through. This applies equally to all the other subjects taught in University College.

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BOARD OF EXAMINERS OF LAND SURVEYORS FOR LOWER CANADA.

*Quebec, March, 1857.*

SIR,

I am directed to inform you that the Board has adopted the following course of examination, in prusuance of the 19th and 20th Vic., cap. 13, sec. 3, and to request you to call the attention of your Students thereto.

I have the honor to be,

Sir,

Your most obedient Servant,  
A. WALLACE,  
Secretary.

---

GEOLOGICAL EXAMINATION OF CANDIDATES FOR THE PROFESSION OF LAND SURVEYOR.

Candidates for examination in the Department of Mineralogy and Geology, will be required to possess a certain knowledge of the following subjects:—

1. The more common characters by which mineral bodies are distinguished from one another, as: Structure, Hardness, Specific Gravity, effects produced by action of acids, &c.

2. The general properties and conditions of occurrence of some twenty or thirty minerals which enter into the composition of rocks, or which are of importance in a geological point of view, as: Quartz, various Feldspars and Micas, Talc, Serpentine, Augite, Hornblende, Tourmaline, Calcareous Spar, Sulphate of Baryta, Sulphate of Lime, &c.

3. The ores of the common Metals, such as: Silver, Copper Lead, Tin, Iron, &c.

4. The Classification of Rocks; and the more common varieties of Igneous, Metamorphic and Sedimentary products.

5. The subdivisions, with characteristic fossils, of the Silurian and Devonian rocks of Canada.

6. A general knowledge of Canadian Geology; comprising the geographical distribution of the various formations occurring in the Province; their economic contents, &c.

Candidates are recommended to attend the Elementary Course of Lectures, given (with special view to their requirements) by Professor Dawson of McGill College, Montreal; or the course to be delivered in Laval University, Quebec, in the course of the ensuing summer; or otherwise, to have recourse to the following publications:—Dana's Manual (not system) of Mineralogy; Hitchcock's or Page's Elementary Geology; Logan and Hunt's Sketch of the geology of Canada.

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EXTRACT FROM THE SYLLABUS OF PROFESSOR DAWSON.

MCGILL COLLEGE, MONTREAL.

MINERALOGY AND GEOLOGY.

PROFESSOR—J. W. DAWSON, A. M. F. G. S.

1. **MINERALOGY.**—Nature and limits of the Science—Chemical Characters of Minerals—Crystallography—Physical properties of Minerals—Modes of determination of Species—Description of the more important mineral Species, with their Geological relations and uses in the Arts.

2. **GEOLOGY.**—Rocks of the Earth's crust, considered in their composition, their structure as Crystalline or Fragmentary—their origin as Igneous, Aqueous or Metamorphic—the fossil remains contained in them—Present State of the Earth's surface—Changes now in progress—Geological History of the Earth—Geology of British America—Application of Geology to Engineering, Agriculture, &c.—Examples of Methods of Geological investigation.

In the present Session (1857) the Lectures on the above subjects will commence on the 1st Thursday of March, and be continued on Tuesdays and Thursdays at 4 P. M., until May 1st. The arrangements of 1857-8 will embrace a course on these subjects to commence in November, at which time also the lectures on Zoology and Botany commence. Fee for the entire course of Natural History, £1 5s. For Mineralogy and Geology alone, 12s. 6d. McGill College also offers a course of Engineering commencing in November—Fee, £2 10s., and students may attend this course, with Natural History, Chemistry, Natural Philosophy and Agriculture, for a fee of £5.

For further information apply to W. C. Baynes, Secretary.

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# R E T U R N

To an Address from the Legislative Assembly to His Excellency the Governor General, dated the 16th instant, praying His Excellency to cause to be laid before the House, "Copies of any Despatches, Letters, or "Correspondence that may have passed between the Colonial Office, the "Treasury, or any other Department of Her Majesty's Government, and "the Government of Canada, since the commencement of the Provincial "Legislative Session of 1856, relative to Chartered and Free Banks, "Bank Management, the Currency and Coinage."

By Command.

T. LEE TERRILL,  
Secretary.

SECRETARY'S OFFICE,  
Toronto, 30th March, 1857.

(Copy.—No. 20.)

DOWNING STREET, 12th February, 1857.

Sir,—Having referred to the Lords Commissioners of the Treasury, the Acts passed by the Legislature of Canada for amending and consolidating the Acts relating to the Bank of Montreal, the Commercial Bank of Canada, the Bank of Upper Canada, and the Acts for incorporating the Union Bank of Canada, and the Colonial Bank of Canada, my attention has been drawn to the 20th Section of the first mentioned Act (the provisions of which are also adopted in the other Acts), by which the Bank is empowered to take Mortgages by way of additional security for debts contracted with the Bank.

On this point, I transmit for your information and guidance, an extract from a letter addressed to this Department by desire of the Lords Commissioners of the Treasury, and I have to instruct you to bring it before your Council with a view to the amendment of the Acts by the insertion of a Clause similar to that to which their Lordships refer.

I have, &c.,

(Signed,) H. LABOUCHERE.

SIR EDMUND HEAD, Baronet,  
&c., &c., &c.

**Extract of a Letter from Sir C. E. Trevelyan to T. F. Elliott, Esquire, dated Treasury Chambers, 16th January, 1857.**

“The object of section 20 is to confine the Bank to the legitimate objects of banking, and to prevent it from holding real estate or merchandize; but it appears to my Lords that this very proper object will be liable to be defeated by a permission to hold such property as collateral security, as the Bank might be induced to make advances to persons on the faith of such security, who without it would not have been able to obtain them, and thus securities nominally collateral, might become the real foundation of credits.”

This point has been frequently brought under the consideration of my Lords, in reference to Royal Charters for the incorporation of Colonial Banks, and they have adopted the following clause, which appears to them to be calculated to guard against the abuse to which they have referred, and at the same time to afford to Banks all the facilities which they ought to possess of obtaining possession of the property of *bonâ fide* debtors:—

“And we further direct that, notwithstanding any thing in our said Charter contained, it shall be lawful for said Company to accept any lands, houses, or other real or personal estate, in satisfaction, liquidation, or payment of any debt, absolutely and *bonâ fide* due to the said Company, and to take any mortgage or other like charge as a security for any monies due to the said Company, or for which parties may have rendered themselves liable to the said Company, and to hold such lands, houses, and other property or security thereon, for such reasonable time only after the said Company shall have acquired an absolute interest therein as shall be necessary for selling and disposing of and converting the same into money: and also, that it shall be lawful for the said Company to sell or otherwise convert into money any goods, wares, and merchandize, which shall or may be taken by them in satisfaction, liquidation, or payment of any debt, and to sell and convey any lands, houses, and other real property whatsoever, or any goods, wares, or merchandize which they may acquire in the manner aforesaid.”

(Copy.—No. 42.)

GOVERNMENT HOUSE,

Toronto, 18th March, 1857.

Sir,—I have had the honor of receiving your Despatch of the 12th February, No. 20, relating to a clause in the Banking Acts, passed last Session (20th Vic., caps. 74, 120, 121, 122, and 123). I referred the matter to the Inspector General of Finance, and that officer has made a report which meets the approval of the Executive Council.

I now enclose a copy of such Report with a Copy of the Minute of Council concurring in the same.

I have, &c.,

(Signed,) EDMUND HEAD.

The Right Honorable H. LABOUCHERE,  
&c., &c., &c.

(Copy.)

The Inspector General has the honor to submit the following observations on the letter of Sir Charles E. Trevelyan to Mr. Labouchere, communicating the opinion of the Lords Commissioners of Her Majesty's Treasury on sundry Bank Charters passed last Session, and suggesting an amendment thereto:—

The objection is taken to the latter part of the 20th section of the Montreal Bank Charter, which is common to all the charters, as insufficient to secure the object sought to be obtained, and suggesting the substitution of a form adopted by the Lords of the Treasury in the Royal Charters granted for the incorporation of Colonial Banks.

The object of section 20 is to confine banks to their legitimate business and to prevent the acquiring of real estate or merchandize, but it contains a proviso permitting them to hold such property as collateral security, and this proviso, Sir C. E. Trevelyan apprehends, may defeat the main object, "as the bank might be induced to make advances to persons on the faith of such security."

Section 20 runs thus:—

"The bank shall not, either directly or indirectly, acquire or hold any real estate, other than such as by the first section of this act they are authorized to acquire and hold; nor any ship or other vessel; nor any share of their own capital stock, or of the capital stock of any other incorporated or unincorporated company; nor shall the bank, either directly or indirectly, lend money or make advances upon the security, mortgage or hypothecation of any real estate, or any share of their own capital stock, or of any goods, wares or merchandize; nor shall the bank, either directly or indirectly, raise loans of money, or deal in the buying, selling or bartering of goods, wares or merchandize, or engage or be engaged in any trade whatever, except as dealers in gold and silver bullion, bills of exchange, discounting of promissory notes and negotiable securities for money, and in such trade generally as legitimately appertains to the business of banking: Provided always, that the bank may take and hold mortgages and hypothecs on real estate in this Province, and on ships and other vessels, and security on personal property, by way of additional security for debts contracted with the bank in the course of their dealings, and also for such purpose may purchase and take any outstanding mortgages, judgments or other charges, upon the real or personal property of any debtor of the said bank."

Stronger language can scarcely be used to secure every avenue against the contingency apprehended by Sir C. E. Trevelyan, and if in the face of the stringent clauses of the Act, any Bank should persist in a violation of the law, it must be at the hazard of forfeiture of its banking privileges.

The safeguard, as proposed by Sir C. E. Trevelyan, appears to lie in compelling an early sale of the property or mortgage taken in security on liquidation of the debt, and contemplates in the majority of cases at least, an absolute conversion of the debtors' property to the uses of the Bank—"it shall be lawful for the said Company to accept any lands, houses, or other real or personal estate, in satisfaction, liquidation, or payment of any debt absolutely and *bona fide* due to the said Company, and to take any mortgage or any other like charge as a security for any monies due to the said Company for such reasonable time only, after the said company shall have acquired an absolute interest therein, as shall be necessary for selling and disposing of, and converting the same into money."

The Canadian Legislature sanctions the taking and holding of mortgages and hypothecs, by way of additional or collateral security, only for a debt already contracted, but fixes no limit within which the property is to be realized.

There appears to be an advantage in this to the debtor, at the same time that the Bank is not prejudiced; the power of postponement which enables the latter to await the most favourable time to effect a sale, affords to the former a better chance of recovering his property, or if realized, of reaping its full value. The conversion of real property is far less readily effected in a new than in an old country. In England, sales of real property by auction may be said to be the rule, in Canada the exception. In the former, a cash sale of an estate of £100,000 would realize, within a few per cent., its full value; in the latter, a sale to half the extent, under similar conditions, could not be effected except at prices utterly ruinous.

The undersigned respectfully submits that while the same general principles of political economy which obtain in the Old Country are fully recognized in Canada, the appropriateness of means to an end will vary with the habits and condition of a people; and the choice of suitable means, may not unsafely be left to those who have been selected by the people as most conversant with their interests, and fitted to watch over them.

It is confidently believed that the Imperial Government, which, in the exercise of a generous policy and wise discretion, conferred upon this Province the privileges and obligations of responsible Government, will have no cause to regret the surrender to the Canadian Legislature of the management of its own internal affairs.

Respectfully submitted.

(Signed,)

WM. CAYLEY,  
Inspector General.

INSPECTOR GENERAL'S OFFICE,  
12th March, 1857.

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**Copy of a Report of a Committee of the Honorable the Executive Council, dated 17th March, 1857, approved by His Excellency the Governor General.**

The Committee of Council have had under consideration a Despatch from Mr. Secretary Labouchere, of the 12th February last, No. 20, and the accompanying extract of a letter from Sir C. E. Trevelyan, to T. L. Elliot, Esquire, dated Treasury Chambers, 16th January, 1857,—and the Report thereon of the Inspector General, dated 12th March, 1857, and the Committee respectfully recommend that the Report be adopted, as they entirely concur therein.

Certified.

(Signed,)

W. H. LEE,  
C.E.C.

# R E T U R N

(IN PART)

To an ADDRESS of the LEGISLATIVE ASSEMBLY of the 2nd ultimo ;  
for certain Statements of the Debts and Revenues of Upper  
and Lower Canada at the time of the Union, and of the pre-  
sent Debt of the Province of Canada.

By Command,

T. LEE TERRILL,  
Secretary.

Secretary's Office,  
Toronto, 27th April, 1857.

(No. 644.)

INSPECTOR GENERAL'S OFFICE,  
Toronto, 22nd April, 1857.

SIR,—In compliance with an Address of the Honorable Legislative Assem-  
bly, dated the 2nd March, 1857, I have the honor to furnish herewith:—

1st. A statement of the debt of Upper Canada at the time of the Union of the  
two Provinces.

2nd. A statement of the debt of Lower Canada at the same time.

3rd. A statement of the sums of money in the public chest of each section,  
respectively, at the time of the Union.

4th and 5th. The preparation of these statements will occupy a considerable  
time, and the instructions to distinguish the Revenue and Expenditure, in the  
two sections of the Province, cannot in all cases be carried out.

6th. A statement of the present debt of the Province.

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

WILLIAM DICKINSON,  
Act'g D. I. G.

The Hon. T. L. Terrill, Esq.,  
Provincial Secretary,  
Toronto.

No. 1.—Statement of the Public Debt of the Province of Canada, for that part formerly Upper Canada, on 10th February, 1841.

|                                              |                 |          |          |
|----------------------------------------------|-----------------|----------|----------|
| Provincial Debentures (in the Province)..... | £213671         | 11       | 2        |
| Do. do. (in England).....                    | 932055          | 11       | 1        |
| Balance due to London Agents.....            | 35106           | 3        | 2        |
| Do. do Provincial Banks.....                 | 26000           | 0        | 0        |
| Total currency.....                          | <u>£1206833</u> | <u>5</u> | <u>5</u> |

The above Debt was contracted on account of the following Public Works and Loans to Incorporated Companies, up to 31st December, 1841, viz.:

|                                         |                 |           |           |
|-----------------------------------------|-----------------|-----------|-----------|
| Welland Canal.....                      | £462856         | 18        | 10        |
| St. Lawrence Canals.....                | 440097          | 11        | 0         |
| Provincial Penitentiary.....            | 44198           | 15        | 1         |
| Inland waters and Trent Navigation..... | 45014           | 11        | 7         |
| Roads and Bridges, Upper Canada.....    | 15955           | 3         | 5         |
| Kettle Creek Harbor.....                | 7500            | 0         | 0         |
| Kingston Hospital.....                  | 3000            | 0         | 0         |
| Parliament Buildings, Toronto.....      | 5000            | 0         | 0         |
| Toronto Harbour.....                    | 5200            | 0         | 0         |
| Loans to Incorporated Companies.....    | 282009          | 19        | 0         |
| Total currency.....                     | <u>£1310832</u> | <u>18</u> | <u>11</u> |

Inspector General's Office,  
Toronto, 22nd April, 1857.

No. 2.—Statement of the Public Debt of the Province of Canada for that part formerly Lower Canada, on 9th February, 1841.

Service for which the Debt was received.

|                                                          |                |          |          |          |
|----------------------------------------------------------|----------------|----------|----------|----------|
| For enlarging and improving the Harbour of Montreal..... | £87175         | 0        | 0        | Currency |
| For Completing the Chambly Canal.....                    | 35000          | 0        | 0        | “        |
| For Steam Dredge, Montreal... ..                         | 1500           | 0        | 0        | “        |
| Total Debts.....                                         | <u>£123675</u> | <u>0</u> | <u>0</u> | “        |

The Public Accounts shew that up to 31st December, 1841, Provincial Debentures were issued for the above amount.

Inspector General's Office,  
Toronto, 22nd April, 1857.

No. 3.—Statement of the Sums of Money in the Public Chest of each section of the Province of Canada at the time of the Union.

|                                         |               |          |          |
|-----------------------------------------|---------------|----------|----------|
| Cash on hand in Upper Canada.....       | £ 17438       | 19       | 0        |
| Do do Lower Canada.....                 | 15722         | 4        | 5        |
| Total, (See Public Accounts, 1841.).... | <u>£33161</u> | <u>3</u> | <u>1</u> |

Inspector General's Office,  
Toronto, 22nd April, 1857.

## STATEMENT of the Public Debt of the Province of Canada on the 31st Dec., 1856.

|                                                  |                                     | £       | s.       | d. | £       | s. | d. |
|--------------------------------------------------|-------------------------------------|---------|----------|----|---------|----|----|
| Chargeable against Public Works.                 | { Imperial guarantee loan.....      | 1825000 | 0        | 0  | 4708308 | 14 | 7  |
|                                                  | { Debentures (payable in England).. | 2196897 | 15       | 3  |         |    |    |
|                                                  | { Do (payable in Canada)..          | 681405  | 19       | 4  |         |    |    |
| Chargeable against Special Funds.                | { Upper Canada Building Fund....    | 30000   | 0        | 0  | 117007  | 9  | 10 |
|                                                  | { Court Houses, Lower Canada....    | 55757   | 9        | 10 |         |    |    |
|                                                  | { Lunatic Asylum, Upper Canada..    | 24250   | 0        | 0  |         |    |    |
|                                                  | { Law Society, Upper Canada.....    | 7000    | 0        | 0  |         |    |    |
| Loans on the guarantee of the Province .....     | { Railroad Companies .....          | 5300408 | 6        | 8  | 5883178 | 6  | 8  |
|                                                  | { Quebec Loan .....                 | 82770   | 0        | 0  |         |    |    |
| Specially chargeable against Municipalities..... | { Municipal Loan Fund, U. Canada..  | 1771665 | 6        | 8  | 1985915 | 6  | 8  |
|                                                  | { Do do L. Canada..                 | 214250  | 0        | 0  |         |    |    |
| Total Debts.....                                 |                                     | £       | 12189404 | 17 | 9       |    |    |

Inspector General's Office,  
Toronto, 22nd April, 1857.

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**TORONTO:**

**PRINTED BY JOHN LOVELL, YONGE STREET.**

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## R E T U R N

(IN PART)

To an Address of the Legislative Assembly, dated 27th March, 1857; for Copies of Complaints against Inspector and Superintendent of Police, Quebec, and Correspondence relating thereto, since the 1st of January, 1855.

By Command.

T. LEE TERRILL,

Secretary.

SECRETARY'S OFFICE,

Toronto, 30th March, 1857.

NOTE.—Copies of the Documents asked for by the above cited Address, which are anterior to the 5th May, 1856, were furnished on that day, in answer to the Address of the 14th April, 1856.

T. L. T.

[*Translation.*]

Quebec, 8th May, 1856.

Sir,—I have the honor to make His Excellency the Governor General in Council acquainted with an act of insulting provocation towards me on the part of the Superintendent of Police, John Maguire, Esquire.

For a long period I have patiently endured the rude and provoking conduct he has displayed towards me. On Tuesday last Mr. Maguire so gravely misconducted himself towards me, that I have determined to make a complaint thereof.

The following is a Statement of the circumstances:—

On Tuesday, the 6th instant, I entered the Magistrates' Room, where, at the request of Mr. Doucet, I administered the oath to a woman named Kelly, upon an information. John Maguire, Esquire, Superintendent of Police, passed near me, without looking at me, or saluting me, on his way to the private room in the rear. Having finished my business, I put my hat on my head to go away. At

the same time Mr. Maguire came out of his room, and when he passed near me I did not remove my hat. He spoke to Mr. Doucet, who immediately went away. Mr. Maguire then, without looking at me, went and shut the door opening into the Police Court, doubtless, to be without witnesses of what he was about to do; J. B. Parkin, however, happening to enter, must have witnessed the proceedings. He came and placed himself before me, and threatening me with his fore-finger, said to me in an insulting tone, "Mr. Bardy, you are not in the habit of keeping on your hat—do you do so to insult me?" Surprised at this address, I replied, "What do you pretend to say, Mr. Maguire; I am not insulting you, and although you continually insult me, I take no notice of it. You know, moreover, that I am here in my own office; in the Magistrates' room."

"No" replied he, "you are not in your own office, you are a School Inspector."

"Yes I am," I replied, "but here I do not inspect schools, I am here in my place as a Magistrate."

He added, "you come here too often."

"I shall come here," I replied, "whenever I think proper," Mr. Maguire threatening me all the time with his finger in the grossest manner, then said:—

"You come here to insult me, take care what you are about, if you insult me, I will call a constable to put you out."

I answered, "I take no notice of your threats." He then retired in a great rage into his room, as I think he then perceived Mr. Parkin.

Such are the facts, as I am ready to certify by affidavit, and which I have the honor humbly to submit, hoping that justice will be done me.

I have the honor to be, Sir,  
Mr. Secretary,  
Your obedient Servant,

P. BARDY, J. P.

The Honorable G. E. CARTIER,  
Secretary.

[*Translation.*]

PROVINCIAL SECRETARY'S OFFICE,

Toronto, 15th July, 1856.

Sir,—I have been directed by His Excellency the Governor General to inform you, that His Excellency having received the explanations of Mr. Maguire, on the subject of the complaint brought by you against him, has come to the conclusion, that the difficulty which has arisen between you, is not of a sufficiently serious nature to warrant any direct action on the part of the Executive. His Excellency however, has directed me to intimate to you both, that it is to be expected, that the ordinary courtesy of society should be displayed by those occupying the office of Justice of the Peace, the absence of which is to be observed on the present occasion.

I have, &c.,

(Signed,) T. LEE TERRILL.

Dr. P. M. BARDY, J.P.,  
Quebec.

SECRETARY'S OFFICE,

Toronto, 28th June, 1856.

Sir,—I have the honor to enclose to you herewith a Copy of a complaint preferred against you, in your capacity of Inspector and Superintendent of Police at Quebec, by P. M. Bardy, Esquire, J. P.; and to request that you will furnish me, at your early convenience, with such remarks or explanations on the subject of the complaint as you may desire to offer, for the information and consideration of his Excellency the Governor General.

I have, &amp;c.,

E. PARENT,  
Assistant Secretary.

JOHN MAGUIRE, Esquire,  
Inspector and Superintendent of Police, Quebec.

OFFICE OF INSPECTOR AND SUPERINTENDENT OF POLICE,  
Quebec, 3rd July, 1856.

Sir,—I had the honor to receive yesterday, the 2nd instant, your letter, enclosing a paper from Dr. Bardy, dated the 8th of May, complaining of all he has suffered by my offensive deportment, *long temps*, and particularly on the 6th of May last, when he insinuates that I meditated something terrible; that I took the precaution to close the door to keep out witnesses, asked Mr. Doucet to leave the room, and actually placed myself right before him, menacing him with my finger; and at your request I have the honor to state in reply:—

That on or about the day mentioned by Dr. Bardy, that gentleman, according to his daily habit, was in the Police Office. After disposing of the cases before me, I retired from the Bench into the room adjoining the Court, where I hold the preliminary investigations of indictable offences. Dr. Bardy was there, sitting at my table, in my chair, wearing his hat, and reading, or pretending to read, from a small book which he held in his hand. At first I took no notice of him, and spoke to Mr. Doucet, one of the Clerks of the Peace, concerning a case then in hand. I then turned round, and seeing Dr. Bardy continued in the same attitude, I asked him whether he wore his hat for the purpose of giving offence. He answered, *je suis chez moi*. I assured him that he was not *chez lui*; that he was, as I understood, a School Inspector, and not Police Magistrate. He said he was in the Magistrates' room, and was a magistrate, and would come there as often as he pleased; I then told him that he came a great deal too often, and that if he did not conduct himself with propriety when he did come, I would call in a constable and have him handed out. All this time Dr. Bardy remained sitting at my table, in my chair, wearing his hat. After Dr. Bardy had left, I found upon my table the book in which he had been reading—it was "Walker on Chess."

These are simply the facts which Dr. Bardy has thought fit to make the subject of complaint to His Excellency the Governor General, and I am sure His Excellency will readily appreciate his conduct on the occasion referred to.

In complaining of what he has suffered for a length of time from my offensive conduct, Dr. Bardy ought to have been more specific, for I have no recollection of having had any altercation with him since or before the incident of which he complains. It is true that I have advised, in a friendly manner, Dr. Bardy to

abstain from interfering in the administration of justice in the Police Court, and expressed to him my surprise, that his daily visits to the Police Office did not interfere with the duties of his profession, as well as his duties as School Inspector. The purport of Dr. Bardy's answer always has been, that he is a Justice of the Peace; that Justices of the Peace have all equal powers, and that he was so informed by the Clerks of the Peace. The last time I had occasion to see the Honorable Mr. Chauveau, Superintendent of Education for Lower Canada, in Quebec, I explained to him the line of conduct of his Officer, and requested him to advise Dr. Bardy to discontinue his daily visits at the Police Office.

The cases of the Ships "Albion" and "Haidie" in which Dr. Bardy acted so disgraceful a part as a Magistrate last summer, are fresh in the memory of the citizens, and I suppose in the memory of His Excellency.

In another case, this spring, of his friend Dr. R. H. Russell, who was brought up for a very brutal assault upon a child ten years' old, his conduct as a Magistrate was equally disgraceful. Since then, seeing that Doctor Bardy, encouraged by persons having an official connection with the Police Office, and some of the *habitués* of the Police Court, such as Messrs. Secretan, Cairns, and Doctor Russell, I have treated Doctor Bardy with the same indifference as any other idler about the Court; for being responsible for the good administration of the law in the department, I had good reason, from past experience, to give Doctor Bardy no encouragement to interfere.

Doctor Bardy evinces in his letter a singular sensitiveness, by which a stranger would be impressed with the idea that he was a person of very delicate feeling, but when he shews that he subjects himself, without any necessity, to what he terms insults, this view disappears. Doctor Bardy has only to remain away if he is offended, because the Police Magistrate neglects to bow to him.

I have the honor to be, Sir,  
Your most obedient Servant,

J. MAGUIRE,  
Inspector and Superintendent of Police.

The Honorable T. L. TERRILL,  
Provincial Secretary,  
&c., &c., &c.

**On Complaint preferred against John Maguire, Esquire,  
Inspector and Superintendent of Police, Quebec, by  
P. M. Bardy, Esquire, J. P.**

CROWN LAW DEPARTMENT,  
Toronto, 14th July, 1856.

The dispute between Mr. Maguire, and Dr. Bardy, is not, in my opinion, of sufficient importance to require any direct action on the part of the Executive. I would however suggest the propriety of its being intimated to both these gentlemen, that it is expected from persons holding the position of Justice of the

Peace, that they should show to one another the common courtesies of society, of which there appears to have been a deficiency on the occasion in question.

GEO. ET. CARTIER,  
Attorney General, E. C.

SECRETARY'S OFFICE,

Toronto, 15th July, 1856.

Sir,—I have the honor to inform you, that His Excellency the Governor General, has had under his consideration, your explanation in answer to the complaint made against you, by Dr. Bardy, J. P.

His Excellency commands me to state, that he has come to the conclusion, that the difficulty which has arisen between you and that gentleman, is not of sufficient importance to require any direct action on the part of the Executive.

I am however to intimate to you, as it has been intimated to Dr. Bardy, that His Excellency expects from persons holding the position of Justice of the Peace, that they should shew to each other the common courtesies of society, of which there appears to have been a want on the occasion in question.

I have the honor to be, Sir,  
Your most obedient Servant,

(Signed,) T. LEE TERRILL,  
Secretary.

JOHN MAGUIRE, Esquire,  
Inspector and Superintendent of Police, Quebec.

QUEBEC, 4th July, 1856.

Sir,—We have for a long time silently submitted to the oppressive conduct of John Maguire, Esquire, Inspector and Superintendent of Police for this city, towards us, in the hope that reflection would have induced him to alter his behaviour, but as our submission has only tended to make him more tyrannical and overbearing, and as he has now gone the length of putting into writing an imputation against us, as uncalled for as it is untrue, we feel ourselves obliged, at last, to seek for redress at the hands of His Excellency the Governor General.

The language and demeanour of Mr. Maguire towards us has been of the most supercilious and haughty nature, lowering us even below domestic servants, so as to prevent all intercourse with him, except of the most strictly official character.

He has gone the length recently of threatening both of us with imprisonment for absence without his permission, and refusal to copy out an affidavit a second time, after a first had been taken in his own presence and with his own sanction.

The violence of his language, in his paroxysms of rage, and his actions, are such as we cannot account for by any motive or cause known to us.

The annoyances which he has practised upon us have now reached the length that, although he has at different times certified the account of Mr. Andrews, a young gentleman employed in our office under the sanction of the Executive

Government, an account being presented to him on the first of the present month, for the services of this gentleman, (more requisite than ever during the season of navigation,) he has added to his certificate of the performance of the service, the following injurious and unfounded statement, "but I have to add "that such necessity has arisen chiefly from the neglect and refusal of the Clerks "of the Peace to discharge their duties themselves."

However painful it may be for us, it becomes necessary in the interest of the public, and of the administration of justice, to solicit the interposition of His Excellency, and we have therefore to request that you will be pleased to submit this letter to His Excellency, and to pray that he may be pleased to grant such relief in the premises as to His Excellency may seem just.

We have the honor to be, Sir,  
Your most obedient Servants,

J. GREEN,  
Joint Clerk of the Peace.

P. A. DOUCET,  
Joint Clerk of the Peace.

Honorable T. LEE TERRILL,  
Secretary, Toronto.

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SECRETARY'S OFFICE.

Toronto, 14th July, 1856.

Sir,—I have the honor to enclose to you herewith a copy of a complaint preferred against you by the Clerk of the Peace, Quebec, and to request that you will furnish me, without delay, with such explanation or remarks as you may deem proper, with reference to the complaint, for the information and consideration of His Excellency the Governor General.

I have the honor to be, Sir,  
Your most obedient Servant,

T. LEE TERRILL,  
Secretary.

JOHN MAGUIRE, Esquire,  
Inspector and Superintendent of Police, Quebec.

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OFFICE OF THE INSPECTOR AND SUPERINTENDENT OF POLICE,

Quebec, 17th July, 1856.

Sir,—I have had the honor to receive your enclosure on Thursday, being copy of a letter of Messrs. Green and Doucet, Joint Clerk of the Peace, dated the 4th instant, and in obedience to His Excellency's request, I beg to state in reply:—

As Inspector and Superintendent of Police, or, in other terms, as Police Magistrate, I am held responsible before the law, the people, and the govern-

ment for the exercise of the authority with which I am vested, as well as for the efficient discharge of the duties appertaining to my office. That such duties are highly important and onerous will be seen by reference to the published Criminal Statistics of Quebec, which show 3,070 cases for the year expired on the 31st December last, and the mental and bodily labor required in the disposal of so large an amount of business may be easily conceived.

In discharging those duties, if I understand the office of Clerk of the Peace, I have the right to claim the daily attendance of Messrs. Green and Doucet to act as my clerks, and assist in drawing up informations, complaints, depositions, warrants, convictions, commitments, and all other necessary documents, and to keep a proper record of all the proceedings had in the department.

Indeed, the 14th & 15th Vic., cap. 95, sec. 32, provides that in all cities and towns, the Clerk or Clerks of the Peace, shall act as the Clerks of the Inspectors and Superintendents of Police and the Justices of the Peace.

I regret, however, to have to state that this assistance has not been satisfactorily afforded by the Clerks of the Peace for a length of time past.

After the passing of the Act 18 Vic. cap. 157, requiring investigations in cases of fire occurring in the Cities of Quebec and Montreal—a duty which the Act imposes on the Inspectors and Superintendents of Police—the Clerks of the Peace were in the habit of sending for Mr. Andrews to write the evidence taken at these investigations, and as they were additional duties recently imposed by statute, I attended to them without requiring any assistance from the Clerks of the Peace, other than the services of Mr. Andrews, whom I found very efficient in writing down the evidence under my own direction.

To have asked the Clerks of the Peace to write the depositions, I would only have exposed myself to refusal—and when Mr. Andrews' accounts were presented to me, I cheerfully certified them. They, however, went on increasing in amount, because the Clerks of the Peace began to employ Mr. Andrews, not only in writing the depositions in cases of fire, but also acting for themselves in criminal and other matters, while they, the Clerks of the Peace, became more neglectful of their duties.

The account of Mr. Andrews, as extra Clerk, for his services for the quarter ending the 30th ultimo, shews that he was employed permanently, or nearly so, during that period by the Clerks of the Peace, and that account with a certificate at the bottom of it,—to the effect that his services were necessary for the period therein stated, was presented to me for my signature.

I felt then, as I do now, that I could not, unless by committing an act of dishonesty and fraud upon the Government, sign the certificate in question, without the modification which I added. I do not wish it to be understood as offering any objection to the payment of Mr. Andrews, which he has well merited,—for his services were necessary, because the Clerks of the Peace neglected and refused to perform these services themselves.

I must, however, complain that Messrs. Green & Doucet have availed themselves of the presence of Mr. Andrews to neglect their duties and absent themselves from the office, thus exposing me to the risk and inconvenience of acting with a person wanting sufficient experience.

I cannot explain my meaning here, better than by quoting the following extract from a letter from my predecessor, William King McCord, Esquire, addressed to the Honorable L. H. LaFontaine, then Attorney General, bearing date the 5th April, 1848; concerning the Clerks of the Peace then in office:

“It must be admitted that it requires a Professional man of much criminal reading, and one of great exactness in business, and a person of business habits, in whom the Police Magistrate could place implicit confidence and reliance,

“ as it is morally impossible that every document should be examined in all its points; in fact that there should exist a mutual feeling of esteem and respect between all these officers.”

In disposing of cases brought before me to be tried summarily, I have to occupy the bench for a considerable portion of the day, and while so engaged, it is impossible for me, with confidence or safety, to sign papers in Criminal and other matters, which I cannot examine, if prepared and presented to me, as it frequently happens, by other persons than the Clerks of the Peace; and there is no part of the duties of the office of greater importance than the examination of witnesses, and the taking down, correctly, their depositions in indictable offences, so as to bring out all the facts, either for the justification of the party accused or for the information of the Crown.

Messrs. Green & Doucet have both refused, and still refuse to write the depositions of the witnesses at these preliminary investigations.

The Clerks of the Peace state, that “ I have gone the length, recently, of threatening both of them with imprisonment for absence without my permission and refusal to copy out an Affidavit a second time, after a first had been taken in my own presence and with my own sanction.”

It is entirely untrue that I ever made so ridiculous a threat as that of imprisoning Messrs. Green & Doucet “ for absence without my permission;” but in the early part of June, I was sitting holding an investigation in a case of Felony, the party accused was a Frenchman, and the witness a French Canadian. I swore the witness, and was called into the next room. When I returned and took my seat the deposition of the witness was about being closed, and either Mr. Andrews or Mr. Green began to read it for the witness in English. The prisoner said that he did not understand it. I then told Mr. Green to examine the witness *de novo* and take down his deposition in French. Mr. Green made some observation in reply which I do not recollect. I told him it was quite irregular to take down the evidence of a French Canadian witness in English, in presence of the prisoner, who only understood French. Mr. Green refused, stood up, walked out of the room and did not return that day. The next day I sent for Mr. Green and spoke to him on the subject of his conduct the day previous, but I could not obtain from him any expression of regret for his behaviour, or any assurance that he would apply himself to the discharge of his duties. At the conclusion of this conversation, which was in my private room, I said to Mr. Green: “ What will you say, if some of these days I shall commit you for contempt.”

Some days subsequent to this occurrence I was again sitting in another case which I was investigating, when Mr. Doucet refused to write the depositions of the witnesses, and rose up and walked out. On that occasion I said to him what I had said to Mr. Green for similar conduct.

In their letter Messrs. Green and Doucet have thought proper to qualify my conduct and language, in their regard, as “ supercilious, tyrannical and overbearing.” To this I have only to offer a simple but indignant negative. They will be supported in their calumnious statement by no one beyond their own immediate *employés* and the circle of their sympathizers.

I have certainly had occasion to find fault with Messrs. Green and Doucet for doing what they should not have done; and although I take a warm interest in the faithful and efficient discharge of the duties of the office, I do not, notwithstanding the impediments cast in my way, recollect to have experienced any of those paroxysms attributed to me by Messrs. Green and Doucet.

Judging from the tone of their letter now before me, I am inclined to think that these gentlemen have written it, if not during a paroxysm, at all events under some excitement, for the offence which appears to have provoked it is

my explaining a certificate according to fact, which I could not have signed without violating the truth in the terms dictated by them.

Before and sometime after the death of the late Mr. Perrault, Mr. Doucet, with the aid of Mr. Bender, his deputy, and Mr. Sauvageau as Clerk, discharged the duties of Clerk of the Peace, and I can say that from the date of my appointment to the office of Police Magistrate, until Mr. Green became associated with him, no officer could have performed his duties better than Mr. Doucet.

Then came the appointment of Messrs. Green and Doucet, Joint Clerks of the Peace, followed by the increase of their salaries,—that of Mr. Green from £250, which he had previously received as Clerk of the Crown, to £500, and that of Mr. Doucet from £350 to £500 per annum. These arrangements completed, a remarkable change took place in the Police Office; Mr. Doucet's business habits were no longer the same, and Mr. Green never had any habits of business.

Thus placed in the receipt of a good salary, permanently fixed, instead of evincing a corresponding zeal in the performance of their official duties, they appear to search only for the means of exemption from them.

Last winter, Messrs. Green and Doucet dismissed the clerks and left the Court themselves at three o'clock in the afternoon, without consulting me. I spoke to Mr. Green about this, and told him that I could not allow a public office, like the Police Office at Quebec, to be closed at three o'clock in the afternoon.

Mr. Green replied that it was not my office, but the Magistrates' Office, and continued, he and Mr. Doucet, to send away the Deputy and the Clerks at three o'clock—grounding their authority for doing so upon an order of the Court of Quarter Sessions, made some years ago, and which, in the matter, could have no binding effect. I kept the office open until four during the winter, without any other officials than the two constables under my control.

The Clerks of the Peace not only absent themselves when they please, without my assent, and without even consulting me, but also give permission to the writers employed by them in the department to go and come when and as they, the Clerks of the Peace, think fit.

About the 5th June last Mr. Green absented himself for ten days. Mr. Doucet was absent from the office on the 25th of June, and another day since. Mr. Green was also absent on these days. I had no previous intimation on these occasions, more than at any other time, given to me, of their intention to absent themselves, that I might have the opportunity, if necessary, to object to it, or, during their absence, to make proper provision for the due performance of the public duty.

I have frequently remonstrated with Mr. Green upon these subjects, but without effect.

In the foregoing observations I have only approached some of the evils prevailing in the Police Office, but I doubt not that they will be sufficient to enable His Excellency to form a correct opinion of the system which holds the head responsible to every one, while all the officers, and even the writers in the department, are independent of him, and acknowledge responsibility to no one. Hence the daily intrigues, the frivolous complaints, calumnious statements, the misfeasance, and non-feasance which I witness, and which I have not the power to prevent.

I am aware that it would be more agreeable to Mr. Green if the Police Magistrate were a person of his own tastes and habits, but I doubt whether the administration of justice and morals would gain by the change.

I made known to Mr. Green at various times the difficulties I had in conducting the business of the department since he became connected with it, and in-

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jurious influence of his example and advice on Mr. Doucet and the other persons employed in the office.

I informed Mr. Green that, however much I regretted it, and however indisposed I was to trouble His Excellency with complaints, if he did not change, I would place, as a *dernier resort*, the whole of his conduct before the Government.

I must say that I would desire to avail myself of the present occasion to do so, but pressed as I am at this moment with my official duties, I must close the subject for the present—for His Excellency having commanded me to make such observations, without delay, in answer to Messrs. Green and Doucet's letter, as I had to offer for the information of His Excellency, it might be considered that I was wanting in due respect to His Excellency if I delayed my answer any longer.

The Police Magistrate who performs his duty honestly, must expect to give offence to certain classes, but while he enjoys the confidence of good men, he may disregard the attacks of the vicious and depraved, which are indeed so many certificates of excellence in the Magistrate.

I have the honor to be, Sir,  
Your most obedient Servant,

J. MAGUIRE,  
Inspector and Superintendent of Police.

The Honorable T. L. TERRILL,  
Provincial Secretary,  
&c., &c., &c.

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ANNUAL REPORT OF THE SENATE  
OF THE  
UNIVERSITY OF TORONTO,  
FOR THE YEAR  
1856.

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To His Excellency Sir EDMUND WALKER HEAD, Baronet, Governor General of  
British North America, and Visitor of the University of Toronto.

MAY IT PLEASE YOUR EXCELLENCY.

The Chancellor, Vice-Chancellor, and Senate of the University of Toronto beg to present this, their Annual Report, upon the affairs of the University, for the year 1856.

Several important questions have engaged the attention of the Senate not in their regular Annual Session, but in two Special Sessions which have been held during the year, and have been continued by adjournment from time to time.

The subject of the most immediate interest, and which the Senate feel justified in hoping will exercise a powerful influence upon the future well being of the institution, has been the erection of new buildings for the University and University College. The frequent removals, and the inconvenient and in some respects deficient accommodation which were inseparable from the absence of a permanent location, could not but be prejudicial to the University, and have tended greatly to impair that character for stability which is so essential to insure for any public institution the confidence and respect of the country. These difficulties are now happily about to be removed by the appropriation by Your Excellency's Government of a sufficient sum from the University Permanent Fund for the erection of buildings, which it is hoped may, for many years to come, be the scene of the useful labors of the Professors, and may be regarded with interest and affection by the Students as associated with their youthful aspirations and earliest successes.

As soon as the Senate had been informed of the sum placed at their disposal for this purpose, they appointed an Architect, and entrusted the management of the proposed building to a Committee. Being anxious to obtain full information

as to the latest improvements in the construction of Libraries, Museums, Laboratories, Lecture Rooms, &c., connected with the institutions of a similar character elsewhere, they authorized their Architect, Mr. Cumberland, to proceed to Europe, and obtain such drawings and other detailed information as would enable them to adopt a plan which, for convenience and efficiency of accommodation, would compare favorably with those of the Universities of other countries.

The buildings with which they were entrusted being designed for the accommodation both of the University and of University College, the Senate invited the co-operation of the Council of the latter body, and a plan was finally agreed upon and submitted to Your Excellency which it is hoped will be found to meet all the necessities of both Corporations—The Convocation Hall, the Senate Chamber, and the Library and Museum may be said more peculiarly to belong to the University, whilst the Lecture Rooms, Students' Quarters, and residences for the Officers in charge of the establishment are more exclusively connected with the College. But the Senate being impressed with the intimate relation which exists between the two bodies, have not attempted to draw any closely defined line, and have avoided the unnecessary expense of providing separate accommodation for each, where both may use the same apartments in common: and from the good understanding which has hitherto prevailed between the two Corporations, the Senate have no fear of any inconvenience arising from this amalgamation.

One of the features of the new plan from which the greatest benefit is expected, is the providing quarters for students in residence, a system which was formerly pursued in King's College with happy results, and the want of which of late years has been felt as a serious inconvenience to the Students themselves, and a great drawback to the efficiency of the College.

The Senate have great pleasure in being able to report that the works are advancing satisfactorily, a preliminary contract has been entered into, and the foundations of the principal front are nearly completed, whilst the working drawings for the superstructure are so far advanced that they hope in a few weeks to be able to contract for all that portion of the buildings which it is proposed to proceed with next summer.

The Senate have endeavoured to avoid an undue expenditure on the one hand, and on the other have been careful not to cramp by too great parsimony the future efficiency of the University. Some portions of the buildings, as the Library, the Museum, and the Lecture Rooms, are perhaps upon a larger scale than is necessary for the present collections and the present number of students; but both will no doubt increase with the general progress of the country, and as they form part of the main building, it would not have been easy to meet future requirements by subsequent additions. In other parts however, as the Students' Quarters, they have so framed the plan that new buildings may be added as increased accommodation is required.

They have desired that the structure, in an architectural point of view, should not be unworthy of a great National Institution, but they have also studied economy in the style and material selected, and have avoided any excess of outlay on mere ornament. They have constantly kept in view the necessity of reducing the expenditure within the amount placed at their disposal, and they have a well grounded expectation that that sum will not only cover the cost of the buildings themselves, but will also defray all the expense of fittings up, and of the necessary approaches.

With every attention to economy however, such a large sum abstracted from the capital, together with that devoted to the increase of the Library and Museum, will make a serious deduction from the University Income Fund;

whilst there is little doubt that the occupation of more extensive buildings, and the maintenance of the grounds in connection with them, will entail increased expenditure.

Under these circumstances, the Senate have anxiously considered the possibility of reducing some of the present expenses of the University. A very liberal appropriation had been made for the foundation of Scholarships and Prizes, and although desirous of affording every encouragement to the Students which rewards may hold out, and particularly of giving facilities for pursuing their studies to those whose means may not equal their attainments, which the University Scholarships afford, yet the Senate cannot but perceive that the appropriation has hitherto very much exceeded the amount required for the Scholarships and Prizes actually awarded, and they believe that a smaller sum would be sufficient to meet all the present wants of the University. They have therefore passed a Statute reducing the appropriation in question, and thus setting free for present use a portion of the capital, in the confident expectation that, when an increased number of students may call for greater liberality in this respect, the means will be provided by the sale of their lands in various parts of the Province which are at present unproductive. When also these lands are sold, the management of which forms the most important part of the business of the Bursar's Office, the cost of that Department, which now forms a deduction of more than 20 per cent from the income, will be greatly reduced.

Although the buildings are completed, the Library and Museum cannot be placed upon the footing which is ultimately contemplated, the Senate have thought it prudent not to delay the gradual formation of the collections, and the creation of a suitable machinery for their management. They have therefore passed statutes placing those Departments under the direction of Committees, and providing for the freest access to them for the public: the Library especially, in order to meet the convenience of all parties, is intended to be open from 9, A. M. till 10, P. M. But these latter regulations, from the present deficiency of space and attendance, cannot be fully carried out until the new Library and Reading Room are ready for occupation.

Your Excellency having exercised the power vested in you by the University Amendment Act, and assigned for the use of the University that portion of the Park lying to the west of the Main Avenue, and it being probable that the eastern portion may not be required for those public purposes for which the Government was authorized by the Legislature to occupy it, it has become the duty of the Senate to provide for the management of the Park, and a Committee has been appointed by statute for that purpose. In the meantime the duties of the Committee on the grounds merely extend to that division of the Park already assigned to the University, but as it is contemplated that there shall be a main approach to the building from Yonge street, the Senate will probably have occasion to apply to the Government during next summer to be put in possession of a part, at least, of the east side, which is now temporarily appropriated to other purposes.

The Senate have seen with regret that a branch of the Lunatic Asylum has been established in the building formerly erected by the University for the accommodation of Students, and that a large portion of the Park has been enclosed in connection with it. They do not believe that such a use of the University property was ever contemplated or authorized by the Act (16 Vic., cap. 89) which vested the whole property in the Crown, in trust for the University, or by the Act (16 Vic., cap. 161) which empowers Your Excellency in Council to appropriate such portion of the Park as is not required for Collegiate purposes as a site for a Government House and Parliamentary Buildings. They felt that the occupation of this building was the more injurious to the University as they

were thus prevented from amalgamating it with the plan of the proposed erections, if a site at the head of the Avenue had been adopted, or from using the materials for the new buildings. It having however been represented to the Senate that great suffering arose from the deficiency of accommodation in the Provincial Lunatic Asylum, that no other building was immediately available, and that the occupation of it was designed to be merely temporary, they offered no remonstrance at the time; but they would respectfully submit that the occupation should not be prolonged beyond what the urgency of the case requires, and that in the meantime they should not thereby be prevented from making such arrangements for their approaches across that part of the grounds as may be deemed necessary.

But whatever may be the destination of the Park itself, the two avenues appear to be in a different position from the rest of the University property. In their last Annual Report upon the occasion of a public road being opened in continuation of Yonge Street Avenue without their knowledge or consent, the Senate respectfully insisted that such a proceeding on the part of the executive was neither authorized by the letter, nor in accordance with the spirit, of the Act of Parliament by which the property became vested in the Crown. The works nevertheless have been continued during the summer, not only upon the road newly opened, but also along portions of the old Avenues, with a view apparently of making them leading thoroughfares: and as the Senate have not been consulted upon the necessity or expediency of the undertaking, they have not offered any further interference. They have however learned with extreme surprise and regret, that on the first of December, by an Order of Your Excellency's Executive Council, two-thirds of the cost of the work has been directed to be paid out of the University Permanent Fund, upon the ground that the road was intended as an approach to the University Buildings.

The Senate feel that they would not be doing their duty towards the Institution which is committed to their charge, if they did not offer to Your Excellency, as Visitor of the University, their respectful but strong remonstrance against this appropriation of the endowment.

The sum of £75,000 having been placed at their disposal for buildings out of the Permanent Fund, before assenting to any plan, or entering into any contract, it became their duty to enquire whether there was such an amount available without trenching upon the capital necessary to provide for the ordinary annual wants of the University and University College.

After making the most liberal allowance for the probable sales of University property during the progress of the works, they came to the conclusion that they could not take from the Permanent Fund a sum sufficient to erect the buildings and provide suitable approaches, without at the same time setting free a portion of the capital by reducing the expenses, and diminishing the encouragement afforded to Students by Scholarships and Prizes.

They adopted this step with extreme reluctance, but they felt that a heavy responsibility rested upon them, and that nothing but the strictest economy would enable them to complete the work undertaken without plunging the Institution into embarrassment. But all their calculations are rendered nugatory if the Permanent Fund is liable at any time to be encroached upon, not only without their consent, but even without their knowledge, or any opportunity being afforded them of remonstrance. The road in question may be a great convenience to the public, and a great benefit to the owners of property adjoining it, but it certainly is not of such essential advantage to the University that they would have consented to sacrifice any part of the buildings, or to diminish any of the educational facilities of the University or the College, in order to provide means for its construction.

The Senate acknowledge to the fullest extent the importance of accommodating the public by providing a communication between the two extremities of the city, through the University Park; and it is a part of their plan to form two other roads running east and west, besides Yonge Street Avenue, which will be open to the public, with due precautions for the safe preservation of the grounds: But the two old Avenues lying without or on the outskirts of the Park, may in their judgment be more conveniently placed upon a different footing. The Yonge Street Avenue is destined to become an important thoroughfare, and the Queen Street Avenue is not only a principal access to the Park, but is very generally used as a road to the country beyond, and whilst it will evidently be soon necessary to open some of the streets across it, there are claims of individuals to right of way connected with it which further complicate its management.

In both these cases the University has little more interest in the Avenues than what it has in common with the rest of the Public; and it does not appear an appropriate expenditure of funds, which are all required for educational purposes, to make and maintain in order a mile and a half of what have in fact become streets of the City of Toronto. The Senate therefore would cheerfully acquiesce in any arrangement which may be made by Your Excellency's Government, by which their jurisdiction may be confined to the Park alone, and the Avenues may be either assumed as Government property or may be assigned to the City of Toronto, under such conditions for their proper maintenance and preservation as may be thought necessary.

The present arrangements in Upper Canada College having been found in many respects not so efficient as its importance as the Principal School in the Province and a preparatory branch of the University demands, the Senate have directed their best endeavours to introduce reforms into that Institution.

With the view of extending its advantages to residents in all parts of the Province, they have passed a statute, the main object of which is to make the Boarding Establishment a more prominent branch of the College than it has hitherto been, and more immediately under the care and superintendance of the Principal. And with the same object they have commenced a large addition to the building appropriated to the Resident School House. They have also prepared a scheme for an improved course of study, better adapted to the wants of the public, and giving greater prominence to subjects which form leading features of the University Examinations, but in the absence of a Principal they have judged it more prudent to defer any final action upon this point till they have an opportunity of profiting by his suggestions.

By an arrangement made with the Government in the early part of this year, the charge of the Magnetic Observatory has devolved upon the University, the Government contributing towards the expenses an annual grant. This Institution, which was originally established by the Imperial Government, and subsequently continued by the Province, has already obtained a high character amongst those which in various parts of the world are united in carrying out an uniform series of observations, and the Senate would hope that its efficiency whilst under their care will not be impaired. The superintendance of the Observatory has been entrusted to a Committee of Management, and for the details of its progress during the year, the Senate would refer Your Excellency to the reports of the Director and of the Committee, both of which documents are herewith submitted.

The Grammar School Act, which directs that the simpler Meteorological Observations shall be regularly made in all Grammar Schools, has as yet been only partially acted upon: but the Chief Superintendent of Schools having now made arrangements for supplying them with the necessary instruments of an uniform construction, the Act will doubtless soon be generally complied with,

and it cannot be otherwise than that a large collection of valuable facts will be obtained. In order to give them however their full value, they will require to be reduced and compared, and the Committee, believing that the University may here be of great service, are making arrangements with the Chief Superintendent, who is also a member of the Committee of Management, with a view of collecting these separate records at the Observatory. The reduction will no doubt entail great increased labor and expense, and some addition to the Staff will in consequence be requisite, but it forms an appropriate duty for a National Observatory, and when the system is fully established, cannot fail to produce important scientific results.

The Director and Observers necessarily reside on the spot, and on their appointment, before the charge was handed over to the University, suitable houses were promised to them; but the present dwellings are only slight frame buildings (the Observatory being never intended originally as a permanent establishment,) they are insufficient also both in number and accommodation, and have become so thoroughly out of repair as to be scarcely habitable. Their present situation immediately in front of the University Buildings, and obstructing the view of the main front, is in many respects objectionable; and as some of them at least cannot be made habitable through another winter without extensive repairs or entire reconstruction, the Senate believe that there would be an advantage in point of economy if new houses in more convenient situations were erected next summer: they would however respectfully submit that this expense should not fall upon the University, and would express a hope that Your Excellency's Government would recommend to the Legislature such an appropriation as will enable the Senate to fulfil the engagements which, before their connection with the Observatory, were entered into with the Director and his Staff.

The Senate cannot conclude this Report without an expression of their regret that they have been deprived of the aid of Mr. Chancellor Blake, who since the re-construction of the University, has occupied the post of its Chancellor, and whose deep interest in, and unremitting attention to, all subjects connected with the University have been of the greatest assistance in establishing it upon its new footing.

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### **Officers and Servants of the University.**

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#### *Visitor:*

His Excellency Sir EDMUND W. HEAD, Baronet, Governor General of British North America, &c. &c.

#### *Chancellor:*

The Honorable ROBT. EASTON BURNS.

#### *Vice-Chancellor:*

JOHN LANGTON, Esquire, M A.

#### *Senate:*

The Reverend JOHN M'CAUL, L.L.D.

The Honorable WM. HENRY DRAPER, C.B.  
 The Honorable ADAM FERGUSON, M.L.C.  
 The Honorable J. C. MORRISON.  
 DAVID CHRISTIE, Esquire, M.P.P.  
 Sir WM. LOGAN, F.R.S.  
 JAMES J. HAYES, Esquire, M.D.  
 Reverend JOHN TAYLOR, M.D.  
 Reverend ADAM LILLIE, D.D.  
 The Honorable C. WIDMER, M.D.  
 The Honorable ROBT. BALDWIN.  
 Reverend E. RYERSON, D.D.  
 The Principal of Queen's College.  
 The Reverend S. S. NELLES, M.A.  
 The Very Reverend A. McDONNELL.  
 The Reverend M. WILLIS, D.D.  
 The Reverend J. TABARET.  
 M. BARRETT, Esquire, M.A.

*Registrar:*

PATRICK FREELAND, Esquire.

*Bedel:*

DANIEL ORRIS.

*Messenger:*

W. P. NEWTON.

**EXAMINERS.**

## LAW.

S. CONNOR, L.L.D., Q.C. | O. MOWAT, Esquire, Q.C.

## MEDICINE.

*Practical Anatomy.*—J. H. RICHARDSON, M.D., M.R.C.S.

*Medicine.*—G. O. REILLY, M.D., M.R.C.S.

*Anatomy and Physiology.*—C. W. COVERNTON, M.D., M.R.C.S.

*Surgery.*—W. R. BEAUMONT, M.D., M.R.C.S.

*Therapeutics, Pharmacology, and Medical Botany.*—W. B. NICOL, M.D.

*Chemistry.*— { H. H. CROFT, D.C.L., F.C.S.,  
 { The Reverend W. ORMISTON, B.A.

*Obstetrics.*—G. HERRICK, M.D.

*Medical Jurisprudence.*—L. O'BRIEN, M.D., M.R.F.S.

*Comparative Anatomy.*—R. CHECKLEY, M.D.

*Elements of Natural History.*— { The Reverend W. HINCKES, F.L.S.  
 { R. CHECKLEY, M.D.

ARTS.

- Greek and Latin Classics and Composition.*— { Reverend J. McCaul, L.L.D.,  
ADAM CROOKS, Esquire, B.A.
- Mathematics and Natural Philosophy.*— { J. B. Cherriman, M.A.  
J. Brown, M.A.
- Metaphysics and Ethics.*— { Reverend J. Beaven, D.D.  
Reverend G. P. Young, M.A.
- History and English Literature and Composition.*— { Daniel Wilson, L.L.D.  
T. J. Robertson, Esquire.
- Chemistry and Chemical Physics.*— { H. H. Croft, D.C.L., F.C.S.  
Reverend W. Ormiston, B.A.
- Natural History.*— { Reverend W. Hincks, F.L.S.  
Robert Checkley, M.D.
- Mineralogy and Geology.*— { E. J. Chapman, Esquire.  
T. Ridout, Esquire.
- Modern Languages and Composition.*— { J. Forneri, L.L.D.  
F. Mantovani, L.L.D.
- Oriental Languages.*— { J. M. Hirschfelder, Esquire.  
Reverend M. Willis, D.D.

**Result of Examinations.**

LAW.

*Second Year.*

| CLASS.  | MODE THREE          | MODE FOUR.    |
|---------|---------------------|---------------|
| 1 ..... | Fitzgerald, E. .... | McCanghey, I. |

*First Year.*

| CLASS. | MODE ONE.     | MODE TWO.     | MODE THREE.                                             | MODE FOUR.                                              |
|--------|---------------|---------------|---------------------------------------------------------|---------------------------------------------------------|
| 1 .... | Benson, T. M. | Bowlby, W. H. | 1.—English, C. E., B.A.<br>2.—Bayly, R., B.A.           |                                                         |
| 2 .... | .....         | .....         | .....                                                   | { 1.—Sampson, D. A.<br>2.—Scott, A. F.                  |
| 3 .... | .....         | .....         | { 1.—Peterson, H. W.,<br>B.A.<br>2.—Taylor, T. W., B.A. | { 1.—Cauthra, H.<br>2.—Sullivan, W.B.<br>3.—McBride, I. |

RESULT OF EXAMINATIONS.—(Continued.)

MATRICULATION.

| CLASS. | MODE THREE.       | MODE FOUR.                                           |
|--------|-------------------|------------------------------------------------------|
| 1      | Crombie, M., B.A. |                                                      |
| 2      | McKcown, J., B.A. |                                                      |
| 3      |                   | { 1.—Sisson, J.<br>2.—Tisdale, D.<br>3.—Laird, W. P. |

Scholarships.

LAW.

| SECOND YEAR.   | FIRST YEAR.                                               | MATRICULATION. |
|----------------|-----------------------------------------------------------|----------------|
| Fitzgerald, E. | Benson, T. M.<br>Bayley, R., B.A.<br>English, C. E., B.A. | Crombie, M.    |

MEDICINE.

| SECOND YEAR.               | FIRST YEAR.     | MATRICULATION.                             |
|----------------------------|-----------------|--------------------------------------------|
| Oilla, L. S.<br>Miller, F. | Barnhart, C. E. | Matheson, R.<br>Young, F. H.<br>McCabe, W. |

## SCHOLARSHIPS.—(Continued.)

## ARTS.

| THIRD YEAR.                                                           | SECOND YEAR.                                                                                  | FIRST YEAR.                                                                                                                                    | MATRICULATION.                                             |
|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| Burns, N.<br>Francis W. J.<br>*Kennedy, G.<br>Oliver, W.<br>*Ross, J. | *Fraser, D.<br>McNaughton, J.<br>†Moss, T.<br>Mulligan, G. R.<br>Paul, C. D.<br>Ratray, W. J. | Applebe, R. A.<br>Holcomb, J. H.<br>Kerr, W. H.<br>*McDougal, J. L.<br>Mitchell, J.<br>Monsanat, U.<br>Jassie, H.<br>White, J.<br>Sullivan, R. | Boyd, J. A.<br>McGregor, J.<br>Rock, W.<br>*Sampson, D. A. |

**Matriculants Admitted.**

## LAW.

Crombie, M., B.A.  
Laird, W. P.  
M'Keown, J., B.A.

Sisson, J.  
Tisdale, D.

## MEDICINE.

English, L.  
Mathieson, R.  
McCabe, W.

Ramsay, R.  
Young, F. H.  
Lapsley, W.

## ARTS.

*Two Years' Course:*

Blake, S. H.  
Fraser, D.

Sinclair, W.  
Waters, D.

*Four Years' Course:*

Bates, W.  
Bernard, H.  
Bernard, R. U.  
Boyd, J. A.  
DeGrassi, G. P.  
Gillespie, A. S.  
Hume, H. H.

McCool, D. B.  
McGregor, J.  
McMurchy, A.  
Rock, W.  
Samson, D. A.  
Scott, W. H.  
Wadsworth, J.

## AGRICULTURE.

Walker, S.

\* Signifies that the person before whose name it is placed has taken a double scholarship.

† Indicates a triple scholarship.

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 SCHOLARSHIPS.—(Continued.)
 

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## ADMISSION TO STANDING.

Bull, T. H., Three Years, Victoria College.

Smith, J. F., Do. Do.

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**Degrees Conferred.**


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## LAW.

*L.L.D.*

Hulburt, J., B.C.L.

## MEDICINE.

*M.B.*

Woodruff, W.

*M.D.*

Woodruff, W., M.B.

## ARTS.

*B.A.*

Bowly, W. H.

Cambie, C., *ad eundem*: Trinity  
College, Dublin.

Cattanach, A.

Crombie, M.

Hodgins, T.

Hume, R.

Kingsmill, U.

M'Nabb, A.

Matheson, R.

Matheson, T. G.

Sanderson, J. E.

Taylor, T. W., *ad eundem*: Trinity  
College, Dublin.

Jassie, W.

Unsworth, R.

Walker, U. C.

*M.A.*

Boyd, W. T., B.A.

Cambie, C., B.A.

Marling, S. A., B.A.

Taylor, T. W., B.A.

Brown, J., B.A.

McKeown, J., B.A.

Peterson, W. H., B.A.

All which is respectfully submitted.

(Signed,)

ROBT. E. BURNS,

*Chancellor.*

SENATE CHAMBER,

UNIVERSITY OF TORONTO,

31st December, 1856.

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 Countersigned.

(Signed,)

P. FREELAND,

*Registrar.*

## Medicine.—SECOND YEAR.

| CLASS.      | PRACTICAL ANATOMY.               | ANATOMY AND PHYSIOLOGY. | CHEMISTRY.              | THERAPEUTICS, PHARMACOLOGY, AND BOTANY. |
|-------------|----------------------------------|-------------------------|-------------------------|-----------------------------------------|
| 1.          | 1.—Oille, L. S.<br>2.—Miller, T. | Oille, L. S.            | Oille, L. S.            | 1.—Miller, T.<br>2.—Oille, L. S.        |
| 2.          |                                  | Miller, T.              | Miller, T.              |                                         |
| FIRST YEAR. |                                  |                         |                         |                                         |
| CLASS.      | ANATOMY OF THE BONES.            | ELEMENTS OF CHEMISTRY.  | ANATOMY AND PHYSIOLOGY. | CHEMISTRY.                              |
| 1.          | Barnhart, C. E.                  |                         | Barnhart, C. E.         | Barnhart, C. E.                         |

## Matriculation.

| CLASS. | CLASSICS.                                        | MATHEMATICS AND NATURAL PHILOSOPHY.                                                    | ELEMENTS OF CHEMISTRY.                              | ZOOLOGY AND BOTANY.                                 | FRENCH.                                          | HISTORY.                                                                               | ENGLISH.                                                                               |
|--------|--------------------------------------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|--------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1.     |                                                  |                                                                                        | 1.—Matheson, R.<br>2.—Young, F. H.<br>3.—McCabe, W. | 1.—Matheson, R.<br>2.—Young, F. H.<br>3.—McCabe, W. |                                                  |                                                                                        |                                                                                        |
| 2.     |                                                  |                                                                                        | 1.—English, C.<br>2.—Ramsay, R.                     |                                                     |                                                  |                                                                                        |                                                                                        |
| 3.     | 1.—McCabe, W.<br>2.—English, L.<br>3.—Ramsay, R. | 1.—McCabe, W.<br>2.—English, L.<br>3.—Matheson, R.<br>4.—Ramsay, R.<br>5.—Young, F. H. |                                                     | 1.—Ramsay, R.<br>2.—English, L.                     | 1.—McCabe, W.<br>2.—Ramsay, R.<br>3.—English, L. | 1.—Young, F. H.<br>2.—English, L.<br>3.—McCabe, W.<br>4.—Ramsay, R.<br>5.—Matheson, R. | 1.—Young, F. H.<br>2.—English, L.<br>3.—McCabe, W.<br>4.—Ramsay, R.<br>5.—Matheson, R. |

## Arts.—CANDIDATES, B.A.

| CLASS. | GREEK AND LATIN LANGUAGES.                                                             |  | METAPHYSICS AND ETHICS.                                                                                                          | CHEMISTRY.              | MATHEMATICS AND NATURAL PHILOSOPHY.                                                        | MODERN LANGUAGES.       |                     |
|--------|----------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------------------------------------------------------------------------------------------|-------------------------|---------------------|
|        |                                                                                        |  |                                                                                                                                  |                         |                                                                                            | FRENCH.                 |                     |
| 1.     |                                                                                        |  |                                                                                                                                  | Matheson, R.            |                                                                                            | FRENCH.                 |                     |
| 2.     | Lister, B. P.                                                                          |  |                                                                                                                                  | Hume, R.                |                                                                                            | Hodgins, T.             |                     |
| 3.     | 1.—Hume, R.<br>2.—Matheson, R.<br>3.—Matheson, R.<br>4.—Hodgins, T.<br>5.—Unsworth, R. |  | 1.—Matheson, T. G.<br>2.—Matheson, R.<br>3.—Bowby, W. H.<br>4.—Unsworth, R.<br>5.—Hodgins, T.<br>6.—Lister, B. P.<br>7.—Hume, R. |                         | 1.—Bowby, W. H.<br>2.—Matheson, R.<br>Matheson, T. G.<br>Hodgins, T.<br>Lister, B. P.      |                         |                     |
| CLASS. | MODERN LANGUAGES.                                                                      |  | NATURAL HISTORY.                                                                                                                 | MINERALOGY AND GEOLOGY. | HISTORY AND ENGLISH LITERATURE.                                                            |                         | HEBREW AND CHALDEE. |
|        | GERMAN.                                                                                |  |                                                                                                                                  |                         | HISTORY.                                                                                   | ENGLISH.                |                     |
| 1.     |                                                                                        |  | Matheson, R.                                                                                                                     |                         | Hodgins, T.                                                                                | Hodgins, T.<br>Hume, R. |                     |
| 2.     |                                                                                        |  |                                                                                                                                  | Hume, R.                |                                                                                            | Lister, B. P.           |                     |
| 3.     | Bowby, W. H.                                                                           |  |                                                                                                                                  | Unsworth, R.            | 1.—Bowby, W. H.<br>2.—Matheson, R.<br>3.—Matheson, T. G.<br>4.—Hume, R.<br>5.—Unsworth, R. | Bowby, W. H.            |                     |

## THIRD YEAR.

| CLASS. | GREEK AND LATIN LANGUAGES.     | METAPHYSICS AND ETHICS.                                           | APPLIED CHEMISTRY.                                 | MATHEMATICS AND NATURAL PHILOSOPHY. | HISTORY AND                                         |  |
|--------|--------------------------------|-------------------------------------------------------------------|----------------------------------------------------|-------------------------------------|-----------------------------------------------------|--|
|        |                                |                                                                   |                                                    |                                     | HISTORY.                                            |  |
| 1.     | Ross, J.                       | Kennedy, G.                                                       | 1.—Francis, W. J.<br>2.—Burns, N.<br>3.—Oliver, W. | Kennedy, G.                         | 1.—Ross, J.<br>2.—Oliver, W.                        |  |
| 2.     |                                |                                                                   |                                                    |                                     |                                                     |  |
| 3.     | Francis, W. J.                 | 1.—Ross, J.<br>2.—Francis, W. J.<br>3.—Burns, W.<br>4.—Oliver, W. |                                                    | 1.—Burns, W.<br>2.—Ross, J.         | 1.—Kennedy, G.<br>2.—Burns, W.<br>3.—Francis, W. J. |  |
| CLASS. | ENGLISH LITERATURE.            |                                                                   | MODERN LANGUAGES.                                  |                                     | NATURAL HISTORY.                                    |  |
|        | ENGLISH.                       |                                                                   | FRENCH.                                            | GERMAN.                             |                                                     |  |
| 1.     | 1.—Ross, J.<br>2.—Oliver, W.   |                                                                   | Oliver, W.                                         | 1.—Oliver, W.<br>2.—Ross, J.        | 1.—Francis, W. J.<br>2.—Burns, N.                   |  |
| 2.     |                                |                                                                   |                                                    |                                     |                                                     |  |
| 3.     | 1.—Kennedy, G.<br>2.—Burns, W. |                                                                   | 1.—Kennedy, G.<br>2.—Burns, W.                     |                                     | Oliver, W.                                          |  |

## SECOND YEAR.

| CLASS. | GREEK AND LATIN LANGUAGES.                                                                                                    | METAPHYSICS AND ETHICS.                                                                                                                                              | CHEMISTRY AND CHEMICAL PHYSICS.                                                                                                 | MATHEMATICS AND NATURAL PHILOSOPHY.                                    |                                                                                                                                                                                      | RHETORIC. |
|--------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|        |                                                                                                                               |                                                                                                                                                                      |                                                                                                                                 |                                                                        |                                                                                                                                                                                      |           |
| 1.     | 1.—Moss, T.<br>2.—Ratray, W. J.                                                                                               | Paul, C. D.                                                                                                                                                          | McNaughton, T.                                                                                                                  | 1.—Moss, T.<br>2.—Mulligan, G. K.                                      |                                                                                                                                                                                      |           |
| 2.     |                                                                                                                               |                                                                                                                                                                      | Wilson, J.                                                                                                                      |                                                                        |                                                                                                                                                                                      |           |
| 3.     | 1.—Mulligan, G. R.<br>2.—Fraser, D.<br>3.—Paul, C. D.<br>4.—Wilson, J.<br>5.—McNaughton, T.<br>6.—Milroy, W.<br>7.—Waters, D. | 1.—Ratray, W. J.<br>2.—Moss, T.<br>3.—Young, F. H.<br>{ McNaughton, T.<br>4. } Milroy, W. J.<br>{ Mulligan, G. R.<br>5.—Fraser, D.<br>6.—Waters, D.<br>7.—Wilson, J. | 1.—Ratray, W. J.<br>2.—Paul, C. D.<br>3.—Young, F. H.<br><br>Milroy, W.                                                         | 1.—Young, F. H.<br>2.—Fraser, D.<br><br>McNaughton, J.                 | 1.—Paul, L. D.<br>2.—Young, F. H.<br>3.—McNaughton, T.<br>4.—Ratray, W. J.<br>5.—Moss, T.<br>6.—Fraser, D.<br>7.—Waters, D.<br>8.—Milroy, W.<br>9.—Mulligan, G. R.<br>10.—Wilson, J. |           |
| CLASS. | MODERN LANGUAGES.                                                                                                             |                                                                                                                                                                      | HISTORY AND ENGLISH LITERATURE.                                                                                                 |                                                                        | HEBREW.                                                                                                                                                                              |           |
|        | FRENCH.                                                                                                                       | GERMAN.                                                                                                                                                              | HISTORY.                                                                                                                        | ENGLISH.                                                               |                                                                                                                                                                                      |           |
| 1.     | Moss, T.                                                                                                                      | 1.—Moss, T.<br>2.—Fraser, D.                                                                                                                                         | 1.—Moss, T.<br>2.—Ratray, W. J.<br>3.—Fraser, D.                                                                                | 1.—Moss, T.<br>2.—Fraser, D.                                           | Fraser, D.                                                                                                                                                                           |           |
| 2.     |                                                                                                                               |                                                                                                                                                                      |                                                                                                                                 |                                                                        |                                                                                                                                                                                      |           |
| 3.     | 1.—Blake, S. H.<br>2.—Young, F. H.                                                                                            | Waters, D.                                                                                                                                                           | 1.—Paul, C. D.<br>2. } Young, F. H.<br>3.—Blake, S. H.<br>4.—Wilson, J.<br>5.—Waters, D.<br>6.—Milroy, W.<br>7.—Mulligan, G. K. | 1. } Waters, D.<br>2.—Milroy, W.<br>3.—Blake, S. H.<br>3.—Young, F. H. |                                                                                                                                                                                      |           |

FIRST YEAR.

| CLASS. | GREEK AND LATIN LANGUAGES.                                                                                                                                                                                                                   | METAPHYSICS AND ETHICS.                                                                                                                                                                                                                | MINERALOGY AND GEOLOGY.                                                                                                                                                                                                         | MATHEMATICS AND NATURAL PHILOSOPHY.                                                                                                         |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 1.     | 1.—Kerr, W. H.<br>2.—Jassie, H.                                                                                                                                                                                                              | Holcomb, J. H.                                                                                                                                                                                                                         | Mitchell, J.                                                                                                                                                                                                                    | 1.—McDougall, J. L.<br>2.—Monsanatt, W.<br>3.—Applebe, R. A.                                                                                |
| 2.     |                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                 | Fitch, B. F.                                                                                                                                |
| 3.     | 1. { Monsanatt, W.<br>{ Sullivan, R.<br>3.—Benson, T. M.<br>4.—Applebe, N. A.<br>5.—Holcomb, J. H.<br>6. { Fitch, B. F.<br>{ Ross, D. W.<br>{ Mitchell, J.<br>8. { McDougall, J. L.<br>{ Blake, S. H.<br>11.—Stanton, W. J.<br>12.—White, J. | 1.—Monsanatt, W.<br>2.—Sullivan, R.<br>3.—Mitchell, J.<br>4.—Ross, D. W.<br>5. { Applebe, N. A.<br>{ Jassie, H.<br>6.—Kerr, W. H.<br>7.—McDougall, J. L.<br>8. { Benson, T. M.<br>{ Fitch, B. F.<br>9. { Stanton, W. J.<br>{ White, J. | 1.—Kerr, W. H.<br>2.—Monsanatt, W.<br>3. { Sullivan, R.<br>{ Jassie, H.<br>{ Benson, T. M.<br>{ Holcomb, J. H.<br>{ Ross, D. W.<br>{ Applebe, R. A.<br>4.—White, J.<br>5.—Fitch, B. F.<br>6.—McDougall, J. L.<br>Stanton, W. J. | 1.—Jassie, H.<br>2.—Mitchell, J.<br>3.—Sullivan, R.<br>4.—Ross, D. W.<br>5.—Kerr, W. H.<br>6.—White, J.<br>Stanton, W. J.<br>Holcomb, J. H. |

FIRST YEAR.—(Continued.)

| CLASS. | FRENCH.                                                                                                                                                                 | NATURAL HISTORY.                                                                                                                                                                                                  | HISTORY AND ENGLISH LITERATURE.                                                                                                                          |                                                                                                                                                                                                              | HEBREW.   |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|        |                                                                                                                                                                         |                                                                                                                                                                                                                   | HISTORY.                                                                                                                                                 | ENGLISH.                                                                                                                                                                                                     |           |
| 1.     | 1.—McDougall, J. L.<br>2.—Sullivan, R.                                                                                                                                  | Mitchell, J.                                                                                                                                                                                                      | 1. { Jassie, H.<br>Kerr, W. H.<br>2. —Sullivan, R.<br>3. —Ross, D. W.                                                                                    |                                                                                                                                                                                                              | White, J. |
| 2.     | { Monsanatt, W.<br>Ross, D. W.                                                                                                                                          | Benson, T. M.                                                                                                                                                                                                     | McDougall, J. L.                                                                                                                                         | 1.—Sullivan, R.<br>2.—McDougall, J. L.                                                                                                                                                                       |           |
| 3.     | 1.—Kerr, W. H.<br>2.—Applebe, R. A.<br>3.—Mitchell, J.<br>4.—Jassie, H.<br>5.—Benson, T. M.<br>6.—White, J.<br>7. { Fitch, B. F.<br>Stanton, W. J.<br>8.—Holcomb, J. H. | 1.—Holcomb, J. H.<br>2.—Kerr, W. H.<br>3. { Fitch, B. F.<br>McDougall, J. L.<br>4.—Sullivan, R.<br>5.—Applebe, R. A.<br>6.—Ross, D. W.<br>7.—Jassie, H.<br>8.—Monsanatt, H.<br>9.—White, J.<br>10.—Stanton, W. J. | 1.—Mitchell, J.<br>2. { Applebe, R. A.<br>Fitch, B. F.<br>3.—White, J.<br>4.—Monsanatt, W.<br>5.—Benson, T. M.<br>6.—Stanton, W. J.<br>7.—Holcomb, J. H. | 1.—Kerr, W. H.<br>2.—Monsanatt, W.<br>3.—White, J.<br>4.—Jassie, H.<br>5. { Applebe, R. A.<br>Ross, D. W.<br>6.—Benson, T. M.<br>7.—Fitch, B. F.<br>8. { Mitchell, J.<br>Stanton, W. J.<br>9.—Holcomb, J. H. |           |

**Matriculation.**

| CLASS. | GREEK AND LATIN LANGUAGES.                                                                                                                                                                                      | MATHEMATICS.                                                                                                                                                                  | NATURAL PHILOSOPHY.                                                                                                                                                                       | ELEMENTARY CHEMISTRY.                                                                                                                                    | HISTORY AND ENGLISH LITERATURE.                                                                                                    |                                                                                                                                    | FRENCH.                                                                                                                            |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
|        |                                                                                                                                                                                                                 |                                                                                                                                                                               |                                                                                                                                                                                           |                                                                                                                                                          | HISTORY.                                                                                                                           | ENGLISH.                                                                                                                           |                                                                                                                                    |
| 1.     | Sampson, D. A.                                                                                                                                                                                                  | 1.—McGregor, J.<br>2.—Rock, W.                                                                                                                                                |                                                                                                                                                                                           | McGregor, J.                                                                                                                                             | 1.—Sampson, D. A.<br>2.—Boyd, J. A.<br>3.—McMurchy, A.<br>4.—DeGrassi, G. P.                                                       | 1.—Boyd, J. A.<br>2.—Sampson, D. A.<br>3.—McMurchy, A.<br>4.—DeGrassi, G. P.                                                       | 1.—Sampson, D. A.<br>2.—Boyd, J. A.<br>3.—DeGrassi, G. P.                                                                          |
| 2.     |                                                                                                                                                                                                                 | McMurchy, A.                                                                                                                                                                  |                                                                                                                                                                                           | 1.—McMurchy, A.<br>2.—Rock, W. D. A.<br>3.—Sampson, D. A.                                                                                                | Bates, W.                                                                                                                          | Bates, W.                                                                                                                          | 1.—McMurchy, A.<br>2.—Bates, U.                                                                                                    |
| 3.     | 1.—Boyd, J. A.<br>2.—Gillespie, A. S.<br>3.—McGregor, J.<br>4.—Hume, H. H.<br>5.—Scott, W. H.<br>6.—Rock, W.<br>7.—Wadsworth, J.<br>8.—DeGrassi, G. P.<br>9.—McCool, D. B.<br>10.—Bates, U.<br>11.—McMurchy, A. | 1.—Sampson, D. A.<br>2.—McCool, D. B.<br>3.—Bates, U.<br>4.—Boyd, J. A.<br>5.—Scott, W. H.<br>6.—Gillespie, A. S.<br>7.—Hume, H. H.<br>8.—Wadsworth, J.<br>9.—DeGrassi, G. P. | 1.—Sampson, D. A.<br>2.—Boyd, J. A.<br>3.—McGregor, J.<br>4.—Scott, W. H.<br>Gillespie, A. S.<br>McMurchy, A.<br>Rock, W.<br>Bates, W.<br>McCool, D. B.<br>DeGrassi, G. P.<br>Hume, H. H. | 1.—Boyd, J. A.<br>2.—Gillespie, A. S.<br>3.—Hume, H. H.<br>4.—Scott, W. H.<br>5.—McCool, D. B.<br>6.—DeGrassi, G. P.<br>7.—Wadsworth, J.<br>8.—Bates, U. | 1.—McCool, D. B.<br>2.—McGregor, J.<br>3.—Gillespie, A. S.<br>4.—Scott, W. H.<br>5.—Rock, W.<br>6.—Wadsworth, J.<br>7.—Hume, H. H. | 1.—Rock, W.<br>2.—Gillespie, A. S.<br>3.—McCool, D. B.<br>4.—McGregor, J.<br>5.—Hume, H. H.<br>6.—Wadsworth, J.<br>7.—Scott, W. H. | 1.—McGregor, J.<br>2.—Hume, H. H.<br>3.—Rock, W.<br>4.—McCool, D. B.<br>5.—Scott, W. H.<br>6.—Gillespie, A. S.<br>7.—Wadsworth, J. |

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**Copy of the Report of the Observatory Committee, to the  
Senate of the University of Toronto.**

The Committee of Management of the Observatory beg to report that having been organized only in October of the present year, they have little else to do than to lay before the Senate the accompanying Report of the Directors on the present condition and prospects of the Observatory, and to express their satisfaction at the orderly and efficient state of the establishment.

Your Committee have authorized the purchase of an apparatus for recording the electrical condition of the atmosphere, which is now under construction by Mr. Walsh, of the Kew Observatory, England, under the kind superintendence of General Sabine.

Your Committee have also, at the request of the Director, authorized the temporary employment of two Assistants as computers and transcribers. The Superintendent of Education for Upper Canada having liberally offered to present to the Observatory the Meteorological Observations from the various Grammar School Sections, it will probably be found necessary to make a permanent addition to the Staff of the Observatory; the mode of effecting this will receive the best consideration of Your Committee.

So short a period of the year having been passed under the control of the Committee, they have not thought it advisable to submit any statement of the expenses of the Institution beyond what is contained in the Director's Report.

All which is respectfully submitted.

(Signed,) J. B. CHERRIMAN,  
Chairman.

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**Copy of the Report of the Director of the Observatory.**

MAGNETIC OBSERVATORY,

Toronto, October, 1856.

The primary object of the Observatory, Toronto, is to aid in furnishing to the scientific world the data necessary for evolving the laws that regulate the **Magnetical and Meteorological Phenomena** of the earth.

This object is effected by observing at stated hours the value of certain **Magnetical and Meteorological elements**, by recording, reducing, and tabulating them in various forms, and finally by printing them, or abstracts of them, for publication.

The elements determined by the **Magnetical Observations** are as follows:—

First, the absolute value of

1. The declination.
2. The inclination or dip.
3. The horizontal component of the force.
4. The vertical component of the force.

Secondly, the variations in the four elements require a second class of observations, which may be marked 5, 6, 7, 8.

Observations for the determination of 1, 2, 3, and 4, called the absolute determinations, are made once each month, and occupy five consecutive days.

Observations 5, 6, 7, 8, are, with the exceptions of Sundays, Christmas Day, and Good Friday, made daily at noon  $\frac{2}{3}$ ,  $\frac{2}{4}$ ,  $\frac{2}{8}$ ,  $\frac{1}{16}$ ,  $\frac{1}{8}$ , and  $\frac{1}{16}$ , Gottingen mean time, which correspond nearly to 6, a.m., 8, a.m., 10, a.m., 2, 4, 10, and 12, Toronto mean time.

The Instruments employed in the above named Observations are respectively as follows:—

First, For 1. Declinometer and Azimuth instrument.

2. Dip Circle and Needle.

3. Apparatus for Vibrations and Deflections.

4. The absolute value of the Vertical component is deduced from that of the other three elements.

Secondly,

For 5. Small Declinometer, and Brooke's Declinometer with Photographic apparatus.

6. The Induction Inclinometer.

7. Small Bifilar Magnetometer, Brooke's Bifilar with Photographic apparatus, and Ronald's Bifilar, also supplied with a Photographic apparatus.

8. Lloyd's Balance Magnetometer, and Ronald's Virtual Force Magnetometer, with Photographic self-registering apparatus.

The Meteorological Elements recorded are,

1. The temperature of the Air.

2. The total atmospheric pressure shown by the Barometer.

3. The elastic force of the aqueous vapour suspended in the atmosphere.

4. The humidity, or the quantity of vapour in any given volume of air expressed in terms of the vapour requisite to saturate that volume at the existing temperature.

5. The temperature of the dew point.

6. The direction and velocity of the wind.

The ordinary hours for observing 1, 2, 3, 4, and 6, are 6 A.M., 8 A.M., 2 P.M., 4 P.M., 10 P.M., and midnight.

At these regular observation hours a record is also made of the general appearance of the sky, including the quantity, force, and distribution of the clouds, and their motion as indicative of the direction of the upper atmospheric current.

5. is observed daily at 3 P.M.

6. is given by Robinson's Anemometer, and is registered not only at the Observation hours, but at every hour of every day through the year.

A Register is also kept of the maximum and minimum temperature that occur during each day, and of the greatest intensity of solar and terrestrial radiation.

Besides the registration of the meteorological conditions of each day, a record is made of occasional Phenomena, such as rain, snow, hail, or dew, with its duration or amount, and annual or meteoric displays.

Subsidiary to the Magnetical and Meteorological transit of Stars are observed weekly, for the purpose of determining the errors and rates of the chronometers, and in the establishment.

The Magnetical and Meteorological elements obtained from Observation are entered in daily registers, from which monthly and yearly abstracts are afterwards formed.

The Observations, when fully reduced, were, by the Imperial Government, usually published at intervals of three years.

Those made since the transfer of the Observatory to the Province, owing chiefly to the interruption occasioned by the erection of the new buildings, have not been numerous enough to render printing hitherto desirable; but at the conclusion of this year (1856) there will be material sufficient to form one volume. With respect to the observations of future years, I am disposed to recommend their publication in yearly volumes.

The ordinary work of the Observatory is that described above; there are however other duties devolving on the Director and his Assistants, essential to the utility of the published Observations, which require much time and care.

The operations when direct results are published, consist in operations on external phenomena *with* instruments; the duties to which I allude consist in operations and observations *on* the instruments, that is, in adjusting them, and in obtaining from them the key by which to learn from their various indications the Magnetical and Meteorological conditions to which these indications usually correspond.

In carrying on the work of the Observatory, the following permanent Staff is at present employed:—

G. S. Kingston, M.A., Director, also Professor of Meteorology in University College. Salary £340, with fuel and house free.

Mr. Walker, Observer. Salary £120, £15 for fuel, and £15 for house rent.

Mr. Menzies, Observer. £120, £15 for fuel, house free.

————— Observer. Salary £120, £15 for fuel, and house free.

There is also a Porter or general Servant attached to the establishment, with a salary of £60, and an allowance of £15 for fuel.

By authority of the Board of Visitors appointed by the Senate, two Copying Clerks have been recently engaged, as a temporary expedient pending the appointment of University Scholars as originally contemplated.

That an increase of some kind in the personal Staff is required, may be drawn from the consideration that the Staff is not as numerous as it used to be, and that a large portion of the work formerly done at Woolwich now devolves on the establishment.

#### GENERAL CONDITION OF THE OBSERVATORY.

As regards the personal establishment, I desire to remark that the experience of another year tends only to confirm me in the opinion I have before expressed of the intelligence, zeal, and good conduct of the three Observers under my orders.

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The Instruments are on the whole in good working order, with the exception of some spare thermometers, and a spare dipping needle recently arrived from England. No new Instruments have been added during the past year, but steps have been taken by permission of the Board to procure from England an apparatus for recording atmospheric Electricity.

With respect to the Observatory Building, the trustworthiness of the Observations as well as personal comfort would be promoted if, before the winter sets in, double sashes were made for the windows in the offices and large differential room.

I also recommend, in order to render the Library available for a computing room in cold weather, that it be cut off from the staircase by two doors above and below it.

The ill condition of the residences occupied by the Director and his Assistants demand attention.

I have stated what I consider to be the primary work of this Observatory, namely, that of supplying to the scientific world information of a certain kind; there is also another office which it may properly be called upon to perform when its strength will permit.

The Observatory of Toronto should be the Central depot for receiving, arranging, and if needs be, for publishing the Meteorological Observations supplied by the Grammar Schools and by private Observers.

If this new work be annexed to its functions, a fresh argument will be supplied for the permanent increase of the existing Staff.

The above is respectfully submitted to the Board of Visitors.

(Signed,) G. T. KINGSTON,  
*Director.*

## REPORT OF THE COUNCIL

OF

## UNIVERSITY COLLEGE, TORONTO,

FOR THE YEAR

1856.

## ANALYSIS OF CONTENTS.

- 1.—BUILDINGS.
- 2.—LIBRARY.
- 3.—APPARATUS, &c.
- 4.—OFFICERS, &c.
- 5.—STUDENTS.
  1. NAMES, RESIDENCES, AND COURSES OF LECTURES
  2. PLACES OF BIRTH.
  3. AGES.
  4. RELIGIOUS DENOMINATIONS.
- 6.—COURSE OF STUDY.
- 7.—PRIZE LIST FOR THE YEAR 1855, 1856.
- 8.—PROGRAMME OF LECTURES.

To His Excellency Sir E. W. HEAD, Baronet, Governor General of British North America.

MAY IT PLEASE YOUR EXCELLENCY :

The Council of University College, Toronto, beg leave to present their Annual Report for the year 1856.

### I.—BUILDINGS.

The Council have learned with much gratification that the Buildings required for conducting the business of the College are in progress—that the foundations have been laid—and that the plans of the superstructure have been finally approved. They beg leave to suggest the great advantage of adding, with as little delay as possible, to those portions of the quadrangle, for the erection of which provision has already been made, suitable accommodation for resident students.

### II.—LIBRARY AND MUSEUM.

During the past year arrangements have been made for transferring to the University of Toronto, the collections of Books and Specimens which are now in the possession of the College. The expediency of this measure was suggested by the considerations, that such an arrangement would save unnecessary outlay on duplicates, and that it would be more beneficial to the students and to the public than that there should be one comprehensive Library and one well supplied Museum, than that there should be two indifferently furnished with the requisite aids to study.

### III.—APPARATUS, &c.

No change has taken place since the Report of last year, with the exception of the usual annual addition to the chemical products. It is intended, however, during the present year, to purchase additional instruments, illustrative of Natural Philosophy, Chemistry, Chemical Physics, and Technology, and also to supply a want, which has long been felt, of Mineralogical and Geological Collections.

### IV.—OFFICERS, &c.

The following at present constitute the Establishment:—

*Visitor:*

His Excellency Sir EDMUND W. HEAD, Baronet, M.A., Governor General of British North America, &c. &c.

*President:*

The Reverend JOHN McCaul, L.L.D.

*Vice-President:*

(Vacant.)

*Professors, &c.:*

- \* Reverend JOHN McCaUL, L.L.D., Professor of Classical Literature, Logic, Rhetoric, and Belles Lettres.
- \* Reverend J. BEAVEN, D.D., Professor of Metaphysics and Ethics.
- \* H. H. CROFT, D.C.L., Professor of Chemistry and Experimental Philosophy.
- \* GEORGE BUCKLAND, Esquire, Professor of the Theory and Practice of Agriculture.
- \* J. B. CHERRIMAN, M.A., Professor of Natural Philosophy.
- \* DANIEL WILSON, L.L.D., Professor of History and English Literature
- \* The Reverend WILLIAM HINCKS, F.L.S., Professor of Natural History.
- \* E. J. CHAPMAN, Esquire, Professor of Mineralogy and Geology.
- \* JAMES FORNERI, L.L.D., Professor of Modern Languages.
- \* G. T. KINGSTON, M.A., Professor of Meteorology.
- J. M. HIRSCHFELDER, Esquire, Lecturer on Oriental Literature.
- Reverend ARTHUR WICKSON, M.A., Classical Tutor.

*Bursar:*

DAVID BUCHAN, Esquire.

*Librarian:*

Reverend ALEXANDER LORIMER, B.A.

*Registrar:*

(Vacant.)

*Bookseller, Printer, and Stationer:*

Mr. H. ROWSELL.

*Bedel and Steward:*

DANIEL ORRIS.

## V.—STUDENTS.

Tabular Statement, giving the names and residences of the Students, with the Courses of Lectures attended by each, &c.

1. Names, Residences, and Courses of Lectures.
2. Places of Birth.
3. Ages.
4. Religious Denominations.

UNDERGRADUATES.











## 2.—BIRTH PLACES.

| PLACE OF BIRTH.         | No. of Students. | PLACE OF BIRTH.                | No. of Students. |
|-------------------------|------------------|--------------------------------|------------------|
| Canada West .....       | 55               | <i>Brought up</i> .....        | 105              |
| do East .....           | 5                | United States .....            | 5                |
| New Brunswick .....     | 2                | West Indies .....              | 1                |
| England .....           | 6                | Red River Colony .....         | 2                |
| Ireland .....           | 8                | Unknown .....                  | 13               |
| Scotland .....          | 29               |                                |                  |
| <i>Carried up</i> ..... | 105              | Total number of Students ..... | 126              |

## 3.—A G E S.

| YEARS OF AGE.           | No. of Students. | YEARS OF AGE.           | No. of Students. |
|-------------------------|------------------|-------------------------|------------------|
| 15 .....                | 2                | <i>Brought up</i> ..... | 87               |
| 16 .....                | 2                | 26 .....                | 7                |
| 17 .....                | 3                | 27 .....                | 5                |
| 18 .....                | 9                | 28 .....                | 2                |
| 19 .....                | 11               | 29 .....                | 2                |
| 20 .....                | 14               | 30 .....                | 3                |
| 21 .....                | 8                | 31 .....                | 3                |
| 22 .....                | 13               | 34 .....                | 2                |
| 23 .....                | 7                | 35 .....                | 1                |
| 24 .....                | 12               | 39 .....                | 1                |
| 25 .....                | 6                | Unknown .....           | 13               |
| <i>Carried up</i> ..... | 87               | Total .....             | 126              |

Average age of Students—22½ years.

## 4.—RELIGIOUS DENOMINATIONS.

| RELIGIOUS DENOMINATION.         | No. of Students. | RELIGIOUS DENOMINATION.        | No. of Students. |
|---------------------------------|------------------|--------------------------------|------------------|
| Church of England .....         | 23               | <i>Brought up</i> .....        | 101              |
| Church of Scotland .....        | 3                | Baptist .....                  | 3                |
| Church of Rome .....            | 2                | Congregational .....           | 8                |
| Free Church Presbyterians ..... | 42               | Protestant .....               | 1                |
| United Presbyterians .....      | 11               | Disciples .....                | 1                |
| Presbyterians .....             | 8                | Unknown .....                  | 12               |
| Methodists .....                | 17               |                                |                  |
| <i>Carried up</i> .....         | 101              | Total number of Students ..... | 126              |

VI.—COURSE OF STUDIES.

(No alteration has been made since the last Report.)

VII.—PRIZE LIST FOR THE ACADEMIC YEAR 1855—1856.

| SUBJECTS.                          | 1st Year.                                  | 2nd Year.      | 3rd Year.           | 4th Year.                            | Occasional Students. |
|------------------------------------|--------------------------------------------|----------------|---------------------|--------------------------------------|----------------------|
| Greek and Latin                    | Kerr, W. H.                                | Moss, T.       | Ross, J.            |                                      |                      |
| Logic                              | Monsarrat, N.                              | Rattray, W. J. | Kennedy, G.         |                                      |                      |
| Metaphysics and Ethics             | Holecomb, J. W.                            | do             | Oliver, W.          |                                      |                      |
| Chemistry                          | Monsarrat, N.                              | Moss, T.       | Kennedy, G.         |                                      |                      |
| Mathematics and Natural Philosophy |                                            |                |                     | { Bowlby, W. H.<br>} Jamieson, Medal |                      |
| History and English                |                                            |                |                     |                                      |                      |
| History                            | Kerr, W. H.                                | Moss, T.       | Ross, J.            |                                      |                      |
| English Language and Literature    | Mitchell, J.                               | do             | do                  |                                      |                      |
| Natural History                    | do                                         |                | Francis, W. J.      |                                      |                      |
| Mineralogy and Geology             | do                                         |                |                     | Hume, R.                             | Grierson, J. C.      |
| French                             | { Monsarrat, N.<br>} { McDougall, J. L.. } | Moss, T.       | Ross, J.            |                                      | do                   |
| German                             |                                            | do             | do                  |                                      | Fraser, D.           |
| Hebrew                             | McVicar, D.                                | Frazer, D.     | Gemley, Reverend J. | Hume, R.                             |                      |
| do, occasional Students            |                                            |                |                     |                                      |                      |

VIII.—PROGRAMME OF LECTURES.

| SUBJECTS.               | Classes.                     | Monday. | Tuesday. | Wednesday. | Thursday. | Friday. |
|-------------------------|------------------------------|---------|----------|------------|-----------|---------|
| GREEK AND LATIN.        | 1st year                     | 10      | * 10     | 10         | * 10      | * 10    |
|                         | 2nd do                       | 11      | * 1      | 11         | 11        | 11      |
|                         | 3rd do                       | 12      | 12       | * 12       | * 12      | * 12    |
|                         | 4th do                       | 13      | 11       | 11         | 1         | * 11    |
|                         | Occasional Students—Class 1. | 1       | 3        | 9          | 1         | 1       |
|                         | do do — do 2.                | 2       | 2        | 1          | 2         | 2       |
|                         | do do — do 3.                | 3       |          |            | 3         |         |
| LOGIC.                  | 1st year                     |         |          |            |           | 12      |
| RHETORIC.               | 2nd year                     |         |          | * 2        |           |         |
| METAPHYSICS AND ETHICS. | 1st year                     | * 3     | 11       | * 9 & 11 * | 3         | * 9     |
|                         | 2nd do                       | 2       | * 9      | * 9        | 2         | * 11    |
|                         | 3rd do                       | 4       | 10       | * 10       | * 4       | 10      |
|                         | 4th do                       |         |          |            |           |         |
| CHEMISTRY               | 2nd year                     | 12      | 12       | 12         | 12        | 12      |
|                         | 3rd do                       | 11      | 10       | 11         | 10        | 10      |
|                         | 4th do                       | 1½      | 1        | 1½         | 1         | 1½      |
|                         | Occasional Students          |         |          |            |           |         |
| AGRICULTURE.            |                              | 4       | 4        | 4          | 4         | 4       |

|                                     |          |     |           |      |     |           |
|-------------------------------------|----------|-----|-----------|------|-----|-----------|
| MATHEMATICS AND NATURAL PHILOSOPHY. | 1st year | 12  | * 11 & 12 | 12   | 12  | 12        |
|                                     | 2nd do   | 2   | * 3       | 2    | * 1 | 1         |
|                                     | 3rd do   | 11  | * 2       | 11   | * 2 | 11        |
|                                     | 4th do   | 1   | * 1       | * 1  | * 2 | 2         |
| HISTORY AND ENGLISH LITERATURE.     | 1st year | 2   | 2         | 2    | 2   | * 2       |
|                                     | 2nd do   | 1   | 2         | * 1  | 2   | 2         |
|                                     | 3rd do   |     | 1         |      | * 1 | 1         |
|                                     | 4th do   |     |           | 3    |     | * 3       |
| NATURAL HISTORY                     | 1st year | 1   |           | 1    |     | § 1       |
|                                     | 2nd do   | 10  | 10        | 10   | 10  | § 10      |
| MINERALOGY AND GEOLOGY              | 1st year |     | 1         |      | 1   | § 1       |
|                                     | 4th do   | 12  | 12        | 12   | 12  | § 12      |
| FRENCH                              | 1st year | 11  | * 9       | 11   | * 9 | 11        |
|                                     | 2nd do   | 10  |           | * 10 |     | * 10 & 12 |
|                                     | 3rd do   | 1   |           | * 1  |     | 3         |
|                                     | 4th do   | † 2 |           | * 12 |     | * 11 & 1  |
| GERMAN                              | 2nd year |     | * 10      |      | 10  | * 1       |
|                                     | 3rd do   |     | 11        |      |     |           |
|                                     | 4th do   |     | 1         |      |     |           |
|                                     |          |     |           | * 2  |     |           |
| ITALIAN                             |          | 3   |           |      |     |           |
| SPANISH                             |          |     |           |      |     | 2         |

\* Classes of Candidates for Honors. † During Michaelmas term. ‡ During Easter Term. § Alternately.

VIII.—PROGRAMME OF LECTURES.—(Continued.)

| SUBJECTS.   | Classes.    | Monday.  | Tuesday. | Wednesday. | Thursday. | Friday. |
|-------------|-------------|----------|----------|------------|-----------|---------|
| METEOROLOGY | .....       | .....    | .....    | † 3        | .....     | .....   |
| HEBREW      | { 1st class | 2        | .....    | 2          | .....     | 2       |
|             | 2nd do      | * 9 & 10 | 2        | .....      | 2         | .....   |
|             | 3rd do      | .....    | 1        | .....      | .....     | 3       |
|             | 4th do      | 3        | .....    | 3          | .....     | .....   |
| CHALDEE     | .....       | .....    | 3        | .....      | 3         | .....   |
| SYRIAC      | .....       | .....    | .....    | 1          | .....     | .....   |
| ARABIC      | .....       | 1        | .....    | .....      | 1         | .....   |

\* Classes of Candidates for Honors. † During Easter term.

In conclusion, the Council feel much pleasure in being able to state, that the retrospect of the past year affords satisfactory evidence of the efficiency of the Institution, as regards both instruction and discipline.

I have, &c.,

(Signed,) JOHN McCAUL,  
President.

UNIVERSITY COLLEGE,  
Toronto, 28th April, 1857.

**BURSAR'S STATEMENTS and ACCOUNTS for 1856; also, ESTIMATE of INCOME of the UNIVERSITY and COLLEGES at TORONTO, for the Year 1857.**

**UNIVERSITY AND COLLEGES at TORONTO.**—The Bursar's Statement of the number of Acres of Land which have been sold from the period of the original endowment to the 31st December, 1856, shewing the total amount of Sales, amount received, and amount unpaid; also, the average price per acre.

| ORIGINAL ENDOWMENT.                              | No. of Acres | Acres sold. |       | Acres unsold. |       | Amount of Sales. |    |    | Amount received. |    |    | Amount unpaid. |    |    | REMARKS.                                             |
|--------------------------------------------------|--------------|-------------|-------|---------------|-------|------------------|----|----|------------------|----|----|----------------|----|----|------------------------------------------------------|
|                                                  |              | A.          | R. F. | A.            | R. F. | £                | s. | d. | £                | s. | d. | £              | s. | d. |                                                      |
| Original endowment, as per Return for 1855 ..... | 226201       | 186444      | 1.0   | 39756         | 3.0   | 293883           | 18 | 10 | 196534           | 9  | 10 | 97349          | 9  | 0  | See Return, 31st December, 1855.                     |
| Deduct loss on Survey 1856 ..                    | 110          | 110.0       |       |               |       |                  |    |    |                  |    |    |                |    |    |                                                      |
|                                                  | 226091       | 186334      | 1.0   | 39756         | 3.0   | 293883           | 18 | 10 | 196534           | 9  | 10 | 97349          | 9  | 0  |                                                      |
|                                                  |              | 2468        | 1.0   |               |       | 10783            | 1  | 3  | 5074             | 5  | 7  | 5658           | 15 | 8  | do, 31st March, 1856.                                |
|                                                  |              | 1038        | 2.0   |               |       | 2788             | 14 | 0  | 5485             | 1  | 7  |                |    |    | do, 30th June, 1856.                                 |
|                                                  |              | 1125        | 0.0   |               |       | 3821             | 2  | 6  | 3539             | 6  | 8  |                |    |    | do, 30th September, 1856.                            |
|                                                  |              | 2721        | 0.0   | 7852          | 3.0   | 7708             | 1  | 3  | 7925             | 14 | 11 |                |    |    | do, 31st December, 1856.                             |
|                                                  |              | 193687      | 0.0   | 32404         | 0.0   | 318429           | 17 | 10 | 218558           | 18 | 7  | 103008         | 4  | 8  | Deduct difference between Sales and Amount received. |
|                                                  | 77           | 7.2         |       |               |       | 10               | 6  |    |                  |    |    | 99870          | 19 | 3  |                                                      |
| Deduct loss on Survey .....                      | 226083       | 198679      | 2.0   | 32404         | 0.0   | 318419           | 11 | 7  | 218558           | 18 | 7  | 3137           | 5  | 5  |                                                      |
|                                                  | 226083       | 198679      | 2.0   | 32404         | 0.0   | 318419           | 11 | 7  | 218558           | 18 | 7  | 99860          | 13 | 0  |                                                      |
| Carried over .....                               |              |             |       |               |       |                  |    |    |                  |    |    | 99860          | 13 | 0  |                                                      |

UNIVERSITY AND COLLEGES AT TORONTO.—The Bursar's Statement of the number of Acres of Land which have been sold from the period of the original endowment to the 31st December, 1856, &c.—(Continued.)

| ORIGINAL ENDOWMENT.       | No. of Acres. | Acres sold. |       | Acres unsold. |       | Amount of Sales. |    |    | Amount received. |       |       | Amount unpaid. |    |    | REMARKS.                                                              |
|---------------------------|---------------|-------------|-------|---------------|-------|------------------|----|----|------------------|-------|-------|----------------|----|----|-----------------------------------------------------------------------|
|                           |               | A.          | R. F. | A.            | R. F. | £                | s. | d. | £                | s.    | d.    | £              | s. | d. |                                                                       |
| <i>Brought over</i> ..... | 226083½       | 198679.2.0  |       | 32404.0.0     |       | 318419           | 11 | 7  | 218558           | 18    | 7     | 99860          | 13 | 0  | Invested property included in Return, 30th June, 1856.                |
|                           |               | 100.0.0     |       | 100.0.0       |       | 200              | 0  | 0  | 20               | 10    | 0     | 179            | 10 | 0  |                                                                       |
|                           |               | 198579.2.0  |       | 32504.0.0     |       | 318219           | 11 | 7  | 218538           | 8     | 7     | 99681          | 3  | 0  | Deduct and add for invested property, included in Quarterly Accounts. |
|                           |               | 11.0.0      |       |               |       |                  |    |    | 2423             | 16    | 11    | 2423           | 16 | 11 |                                                                       |
| Add gain on Survey .....  | 11            |             |       |               |       |                  |    |    | 216114           | 11    | 8     | 102104         | 19 | 11 |                                                                       |
|                           | 226094½       | 198590.2.0  |       | 32504.0.0     |       | 318219           | 11 | 7  | 216114           | 11    | 8     | 102104         | 19 | 11 | Increase on Lot re-sold.                                              |
|                           |               |             |       |               |       | 154              | 13 | 9  | 30               | 8     | 9     | 124            | 5  | 0  |                                                                       |
|                           |               | 100.0.0     |       | 100.0.0       |       | 318874           | 5  | 4  | 216145           | 0     | 5     | 102229         | 4  | 11 | Deduct on Lot re-sold.                                                |
|                           | 226094½       | 198490.2.0  |       | 32604.0.0     |       | 90               | 0  | 0  | .....            | ..... | ..... | 90             | 0  | 0  | Average price per acre, 33s.                                          |
|                           |               |             |       |               |       | 318284           | 5  | 4  | 216145           | 0     | 5     | 102139         | 4  | 11 |                                                                       |

DAVID BUCHAN, *Bursar.*

JOHN LANGTON, *Auditor.*

BURSAR'S OFFICE,  
Toronto, 31st December, 1856.

UNIVERSITY AND COLLEGES AT TORONTO.—Statement of Capital Invested and Amount Expended by the University, from its commencement to the 31st December, 1856.

|                                                                                                     | £      | s. | d. | £      | s. | d. |
|-----------------------------------------------------------------------------------------------------|--------|----|----|--------|----|----|
| Capital invested to the 31st December, 1855, as shewn in Return to Parliament .....                 |        |    |    | 222271 | 5  | 10 |
| Capital invested to 31st December, 1856, as shewn in Account No. 1, Permanent Fund .....            | 120    | 5  | 10 |        |    |    |
| Capital invested to 31st December, 1856, as shewn in Account No. 6, Building Appropriation Fund.... | 1687   | 0  | 0  |        |    |    |
|                                                                                                     |        |    |    | 1807   | 5  | 10 |
| Less—Amount of Loans returned, as shewn in Account No. 1, Permanent Fund .....                      |        |    | £  | 224078 | 11 | 8  |
|                                                                                                     |        |    |    | 15044  | 14 | 3  |
|                                                                                                     |        |    | £  | 209038 | 17 | 5  |
| Amount expended, as shewn in Return to Parliament, to 31st December, 1855 .....                     | 157154 | 3  | 7  |        |    |    |
| Amount expended to 31st December, 1856, as shewn in Account No. 2, Income Fund .....                | 15097  | 7  | 9  |        |    |    |
| Amount expended to 31st December, 1856, as shewn in Account No. 5, Library Appropriation Fund.....  | 671    | 1  | 8  |        |    |    |
|                                                                                                     |        |    |    | 172922 | 13 | 0  |
| Total amount invested and expended to 31st December, 1856 .....                                     |        |    | £  | 381956 | 10 | 5  |

DAVID BUCHAN,

*Bursar.*

BURSAR'S OFFICE,

Toronto, 31st December, 1856.

JOHN LANGTON,

*Auditor.*



**No. 1.—UNIVERSITY AND COLLEGES AT TORONTO.**—The Bursar's Statement of Cash received and expended on account of the Permanent Fund, for the year ended 31st December, 1856.

| RECEIPTS.                                      | Currency. |       |      | EXPENDITURE.                                                                | —     |       |       | Currency. |    |    |
|------------------------------------------------|-----------|-------|------|-----------------------------------------------------------------------------|-------|-------|-------|-----------|----|----|
|                                                | £         | s.    | d.   |                                                                             | £     | s.    | d.    | £         | s. | d. |
| To Cash received on account of purchase money. | 22024     | 8     | 9    | By Balance overdrawn, 31st December, 1855 ..                                | ..... | ..... | 7574  | 19        | 11 |    |
| do do do Loans returned...                     | 15044     | 14    | 3    | By Paid Wakefield and Coate for Book for Li-<br>brary .....                 | ..... | ..... | 0     | 5         | 4  |    |
|                                                |           |       |      | do S. W. Passmore, Specimens for Museum.                                    | 6     | 5     | 0     |           |    |    |
|                                                |           |       |      | do Dr. Checkley, do ..                                                      | 5     | 0     | 0     |           |    |    |
|                                                |           |       |      | do George Hadgraft, do do ..                                                | 72    | 15    | 6     |           |    |    |
|                                                |           |       |      | do do do do ..                                                              | 36    | 0     | 0     |           |    |    |
|                                                |           |       |      | By Balance of Library Account transferred to<br>Library Appropriation ..... | ..... | ..... | 120   | 0         | 6  |    |
|                                                |           |       |      | By Balance on hand, 31st December, 1856 .....                               | ..... | ..... | 0     | 3         | 9  |    |
|                                                | £         | 37069 | 3 0  |                                                                             |       |       | 7695  | 9         | 6  |    |
|                                                |           |       |      |                                                                             |       |       | 29373 | 13        | 6  |    |
| Balance, 31st December, 1856 .....             | £         | 29373 | 13 6 |                                                                             |       |       | 37069 | 3         | 0  |    |

**BURSAR'S OFFICE,**  
Toronto, 31st December, 1856.

**DAVID BUCHAN,**

*Bursar.*

**JOHN LANGTON,**

*Auditor.*

**No. 2.—UNIVERSITY AND COLLEGES AT TORONTO.**—The Bursar's Statement of Cash Received and Expended on account of the "Income Fund," for the year ended 31st December, 1856; shewing the total Amount Expended on account of the University and Colleges at Toronto, generally; and on account of the University of Toronto and University College separately.

| Receipts.                       | £    |    | Date.     | Name.           | Service.                                                       | Voucher. | £   |    | s. |    | d. |    | University of Toronto. |    | University College. |    |
|---------------------------------|------|----|-----------|-----------------|----------------------------------------------------------------|----------|-----|----|----|----|----|----|------------------------|----|---------------------|----|
|                                 | £    | s. |           |                 |                                                                |          | £   | s. | £  | s. | £  | s. | £                      | s. | £                   | s. |
| To Interest on Purchase Money   | 7207 | 5  | Decr. 31. | David Buchan    | Bursar's Office.                                               |          | 460 | 0  | 0  |    |    |    |                        |    |                     |    |
|                                 |      | 4  | March do. | do              | Increase, as per Order in Council, for 1855                    |          | 60  | 0  | 0  |    |    |    |                        |    |                     |    |
| To Interest on Promissory Notes |      |    | Decr. do. | Alan Cameron    | Cashier, 12 months' Salary                                     |          | 460 | 0  | 0  |    |    |    |                        |    |                     |    |
|                                 |      |    | March do. | do              | Increase, as per Order in Council, for 1855                    |          | 60  | 0  | 0  |    |    |    |                        |    |                     |    |
| To Interest on Debentures       |      |    | Decr. do. | James Nation    | Assistant Clerk, 12 months' Salary                             |          | 250 | 0  | 0  |    |    |    |                        |    |                     |    |
|                                 |      |    | March do. | do              | Increase, as per Order in Council, for 1855                    |          | 50  | 0  | 0  |    |    |    |                        |    |                     |    |
| To Interest on Debentures       |      |    | Decr. do. | M. Drummond     | Book-keeper, 12 months' Salary                                 |          | 360 | 0  | 0  |    |    |    |                        |    |                     |    |
|                                 |      |    | March do. | do              | Increase, as per Order in Council, for 1855                    |          | 60  | 0  | 0  |    |    |    |                        |    |                     |    |
| To Interest on Loans            |      |    | Decr. do. | Joseph Frankish | Assistant Book-keeper 9 months' Salary, at £187 10s. per annum |          | 140 | 12 | 6  |    |    |    |                        |    |                     |    |
|                                 |      |    | March do. | do              | Increase, as per Order in Council, for 1855                    |          | 37  | 10 | 0  |    |    |    |                        |    |                     |    |
| Carried over                    | 0000 | 0  |           |                 | Carried over                                                   |          |     |    |    |    |    |    |                        |    |                     |    |
|                                 |      |    |           |                 |                                                                |          |     |    |    |    |    |    |                        |    |                     |    |











No. 2.—UNIVERSITY AND COLLEGES AT TORONTO.—The Bursar's Statement of Cash Received and Expended on account of the "Income Fund," for the year ended 31st December, 1856, &c.—(Continued.)

| Receipts.              | £     |       | Date.     | Name.         | Service.                           | Voucher. | £  |       | s. d. |       | University of Toronto. |       | University College. |   |   |
|------------------------|-------|-------|-----------|---------------|------------------------------------|----------|----|-------|-------|-------|------------------------|-------|---------------------|---|---|
|                        | £     | s. d. |           |               |                                    |          | £  | s. d. | £     | s. d. | £                      | s. d. |                     |   |   |
| <i>Brought over</i> .. | 17461 | 13 8  |           |               |                                    |          |    |       |       |       |                        |       |                     |   |   |
|                        |       |       | 1856.     |               | <i>Scholarships.</i> —(Continued.) |          |    |       |       |       |                        |       |                     |   |   |
|                        |       |       | Decr. 12. | W. J. Rattray | Allowance as University Scholar    |          | 20 | 0     | 0     | 401   | 7                      | 4     | 10634               | 9 | 1 |
|                        |       |       | March 20. | W. McCabe     | do                                 |          | 10 | 0     | 0     | 30    | 0                      | 0     |                     |   |   |
|                        |       |       | June 19.  | do            | do                                 |          | 10 | 0     | 0     |       |                        |       |                     |   |   |
|                        |       |       | Decr. 12. | do            | do                                 |          | 15 | 0     | 0     |       |                        |       |                     |   |   |
|                        |       |       | March 20. | F. H. Young   | do                                 |          | 10 | 0     | 0     | 35    | 0                      | 0     |                     |   |   |
|                        |       |       | June 19.  | do            | do                                 |          | 10 | 0     | 0     |       |                        |       |                     |   |   |
|                        |       |       | Decr. 12. | do            | do                                 |          | 15 | 0     | 0     |       |                        |       |                     |   |   |
|                        |       |       | March 20. | C. D. Paul    | do                                 |          | 10 | 0     | 0     |       |                        |       |                     |   |   |
|                        |       |       | June 19.  | do            | do                                 |          | 10 | 0     | 0     |       |                        |       |                     |   |   |
|                        |       |       | Decr. 12. | do            | do                                 |          | 10 | 0     | 0     |       |                        |       |                     |   |   |
|                        |       |       | March 20. | F. Tisdale    | do                                 |          | 10 | 0     | 0     |       |                        |       |                     |   |   |
|                        |       |       | June 19.  | do            | do                                 |          | 10 | 0     | 0     |       |                        |       |                     |   |   |
|                        |       |       | March 20. | P. McNaughton | do                                 |          | 10 | 0     | 0     | 20    | 0                      | 0     |                     |   |   |
|                        |       |       | June 19.  | do            | do                                 |          | 10 | 0     | 0     |       |                        |       |                     |   |   |
|                        |       |       | Decr. 12. | do            | do                                 |          | 10 | 0     | 0     |       |                        |       |                     |   |   |
|                        |       |       | March 20. | R. Sullivan   | do                                 |          | 10 | 0     | 0     | 30    | 0                      | 0     |                     |   |   |
|                        |       |       | June 19.  | do            | do                                 |          | 10 | 0     | 0     |       |                        |       |                     |   |   |
|                        |       |       | March 20. | J. T. Fraser  | do                                 |          | 10 | 0     | 0     | 20    | 0                      | 0     |                     |   |   |
|                        |       |       | June 19.  | do            | do                                 |          | 10 | 0     | 0     |       |                        |       |                     |   |   |

|                        |       |      |           |                 |                     |  |    |    |   |    |    |   |       |   |   |
|------------------------|-------|------|-----------|-----------------|---------------------|--|----|----|---|----|----|---|-------|---|---|
|                        |       |      | Decr. 12. | do              | do                  |  | 11 | 13 | 4 |    |    |   |       |   |   |
|                        |       |      | March 20. | W. H. Kerr      | do                  |  | 10 | 0  | 0 | 31 | 13 | 4 |       |   |   |
|                        |       |      | June 19.  | do              | do                  |  | 10 | 0  | 0 |    |    |   |       |   |   |
|                        |       |      | Decr. 12. | do              | do                  |  | 10 | 0  | 0 |    |    |   |       |   |   |
|                        |       |      | March 20. | H. Tassie       | do                  |  | 10 | 0  | 0 | 30 | 0  | 0 |       |   |   |
|                        |       |      | June 19.  | do              | do                  |  | 10 | 0  | 0 |    |    |   |       |   |   |
|                        |       |      | Decr. 12. | do              | do                  |  | 10 | 0  | 0 |    |    |   |       |   |   |
|                        |       |      | March 20. | N. Monsarrat    | do                  |  | 10 | 0  | 0 | 30 | 0  | 0 |       |   |   |
|                        |       |      | June 19.  | do              | do                  |  | 10 | 0  | 0 |    |    |   |       |   |   |
|                        |       |      | Decr. 12. | do              | do                  |  | 10 | 0  | 0 |    |    |   |       |   |   |
|                        |       |      | March 20. | J. L. McDougall | do                  |  | 10 | 0  | 0 | 30 | 0  | 0 |       |   |   |
|                        |       |      | June 19.  | do              | do                  |  | 10 | 0  | 0 |    |    |   |       |   |   |
|                        |       |      | Decr. 12. | do              | do                  |  | 11 | 13 | 4 |    |    |   |       |   |   |
|                        |       |      | March 20. | B. F. Fitch     | do                  |  | 10 | 0  | 0 | 31 | 13 | 4 |       |   |   |
|                        |       |      | June 19.  | do              | do                  |  | 10 | 0  | 0 |    |    |   |       |   |   |
|                        |       |      | March 20. | K. A. Applebe   | do                  |  | 10 | 0  | 0 | 20 | 0  | 0 |       |   |   |
|                        |       |      | June 19.  | do              | do                  |  | 10 | 0  | 0 |    |    |   |       |   |   |
|                        |       |      | Decr. 12. | do              | do                  |  | 10 | 0  | 0 |    |    |   |       |   |   |
|                        |       |      | March 20. | D. E. Blake     | do                  |  | 10 | 0  | 0 | 30 | 0  | 0 |       |   |   |
|                        |       |      | June 19.  | do              | do                  |  | 10 | 0  | 0 |    |    |   |       |   |   |
|                        |       |      | March 20. | E. Fitzgerald   | do                  |  | 10 | 0  | 0 | 20 | 0  | 0 |       |   |   |
|                        |       |      | June 19.  | do              | do                  |  | 10 | 0  | 0 |    |    |   |       |   |   |
|                        |       |      | Decr. 12. | do              | do                  |  | 10 | 0  | 0 |    |    |   |       |   |   |
|                        |       |      | March 20. | R. M. Wells     | do                  |  | 10 | 0  | 0 | 30 | 0  | 0 |       |   |   |
|                        |       |      | June 19.  | do              | do                  |  | 10 | 0  | 0 |    |    |   |       |   |   |
|                        |       |      | March 20. | W. J. Stanton   | do                  |  | 10 | 0  | 0 | 20 | 0  | 0 |       |   |   |
|                        |       |      | June 19.  | do              | do                  |  | 10 | 0  | 0 |    |    |   |       |   |   |
| <i>Carried over</i> .. | 17461 | 13 8 |           |                 | <i>Carried over</i> |  |    |    |   | 95 | 14 | 0 | 10634 | 9 | 1 |

No. 2.—UNIVERSITY AND COLLEGES AT TORONTO.—The Bursar's Statement of Cash Received and Expended on account of the "Income Fund," for the year ended 31st December, 1856, &c.—(Continued.)

| Receipts.      | £          |    | Date. | Name.             | Service.                                                       | Voucher. | £   |    | s. |      | d. |    | University of Toronto. |   | University College. |      |   |   |
|----------------|------------|----|-------|-------------------|----------------------------------------------------------------|----------|-----|----|----|------|----|----|------------------------|---|---------------------|------|---|---|
|                | s.         | d. |       |                   |                                                                |          | s.  | d. | s. | d.   | £  | s. | d.                     | £ | s.                  | d.   |   |   |
| Brought over.. | 17461      | 13 | 8     |                   |                                                                |          |     |    |    |      |    |    | 560                    | 7 | 57523               | 13   | 2 |   |
|                | 1856.      |    |       | T. M. Benson      | Scholarships—(Continued.)                                      |          | 954 | 14 | 0  | 1063 | 9  | 1  |                        |   |                     |      |   |   |
|                | March 20.  |    |       | do                | Brought over                                                   |          |     |    |    |      |    |    |                        |   |                     |      |   |   |
|                | June 19.   |    |       | do                | Allowance as University Scholar                                |          | 10  | 0  | 0  |      |    |    |                        |   |                     |      |   |   |
|                | Decr. 12.  |    |       | do                | do                                                             |          | 10  | 0  | 0  |      |    |    |                        |   |                     |      |   |   |
|                | March 20.  |    |       | W. H. Bowlby      | do                                                             |          | 30  | 0  | 0  |      |    |    |                        |   |                     |      |   |   |
|                | June 19.   |    |       | do                | do                                                             |          |     |    |    |      |    |    |                        |   |                     |      |   |   |
|                | March 20.  |    |       | Marcellus Crombie | do                                                             |          | 20  | 0  | 0  |      |    |    |                        |   |                     |      |   |   |
|                | Decr. 12.  |    |       | do                | do                                                             |          |     |    |    |      |    |    |                        |   |                     |      |   |   |
|                | do         |    |       | L. S. Oille       | do                                                             |          | 35  | 0  | 0  |      |    |    |                        |   |                     |      |   |   |
|                | do         |    |       | C. E. English     | do                                                             |          | 15  | 0  | 0  |      |    |    |                        |   |                     |      |   |   |
|                | do         |    |       | J. Mitchell       | do                                                             |          | 10  | 0  | 0  |      |    |    |                        |   |                     |      |   |   |
|                | do         |    |       | R. Sullivan       | do                                                             |          | 10  | 0  | 0  |      |    |    |                        |   |                     |      |   |   |
|                | do         |    |       | J. H. Holcome     | do                                                             |          | 19  | 0  | 0  |      |    |    |                        |   |                     |      |   |   |
|                | do         |    |       | J. White          | do                                                             |          | 10  | 0  | 0  |      |    |    |                        |   |                     |      |   |   |
|                | do         |    |       | D. A. Sampson     | do                                                             |          | 10  | 0  | 0  |      |    |    |                        |   |                     |      |   |   |
|                | do         |    |       | J. McGregor       | do                                                             |          | 11  | 13 | 4  |      |    |    |                        |   |                     |      |   |   |
|                | do         |    |       | W. Rock           | do                                                             |          | 10  | 0  | 0  |      |    |    |                        |   |                     |      |   |   |
|                | do         |    |       | J. A. Boyd        | do                                                             |          | 10  | 0  | 0  |      |    |    |                        |   |                     |      |   |   |
|                | do         |    |       | — Mulligan        | do                                                             |          | 10  | 0  | 0  |      |    |    |                        |   |                     |      |   |   |
|                | do         |    |       |                   | University Commission.                                         |          |     |    |    |      |    |    | 1158                   | 6 | 8                   | 1158 | 6 | 8 |
|                | Jan'y. 29. |    |       | Miles O'Reilly    | Amount paid him under Order in Council, and Secretary's Letter |          |     |    |    | 200  | 0  | 0  |                        |   |                     |      |   |   |

| Receipts.      | £       |    | Date. | Name.                        | Service.     | Voucher. | £   |    | s. |    | d. |    | University of Toronto. |    | University College. |      |    |      |   |   |
|----------------|---------|----|-------|------------------------------|--------------|----------|-----|----|----|----|----|----|------------------------|----|---------------------|------|----|------|---|---|
|                | s.      | d. |       |                              |              |          | s.  | d. | s. | d. | £  | s. | d.                     | £  | s.                  | d.   |    |      |   |   |
| Brought over.. | 17461   | 13 | 8     |                              |              |          |     |    |    |    |    |    | 800                    | 11 | 6                   |      |    |      |   |   |
|                | do      |    |       | Miles O'Reilly               | do           |          | 600 | 11 | 6  |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | W. F. Coffin, and J. Daniels | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | J. Daniels                   | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | July 8. |    |       | Skeffington Connor, L.L.D.   | Examiner     |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | O. Mowatt                    | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | J. H. Richardson, M.D.       | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | J. O'Reilly, M.D.            | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | C. W. Covernton, M.D.        | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | W. R. Beaumont, M.D.         | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | W. B. Nicol, M.D.            | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | H. H. Croft, D.C.L.          | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | Rev. W. Ormiston             | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | George Herrick, M.D.         | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | L. O'Brien, M.D.             | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | Rev. W. Hincks, F.L.S.       | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | Robert Cheekley, M.D.        | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | The Rev. J. McCaul, L.L.D.   | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | James Brown, B.A.            | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | J. B. Cherriman, M.A.        | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | G. P. Young                  | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | Rev. J. Beavan, D.D.         | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | Adam Crooks, M.A.            | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | Daniel Wilson, L.L.D.        | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | J. T. Robertson              | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | E. J. Chapman                | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | Thomas Ridout, C.E.          | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | J. Forneri, L.L.D.           | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | J. M. Herschfelder           | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | Rev. J. Willis, D.D.         | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                | do      |    |       | F. Mantovani, L.L.D.         | do           |          |     |    |    |    |    |    |                        |    |                     |      |    |      |   |   |
|                |         |    |       |                              | Carried over |          |     |    |    |    |    |    | 540                    | 0  | 0                   | 540  | 0  | 0    |   |   |
|                |         |    |       |                              |              |          |     |    |    |    |    |    | 13138                  | 7  | 3                   | 1718 | 14 | 1    |   |   |
|                |         |    |       |                              |              |          |     |    |    |    |    |    |                        |    |                     |      |    | 8924 | 4 | 8 |





No. 2.—UNIVERSITY AND COLLEGES AT TORONTO.—The Bursar's Statement of Cash Received and Expended on account of the "Income Fund," for the year ended 31st December, 1856, &c.—(Continued.)

| Receipts.            | £     |      | Date.      | Name.                             | Service.                            | Voucher. | £   |       | s. d. |     | University of Toronto. |     | University College. |         |
|----------------------|-------|------|------------|-----------------------------------|-------------------------------------|----------|-----|-------|-------|-----|------------------------|-----|---------------------|---------|
|                      | s.    | d.   |            |                                   |                                     |          | £   | s.    | d.    | £   | s.                     | d.  | £                   | s.      |
| <i>Brought over.</i> | 17461 | 13 8 | 1856.      |                                   | <i>Advertising—(Continued.)</i>     |          | 230 | 3 9   | 14307 | 7 6 | 2555                   | 8 6 | 8658                | 16 1    |
|                      |       |      | Nov. 14.   | "London Herald"                   | Amount of Account                   |          | 4   | 5 3   |       |     |                        |     |                     |         |
|                      |       |      | Decr. 4.   | The "Pilot"                       | do                                  |          | 3   | 6 6   |       |     | 3                      | 6 6 |                     |         |
|                      |       |      | March 31.  | "Hamilton Banner"                 | do                                  |          | 3   | 14 11 |       | 241 | 10 5                   |     |                     |         |
|                      |       |      |            |                                   | <i>Stationery and Printing.</i>     |          |     |       |       |     |                        |     |                     |         |
|                      |       |      | Jan'y. 16. | Maclear & Company.                | Amount of Account                   |          | 7   | 12 10 |       |     |                        | 5   | 4 5                 | 2 8 5   |
|                      |       |      | Sept. 10.  | do                                | do                                  |          | 1   | 9 4   |       |     |                        | 1   | 9 4                 |         |
|                      |       |      | Feb'y. 20. | Department of Public Instruction. | do                                  |          | 7   | 12 1  |       |     |                        |     |                     | 7 12 1  |
|                      |       |      | Decr. 27.  | do                                | do                                  |          | 7   | 14 4  |       |     |                        |     |                     | 7 14 4  |
|                      |       |      | April 30.  | Henry Rowsell                     | do                                  |          | 78  | 8 10  |       |     |                        | 78  | 8 10                | 19 15 8 |
|                      |       |      | do         | do                                | do                                  |          | 2   | 0 0   |       |     |                        | 2   | 0 0                 |         |
|                      |       |      | May 6.     | do                                | do                                  |          | 19  | 15 3  |       |     |                        |     |                     |         |
|                      |       |      | April 3.   | do                                | do                                  |          | 40  | 13 4  |       |     |                        | 40  | 13 4                |         |
|                      |       |      | July 8.    | do                                | do                                  |          | 223 | 6 11  |       |     |                        | 223 | 6 11                |         |
|                      |       |      | Sept. 26.  | do                                | do                                  |          | 14  | 3 7   |       |     |                        |     |                     | 14 3 7  |
|                      |       |      | Decr. 6.   | do                                | do                                  |          | 84  | 12 6  |       |     |                        |     |                     | 84 12 6 |
|                      |       |      |            |                                   | <i>Miscellaneous Disbursements.</i> |          | 463 | 0 5   |       | 487 | 9 0                    |     |                     |         |
|                      |       |      | Jan'y. 16. | Charles Vale                      | Sundries, as per Account            |          | 8   | 1 6   |       |     |                        |     |                     | 8 1 6   |
|                      |       |      | August 11. | do                                | do                                  |          | 0   | 17 0  |       |     |                        |     |                     | 0 17 0  |
|                      |       |      |            |                                   |                                     |          | 818 | 6     |       |     |                        | 818 | 6                   | 818 6   |

|                      |                          |    |    |                                                                |    |     |      |       |      |      |     |      |      |                                      |
|----------------------|--------------------------|----|----|----------------------------------------------------------------|----|-----|------|-------|------|------|-----|------|------|--------------------------------------|
| Feb'y 13.            | Francis Nisbit.          | do | do | do                                                             | do | 37  | 9 5  |       |      |      |     |      |      | 37 9 5                               |
| do 21.               | Piper and Brothers.      | do | do | Stove-pipes                                                    | do | 4   | 1 10 |       |      |      |     |      |      | 4 1 10                               |
| do do.               | do                       | do | do | do                                                             | do | 4   | 9 3  |       |      |      |     |      |      | 4 9 3                                |
| do do.               | Daniel Orris             | do | do | Removal Expenses                                               | do | 5   | 15 0 |       |      |      |     |      |      | 5 15 0                               |
| do 12.               | do                       | do | do | Coffee for the Senate                                          | do | 11  | 5 0  |       |      |      |     |      |      | 11 5 0                               |
| do 13.               | do                       | do | do | Cleaning Buildings, and Express Charges                        | do | 3   | 0 0  |       |      |      |     |      |      | 3 0 0                                |
| do 22.               | do                       | do | do | Making up Carpets                                              | do | 3   | 8 1  |       |      |      |     |      |      | 3 8 1                                |
| June 2.              | do                       | do | do | Seeds, &c.                                                     | do | 0   | 8 9  |       |      |      |     |      |      | 0 8 9                                |
| July 21.             | do                       | do | do | Amount paid by him for cutting Grass on the University Grounds | do | 19  | 10 0 |       |      |      |     |      |      | 19 10 0                              |
| do do.               | do                       | do | do | Amount paid by him for cleaning Buildings                      | do | 3   | 3 9  |       |      |      |     |      |      | 3 3 9                                |
| do do.               | do                       | do | do | Express Charges paid by him                                    | do | 0   | 8 9  |       |      |      |     |      |      | 0 8 9                                |
| Sept. do.            | do                       | do | do | do                                                             | do | 0   | 10 8 |       |      |      |     |      |      | 0 10 8                               |
| do do.               | do                       | do | do | do                                                             | do | 1   | 0 8  |       |      |      |     |      |      | 1 0 8                                |
| do do.               | do                       | do | do | Paid for cleaning Buildings                                    | do | 1   | 15 0 |       |      |      |     |      |      | 1 15 0                               |
| Decr. 31.            | do                       | do | do | Paid for Hammer                                                | do | 0   | 5 0  |       |      |      |     |      |      | 0 5 0                                |
| Feb'y. March 8.      | William Fahcy            | do | do | Removing Furniture                                             | do | 10  | 0 0  |       |      |      |     | 10   | 0 0  | 10 0 0                               |
| do 31.               | A. Sherwood              | do | do | do                                                             | do | 5   | 0 0  |       |      |      |     | 5    | 0 0  | 5 0 0                                |
| do do.               | William Patterson        | do | do | Washing Towels                                                 | do | 1   | 1 3  |       |      |      |     |      |      | 1 1 3                                |
| do do.               | A. H. Armour and Company | do | do | Charges on Box of Microscopic Specimens                        | do | 2   | 13 2 |       |      |      |     |      |      | 2 13 2                               |
| Feb'y. 2.            | The Bursar               | do | do | Expenses attending Sale of Lot 10, 9th Con. Norwich            | do | 26  | 13 9 |       |      |      |     |      |      | 26 13 9                              |
| do 7.                | William Wakefield        | do | do | do do, and his Commission                                      | do | 29  | 6 11 |       |      |      |     |      |      | 29 6 11                              |
| Feb'y. 13.           | John Ellis               | do | do | University Seal, Copying Press                                 | do | 33  | 18 6 |       |      |      |     | 33   | 18 6 | 33 18 6                              |
| <i>Carried over.</i> |                          |    |    |                                                                |    | 187 | 8 4  | 15036 | 6 11 | 3027 | 3 3 | 8863 | 2 7  | 187 8 4 15036 6 11 3027 3 3 8863 2 7 |



No. 2.—UNIVERSITY AND COLLEGES AT TORONTO.—The Bursar's Statement of Cash Received and Expended on account of the "Income Fund," for the year ended 31st December, 1856, &c.—(Continued.)

| Receipts.      | Date. |            | Name.                          | Service.                                                    | Voucher. | £ s. d. |       | University of Toronto. |       | University College. |      |
|----------------|-------|------------|--------------------------------|-------------------------------------------------------------|----------|---------|-------|------------------------|-------|---------------------|------|
|                | £     | s. d.      |                                |                                                             |          | £       | s. d. | £                      | s. d. |                     |      |
| Brought over.. | 17461 | 18 8       |                                |                                                             |          |         |       | 3080                   | 0 11  | 8954                | 16 3 |
|                |       | 1856.      | John Wilson, M.P.P.            | Miscellaneous Disbursements.—(Continued.)                   |          |         |       |                        |       |                     |      |
|                |       | Sept. 17.  | William Livingston..           | Brought over .....                                          |          |         |       | 505                    | 1 11  | 15086               | 6 11 |
|                |       | August do. | Henry Northcote ..             | Expenses as one of the Commission of Visitation, 1851 ..... |          |         |       | 50                     | 0 0   |                     |      |
|                |       | Sept. 24.  | Thomas Billon .....            | For inspecting Lands in Zone .....                          |          |         |       | 315                    | 0 0   |                     |      |
|                |       | July do    | Peter Miller .....             | Copying and Surveying..                                     |          |         |       | 5                      | 5 0   |                     |      |
|                |       | August 21. | James Ross .....               | Official Gown for Bede..                                    |          |         |       | 10                     | 0 0   |                     |      |
|                |       | Sept. 16.  | William Brown.....             | Sharpening Saws .....                                       |          |         |       | 0                      | 10 0  |                     |      |
|                |       | do         | J. E. Pell .....               | For his Services as Copying Clerk.....                      |          |         |       | 7                      | 10 0  |                     |      |
|                |       | do         | J. W. Miller .....             | Amount of his Account, Sweeping Flues .....                 |          |         |       | 0                      | 10 0  |                     |      |
|                |       | Oct. 14.   | John Young .....               | Mounting Diagrams .....                                     |          |         |       | 1                      | 5 0   |                     |      |
|                |       | do         | John Goodall .....             | Repairing Clock .....                                       |          |         |       | 0                      | 7 6   |                     |      |
|                |       | do         | do .....                       | Carting Hay .....                                           |          |         |       | 2                      | 3 9   |                     |      |
|                |       | Novr. do   | The Rev. N. Wickson.           | Ploughing .....                                             |          |         |       | 17                     | 0 0   |                     |      |
|                |       | do         | J. C. Griffith & Company ..... | Labour on Grounds .....                                     |          |         |       | 5                      | 0 0   |                     |      |
|                |       | Decr. 3.   | W. H. Kerr .....               | Services at Convocation..                                   |          |         |       | 1                      | 0 0   |                     |      |
|                |       | do         | The Rev. A. Lovimer.           | Earthenware .....                                           |          |         |       | 2                      | 10 0  |                     |      |
|                |       | do         | Hearn & Potter .....           | Copying Clerk.....                                          |          |         |       | 0                      | 9 5   |                     |      |
|                |       | do         | Parkes, Brothers .....         | Express Charges .....                                       |          |         |       | 2                      | 0 0   |                     |      |
|                |       | Oct. 16.   | Jacques & Hay .....            | Gyroscope .....                                             |          |         |       | 0                      | 8 1   |                     |      |
|                |       |            |                                | Stands for Museum .....                                     |          |         |       | 3                      | 2 6   |                     |      |
|                |       |            |                                | Window Rollers .....                                        |          |         |       |                        |       |                     |      |

|            |                       |                                                                                                                                          |     |    |   |  |  |              |   |       |                |
|------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------|-----|----|---|--|--|--------------|---|-------|----------------|
| Decr. 23.  | J. Ferguson .....     | For making Bridge and repairing foot-path.....                                                                                           | 14  | 0  | 0 |  |  |              |   |       |                |
| do         | Thomas Patterson ..   | Draining Grounds .....                                                                                                                   | 148 | 1  | 7 |  |  |              |   |       |                |
| do         | Mary Townley .....    | do Pipes for do .....                                                                                                                    | 68  | 0  | 0 |  |  |              |   |       |                |
| April 7.   | F. Nisbet .....       | Repairs .....                                                                                                                            | 10  | 9  | 2 |  |  |              |   | 10    | 9              |
| May 8.     | do .....              | do .....                                                                                                                                 | 4   | 5  | 0 |  |  |              | 4 | 5     | 0              |
| April 19.  | John Ritchey .....    | do .....                                                                                                                                 | 14  | 14 | 2 |  |  |              | 1 | 0     | 0              |
| do         | do .....              | do .....                                                                                                                                 | 1   | 0  | 0 |  |  |              |   |       |                |
| do         | Thomas Reynolds ..... | Observatory.                                                                                                                             |     |    |   |  |  |              |   |       |                |
| do         | do .....              | Computer .....                                                                                                                           | 6   | 7  | 0 |  |  |              |   |       |                |
| do         | do .....              | do .....                                                                                                                                 | 2   | 18 | 6 |  |  |              |   |       |                |
| do         | W. F. Davison .....   | Assistant Computer .....                                                                                                                 | 6   | 2  | 6 |  |  |              |   |       |                |
| do         | do .....              | do .....                                                                                                                                 | 8   | 10 | 0 |  |  |              |   |       |                |
| do         | do .....              | Museum Appropriation.                                                                                                                    |     |    |   |  |  |              |   | 882   | 11 11          |
| do         | do .....              | Amount appropriated by Statute of Senate approved by His Excellency the Governor General, in Council, for Specimens for the Museum ..... |     |    |   |  |  |              |   | 15918 | 18 10          |
| do         | do .....              | Surplus Income Fund.                                                                                                                     |     |    |   |  |  |              |   | 1200  | 0 0            |
| do         | do .....              | Amount transferred to this Fund .....                                                                                                    |     |    |   |  |  |              |   | 342   | 14 10          |
| Total..... | £ 17461 18 8          |                                                                                                                                          |     |    |   |  |  | £ 17461 18 8 |   | 3145  | 5 11 8989 13 6 |

BURSAR'S OFFICE,  
Toronto, 31st December, 1856.

DAVID BUCHAN, Bursar.  
JOHN LANGTON, Auditor.

**No. 3.—UNIVERSITY AND COLLEGES AT TORONTO.—The Bursar's Statement of Receipts, and Appropriation of Monies Received in Deposit, for the year ended 31st December, 1856.**

| R E C E I P T S.                              | CURRENCY. |    | A P P R O P R I A T I O N.                    |      | CURRENCY. |    |
|-----------------------------------------------|-----------|----|-----------------------------------------------|------|-----------|----|
|                                               | £         | d. | £                                             | s.   | £         | d. |
| To Balance on hand, 31st December, 1855 ..... | 1371      | 10 | By Deposits placed to Account .....           | 566  | 8         | 1  |
| To Cash received in Deposit .....             | 524       | 7  | By Balance on hand, 31st December, 1856 ..... | 1329 | 17        | 4  |
| £ 1896                                        | 5         | 5  | £ 1896                                        | 5    | 5         | 5  |
| By Balance, 31st December, 1856 .....         | £ 1329    | 17 | 4                                             |      |           |    |

BURSAR'S OFFICE, Toronto, 31st December, 1856.

DAVID BUCHAN, *Bursar.*  
JOHN LANGTON, *Auditor.*

**No. 4.—UNIVERSITY AND COLLEGES AT TORONTO.—The Bursar's Statement of Cash Received and Expended on account of the "Appropriation Fund," for the year ended 31st December, 1856.**

| R E C E I P T S.                                                                                                                                                        | CURRENCY. |    | E X P E N D I T U R E. |                                              | CURRENCY. |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----|------------------------|----------------------------------------------|-----------|----|
|                                                                                                                                                                         | £         | d. | £                      | s.                                           | £         | d. |
| To Balance on hand, 31st December, 1855, being residue of £950 appropriated by Statute of Senate for the improvement of the Port Hope and Port Stanley properties ..... | 571       | 19 | 1                      | By Balance on hand 31st December, 1856 ..... | 571       | 19 |
| £ 571                                                                                                                                                                   | 19        | 1  | £ 571                  | 19                                           | 1         | 1  |
| Balance, 31st December, 1856 .....                                                                                                                                      | £ 571     | 19 | 1                      |                                              |           |    |

BURSAR'S OFFICE, Toronto, 31st December, 1856.

DAVID BUCHAN, *Bursar.*  
JOHN LANGTON, *Auditor.*

**No. 5.—UNIVERSITY AND COLLEGES AT TORONTO.**—The Bursar's Statement of Receipts and Expenditure on account of the "Library Appropriation Fund," for the year ended 31st December, 1856.

| RECEIPTS.                                 | Currency. |      | EXPENDITURE. | Currency. |      |    |
|-------------------------------------------|-----------|------|--------------|-----------|------|----|
|                                           | £         | s.   |              | d.        | £    | s. |
| Balance on hand, 31st December, 1855..... | 2500      | 3    | 9            | 87        | 9    | 9  |
|                                           |           |      |              | 288       | 0    | 0  |
|                                           |           |      |              | 3         | 15   | 11 |
|                                           |           |      |              | 6         | 15   | 0  |
|                                           |           |      |              | .32       | 8    | 7  |
|                                           |           |      |              | 30        | 6    | 6  |
|                                           |           |      |              | 84        | 7    | 1  |
|                                           |           |      |              | 66        | 12   | 6  |
|                                           |           |      |              | 47        | 19   | 4  |
|                                           |           |      |              | 23        | 7    | 0  |
|                                           |           |      |              | £         | 671  | 1  |
|                                           |           |      |              |           | 1829 | 2  |
|                                           |           |      |              | £         | 2500 | 3  |
|                                           |           |      |              |           |      | 9  |
| Balance on 31st December, 1856.....       | £         | 1829 | 2            | 1         |      |    |

DAVID BUCHAN,

*Bursar.*

JOHN LANGTON,

*Auditor.*

**BURSAR'S OFFICE,**  
Toronto, 31st December, 1856.

**No. 6.—UNIVERSITY AND COLLEGES AT TORONTO.—The Bursar's Statement of Cash Expended on account of the "Building Appropriation Fund," for the year ended 31st December, 1856.**

| R E C E I P T S.                      | C u r r e n c y . |    |    | E X P E N D I T U R E .                                                                 |    |    | C u r r e n c y . |     |    |   |
|---------------------------------------|-------------------|----|----|-----------------------------------------------------------------------------------------|----|----|-------------------|-----|----|---|
|                                       | £                 | s. | d. | £                                                                                       | s. | d. | £                 | s.  | d. |   |
| To Balance, 31st December, 1856 ..... | 1687              | 0  | 0  |                                                                                         |    |    | 300               | 0   | 0  |   |
|                                       |                   |    |    | By paid F. W. Cumberland's expenses to England, as ordered by Senate, February 24 ..... |    |    |                   |     |    |   |
|                                       |                   |    |    | do John Morris, Clerk of the Works, November 7 .....                                    | 16 | 0  | 0                 |     |    |   |
|                                       |                   |    |    | do do do, December 4 .....                                                              | 16 | 0  | 0                 |     |    |   |
|                                       |                   |    |    | do Benjamin Walton, Contractor, on account of Works, 7th November .....                 |    |    |                   | 610 | 0  | 0 |
|                                       |                   |    |    | do do do, 4th December .....                                                            |    |    |                   | 495 | 0  | 0 |
|                                       |                   |    |    | do Cumberland & Storm, Architects .....                                                 |    |    |                   |     |    |   |
| £                                     | 1687              | 0  | 0  |                                                                                         |    |    | 1105              | 0   | 0  |   |
|                                       |                   |    |    |                                                                                         |    |    | 250               | 0   | 0  |   |
|                                       |                   |    |    |                                                                                         |    |    | 1687              | 0   | 0  |   |

DAVID BUCHAN,  
*Bursar.*

BURSAE'S OFFICE,  
Toronto, 31st December, 1856.

JOHN LANGTON,  
*Auditor.*

**No. 7.**—UNIVERSITY AND COLLEGES AT TORONTO.—The Bursar's Statement of Receipts and Expenditure on account of the "Museum Appropriation Fund," for the year ended 31st December, 1856.

| R E C E I P T S.                                                                                                                    | CURRENCY. |       | E X P E N D I T U R E.                        | CURRENCY. |       |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|-----------------------------------------------|-----------|-------|
|                                                                                                                                     | £         | s. d. |                                               | £         | s. d. |
| To Amount appropriated from the Income Fund by Statute of Senate, approved by His Excellency the Governor General, in Council ..... | 1200      | 0 0   | By Balance on hand, 31st December, 1856 ..... | 1200      | 0 0   |
| £ 1200 0 0                                                                                                                          |           |       | £ 1200 0 0                                    |           |       |
| Balance, 31st December, 1856 .....                                                                                                  | 1200      | 0 0   |                                               |           |       |

BURSAR'S OFFICE, Toronto, 31st December, 1856.

DAVID BUCHAN, *Bursar.*

JOHN LANGTON, *Auditor.*

**No. 8.**—UNIVERSITY AND COLLEGES AT TORONTO.—The Bursar's Statement of Receipts and Expenditure on account of the "Surplus Income Fund," for the year ended 31st December, 1856.

| R E C E I P T S.                              | CURRENCY. |       | E X P E N D I T U R E.                        | CURRENCY. |       |
|-----------------------------------------------|-----------|-------|-----------------------------------------------|-----------|-------|
|                                               | £         | s. d. |                                               | £         | s. d. |
| To Balance on hand, 31st December, 1855 ..... | 6580      | 4 11  | By Balance on hand, 31st December, 1856 ..... | 6922      | 19 9  |
| To amount of surplus income for 1856 .....    | 342       | 14 10 |                                               |           |       |
| £ 6922 19 9                                   |           |       | £ 6922 19 9                                   |           |       |
| Balance, 31st December, 1856 .....            | 6922      | 19 9  |                                               |           |       |

BURSAR'S OFFICE, Toronto, 31st December, 1856.

DAVID BUCHAN, *Bursar.*

JOHN LANGTON, *Auditor.*

No. — UNIVERSITY AND COLLEGES AT TORONTO.—Summary of the foregoing Accounts.

|                                                                                                                                                       | £     | s. | d. | £     | s. | d. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----|----|-------|----|----|
| To Balance on hand, 31st December, 1855 .....                                                                                                         | 3449  | 3  | 11 | 120   | 5  | 10 |
| To Cash received on account of Lands sold, and Investments returned, as contained in Account No. 1 .....                                              | 37069 | 3  | 0  | 2550  | 8  | 6  |
| do received on account of Interest on Purchase Money, Debentures, Loans, Promissory Notes, Bank Balances, Rent of Leased Lots .....                   | 16390 | 4  | 8  | 8084  | 0  | 7  |
| do Postage returned, Fees on Transfers, Law Costs, Dividend on Bank Stock, Insurance repaid, Interest on do, Advertising repaid .....                 | 579   | 9  | 8  | 1158  | 6  | 8  |
| To Proportion of Joint Management charged, Upper Canada College, for 1856 .....                                                                       | 491   | 19 | 4  | 540   | 0  | 0  |
| To Cash received in Deposit .....                                                                                                                     | 524   | 5  | 7  | 800   | 11 | 6  |
|                                                                                                                                                       |       |    |    | 850   | 6  | 6  |
|                                                                                                                                                       |       |    |    | 1052  | 13 | 2  |
|                                                                                                                                                       |       |    |    | 882   | 11 | 11 |
|                                                                                                                                                       |       |    |    | 566   | 8  | 1  |
|                                                                                                                                                       |       |    |    | 671   | 1  | 8  |
|                                                                                                                                                       |       |    |    | 1687  | 0  | 0  |
|                                                                                                                                                       | £     | 6  | 2  | 18963 | 14 | 5  |
|                                                                                                                                                       |       |    |    | 39540 | 11 | 9  |
|                                                                                                                                                       | £     |    |    | 58504 | 6  | 2  |
| By Cash invested in Specimens for Museum, &c., as contained in Account No. 1 .....                                                                    |       |    |    |       |    |    |
| do paid Salaries, Stationery, Incidents, &c., Bursar's Office, as contained in Account No. 2 .....                                                    |       |    |    |       |    |    |
| do paid Salaries to Professors, &c., and Wages to Servants .....                                                                                      |       |    |    |       |    |    |
| do paid Scholarships .....                                                                                                                            |       |    |    |       |    |    |
| do paid Examiners' Fees .....                                                                                                                         |       |    |    |       |    |    |
| do paid Miles O'Reilly, F. Daniels, and W. F. Coffin, Commissioners, for the investigation of certain matters connected with University College ..... |       |    |    |       |    |    |
| do paid for Prizes, Taxes, Law Costs, and Insurances .....                                                                                            |       |    |    |       |    |    |
| do paid Fuel, Advertising, Stationery, and Printing .....                                                                                             |       |    |    |       |    |    |
| do paid Miscellaneous Disbursements .....                                                                                                             |       |    |    |       |    |    |
| do Deposits placed to Account, as contained in Account No. 3 .....                                                                                    |       |    |    |       |    |    |
| do expended on account of Library Appropriation, as per Account No. 5 .....                                                                           |       |    |    |       |    |    |
| do expended on account of Building Appropriation, as per Account No. 6 .....                                                                          |       |    |    |       |    |    |
| By Balance on hand, and deposited in the Bank of Upper Canada, as shewn by Bank Pass Books and Quarterly Statements .....                             | £     |    |    | £     |    |    |
|                                                                                                                                                       |       |    |    | 18963 | 14 | 5  |
|                                                                                                                                                       |       |    |    | 39540 | 11 | 9  |
|                                                                                                                                                       | £     |    |    | 58504 | 6  | 2  |

DAVID BUCHAN,

Bursar.

BURSAR'S OFFICE,  
Toronto, 31st December, 1856.

JOHN LANGTON,

Auditor.

**UNIVERSITY and COLLEGES at TORONTO.—ESTIMATE  
of INCOME for 1857.**

|                                                           | £       | s. | d. |
|-----------------------------------------------------------|---------|----|----|
| Interest on balance of Purchase Money, general sales..... | 5800    | 0  | 0  |
| do on balance of price of Hamilton Property. ....         | 540     | 0  | 0  |
| do on balance of sales of Ridout Property .....           | 31      | 0  | 0  |
| do for Ground Rent from Bay street Property .....         | 90      | 0  | 0  |
| do on balance of sales of Garrison Reserve Property.....  | 115     | 0  | 0  |
| do on balance of sales of Port Hope Property .....        | 978     | 0  | 0  |
| do on Debentures .....                                    | 7038    | 0  | 0  |
| do on Mortgages.....                                      | 1330    | 0  | 0  |
| do on Bank balances.....                                  | 750     | 0  | 0  |
| Dividends on Bank Stock .....                             | 30      | 0  | 0  |
| Rent of leased Lots .....                                 | 650     | 0  | 0  |
| Fees on Transfers of Land.....                            | 150     | 0  | 0  |
|                                                           | £ 17002 | 0  | 0  |

DAVID BUCHAN,

*Bursar.*

BURSAR'S OFFICE,

Toronto, 31st December, 1856.



UPPER CANADA COLLEGE.—Statement of Capital Invested, and the Amount Expended on account of the College, from its commencement, to 31st December, 1856.

|                                                                                                                | £      | s. | d. | £        | s. | d. |
|----------------------------------------------------------------------------------------------------------------|--------|----|----|----------|----|----|
| Amount of Capital Invested to 31st December, 1855, as shewn in Annual Statement transmitted to Government..... |        |    |    | 34116    | 3  | 3  |
| do of Capital Invested in 1856, as shewn in Account No. 1.....                                                 |        |    |    | 491      | 0  | 0  |
|                                                                                                                |        |    |    | £ 34607  | 3  | 3  |
| Amount expended to 31st December, 1855, as shewn in Annual Statement transmitted to Government.....            | 117615 | 12 | 4  |          |    |    |
| Amount expended in 1856, as shew in Account No. 2.....                                                         | 6120   | 3  | 7  |          |    |    |
|                                                                                                                |        |    |    | 123735   | 15 | 11 |
|                                                                                                                |        |    |    | £ 158342 | 19 | 2  |

DAVID BUCHAN,

*Bursar.*

BURSAR'S OFFICE,

Toronto, 31st December, 1856.

JOHN LANGTON,

*Auditor.*

**No. 1.**—UPPER CANADA COLLEGE.—The Bursar's Statement of Receipts and Payments on account of the "Permanent Fund," for the year ended 31st December, 1856.

| R E C E I P T S.                                    | C u r r e n c y . |      |    | P A Y M E N T S.                                       | C u r r e n c y . |      |    |
|-----------------------------------------------------|-------------------|------|----|--------------------------------------------------------|-------------------|------|----|
|                                                     | £                 | s.   | d. |                                                        | £                 | s.   | d. |
| To Balance, 31st December, 1855 .....               | 330               | 19   | 4  | By transfer of amount of Surplus Income for 1855 ..... | 102               | 10   | 5  |
| To Cash received on account of Purchase Money ..... | 2485              | 12   | 9  | By amount paid on account of new Building.....         | 491               | 0    | 0  |
|                                                     |                   |      |    | By Balance on hand, 31st December, 1856 .....          | 2223              | 1    | 8  |
|                                                     | £                 | 2816 | 12 |                                                        | £                 | 2816 | 12 |
|                                                     |                   |      | 1  |                                                        |                   |      | 1  |
| To Balance on hand, 31st December, 1856.....        | £                 | 2223 | 1  |                                                        |                   |      |    |
|                                                     |                   |      | 8  |                                                        |                   |      |    |

DAVID BUCHAN,  
*Bursar.*

JOHN LANGTON,  
*Auditor.*

BURSAE'S OFFICE,  
Toronto, 31st December, 1856.









**No. 3.**—UPPER CANADA COLLEGE.—The Bursar's Statement of Receipts and Appropriation of "Monies in Deposit," for the year ended 31st December, 1856.

| R E C E I P T S.                                           | —   |    |    | A P P R O P R I A T I O N. |    |    |
|------------------------------------------------------------|-----|----|----|----------------------------|----|----|
|                                                            | £   | s. | d. | £                          | s. | d. |
| To Balance, 31st December, 1855 .....                      | 72  | 10 | 0  | 105                        | 10 | 0  |
| To Cash received in deposit for the purchase of Land ..... | 94  | 10 | 0  | 61                         | 10 | 0  |
| £                                                          | 167 | 0  | 0  | 167                        | 0  | 0  |
| To Balance on hand, 31st December, 1856 .....              | 61  | 10 | 0  |                            |    |    |

BURSAR'S OFFICE,  
Toronto, 31st December, 1856.

DAVID BUCHAN,  
*Bursar.*  
JOHN LANGTON,  
*Auditor.*

UPPER CANADA COLLEGE.—Summary of the foregoing Accounts.

|                                              | £    | s. | d. | £   | s. | d. |
|----------------------------------------------|------|----|----|-----|----|----|
| Balance on hand, 31st December, 1855 .....   | 403  | 9  | 4  |     |    |    |
| Cash received on account of Lands Sold ..... | 2485 | 12 | 9  | 491 | 0  | 0  |

By Cash paid on account of Buildings, as contained in Account No. 1.....

|                                                                                                          | 1    | 2  | £ | s. | d. | £    | s. | d. |
|----------------------------------------------------------------------------------------------------------|------|----|---|----|----|------|----|----|
| do on account of Interest on Purchase Money, Loans, Debentures, Promissory Notes, and Bank Balances..... | 2415 |    |   |    |    | 3800 | 19 | 6  |
| do on account of Rents of Leased Lots, Provincial Grant, Fees on Transfers, &c.....                      | 1387 |    |   |    |    | 160  | 3  | 4  |
| do on account of Insurance returned, duties on Timber Trespass on Land, and Law Costs repaid ..          | 146  | 10 | 6 |    |    | 764  | 14 | 6  |
| do Tuition Fees, Dues for Board and Postage returned .....                                               | 1875 | 16 | 9 |    |    | 271  | 4  | 10 |
| do in Deposit to 31st December, 1856.....                                                                | 94   | 10 | 0 |    |    | 134  | 9  | 7  |
| £                                                                                                        | 8808 | 14 | 6 |    |    | 496  | 12 | 6  |

do Salaries of Masters and Wages of Servants, as contained in Account No. 2 .....

do Examiners, Exhibitors, and Pensions .....

do on account of Resident School House .....

do do Fuel, Insurance, Advertizing, Land Costs, and Commission on Fees and Dues.....

do do Taxes, Prizes, Books and Stationery ..

do do Repairs to buildings and Incidental Expenses .....

Amount transferred to University Income Fund, being the proportion of Joint Management, for the year 1856..

Amount of Deposits placed on Account.....

£

Balance on hand and deposited in the Bank of Upper Canada, as shown by the Bank Pass Books and Quarterly Returns.....

BURSAR'S OFFICE,  
Toronto, 31st December, 1856.

DAVID BUCHAN,  
*Bursar.*  
JOHN LANGTON,  
*Auditor.*

UPPER CANADA COLLEGE.—ESTIMATE of the INCOME, for the year  
1856.

|                                                    | £    | s. | d. | £      | s. | d. |
|----------------------------------------------------|------|----|----|--------|----|----|
| Interest on Balances unpaid on Sales of Land ..... |      |    |    | 1840   | 0  | 0  |
| do on Block D, and other City Property.....        |      |    |    | 195    | 0  | 0  |
| do on Debentures .....                             |      |    |    | 507    | 0  | 0  |
| do on Loans .....                                  |      |    |    | 494    | 0  | 0  |
| do on Bank Balances .....                          |      |    |    | 50     | 0  | 0  |
| Rents of Leased Lots .....                         |      |    |    | 70     | 0  | 0  |
| Fees on Instruments and Transfers of Land .....    |      |    |    | 25     | 0  | 0  |
|                                                    |      |    |    | £ 3181 | 0  | 0  |
| Tuition Fees .....                                 | 1300 | 0  | 0  |        |    |    |
| Legislative Grant.....                             | 1111 | 2  | 2  |        |    |    |
|                                                    |      |    |    | 2411   | 2  | 2  |
|                                                    |      |    |    | £ 5592 | 2  | 2  |

Board Dues are not included in this Estimate, because, according to the new Statute of Senate, they are to be paid to the Principal, by whom the Expenses of the Resident School House are to be sustained.

DAVID BUCHAN,  
*Bursar.*

BURSAR'S OFFICE,  
Toronto, 31st December, 1856.

JOHN LANGTON,  
*Auditor.*

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# R E T U R N

To an Address from the Legislative Assembly to His Excellency the Governor General, dated 4th March, praying His Excellency to cause to be laid before the House "a Return of all principal Moneys received by the University of Toronto and Upper Canada College, on any account whatever, since the passage of the Act placing the Management of the Endowment of those Institutions in the Government; of the nature of the Securities in which any of those Moneys have been invested, with a List of the various investments that have, from time to time, been made, and a Statement of the length of time that any Moneys have remained uninvested; and also, a Statement shewing how much, if any, of those Moneys are in the hands of the Receiver General, and how much, if any, at the disposal of the University, and under what authority such investments have been made."

By Command.

T. LEE TERRILL,

Secretary.

SECRETARY'S OFFICE,

Toronto, 1st June, 1857.

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UNIVERSITY OF TORONTO.—RETURN to the Address of the Legislative Assembly of Canada, to His Excellency the Governor General, for information as to the amount of Principal Monies Received and Invested, on University Account, &c.—(Continued.)

| Total amount of Principal Monies received and placed at the credit of "University Permanent Fund," between 22nd April, 1853 and 9th March, 1857, including repayment of £15000 lent to the Buffalo, Brantford and Goderich Railroad Company, within that period. | 1857. |       | Quarterly Balance of Cash belonging to the "University Permanent Fund," showing the amount of money in the Bursar's hands, and ready for investment at the respective dates given. | 1857. |            | Dates and Amounts of the various Payments and Investments. | Nature of the Investment.                          | Authority for the Investment.              | Amount over-invested at the dates of respective Investments. |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------|------------------------------------------------------------|----------------------------------------------------|--------------------------------------------|--------------------------------------------------------------|
|                                                                                                                                                                                                                                                                  | £     | s. d. |                                                                                                                                                                                    | £     | s. d.      |                                                            |                                                    |                                            |                                                              |
| Brought over .....                                                                                                                                                                                                                                               | 29373 | 13 6  |                                                                                                                                                                                    |       | 1857.      |                                                            |                                                    |                                            |                                                              |
| Amount received between 31st December, 1856, and 9th March, 1857..                                                                                                                                                                                               | 5751  | 17 3  |                                                                                                                                                                                    |       | Jan'y. 15. | 2750 0 0                                                   | Law Society Debentures .....                       | Order in Council.                          |                                                              |
| £                                                                                                                                                                                                                                                                | 35125 | 10 9  |                                                                                                                                                                                    |       | do do.     | 17250 0 0                                                  | Consolidated Municipal Loan Fund Debentures .....  | do.                                        |                                                              |
| Amount invested since 31st December, 1856 .....                                                                                                                                                                                                                  | 24814 | 0 0   |                                                                                                                                                                                    |       | Feb'y. 19. | 4814 0 0                                                   | On account of New University Building to date..... | Order in Council and Resolution of Senate. |                                                              |
| Balance of permanent fund remaining uninvested..£                                                                                                                                                                                                                | 10311 | 10 9  |                                                                                                                                                                                    |       | £          | 24814 0 0                                                  |                                                    |                                            |                                                              |



UPPER CANADA COLLEGE.—RETURN to the Address of the Legislative Assembly of Canada, to His Excellency the Governor General, for Information as to the Amount of Principal Monies Received on Account of Upper Canada College, &c.—(Continued.)

| Total amount of Principal Monies received, and placed to the credit of "Upper Canada College Permanent Fund," between 22nd April, 1853, and 9th March, 1857. | £  |    | s. |   | d. |    | Quarterly balance of Cash belonging to "Upper Canada College Permanent Fund," shewing the Amount of Money in the Bursar's hands, and ready for investment at the respective dates given. | £    |    | s. |   | d. |    | Dates and Amounts of the various Payments and Investments. | Nature of the Investment. | Authority for the Investment. |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---|----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----|----|---|----|----|------------------------------------------------------------|---------------------------|-------------------------------|
|                                                                                                                                                              | £  | s. | d. | £ | s. | d. |                                                                                                                                                                                          | £    | s. | d. | £ | s. | d. |                                                            |                           |                               |
| Brought over .....                                                                                                                                           | 84 | 16 | 2  |   |    |    | 1853.                                                                                                                                                                                    |      |    |    |   |    |    |                                                            |                           |                               |
|                                                                                                                                                              |    |    |    |   |    |    | Decr. 31.                                                                                                                                                                                | 1555 | 11 | 8  |   |    |    | 1854.                                                      |                           |                               |
|                                                                                                                                                              |    |    |    |   |    |    | March 31.                                                                                                                                                                                | 2608 | 18 | 4  |   |    |    | July 14.                                                   | 2000                      | 0                             |
|                                                                                                                                                              |    |    |    |   |    |    | June 30.                                                                                                                                                                                 | 4100 | 6  | 6  |   |    |    | Novr. 13.                                                  | 2968                      | 15                            |
|                                                                                                                                                              |    |    |    |   |    |    | Sept. do.                                                                                                                                                                                | 1544 | 10 | 7  |   |    |    | Jan. 18.                                                   | 2149                      | 4                             |
|                                                                                                                                                              |    |    |    |   |    |    | Decr. 31.                                                                                                                                                                                | 1871 | 3  | 0  |   |    |    | 1855.                                                      |                           |                               |
|                                                                                                                                                              |    |    |    |   |    |    | March 31.                                                                                                                                                                                | 789  | 12 | 5  |   |    |    | Jan. 18.                                                   | 2149                      | 4                             |
|                                                                                                                                                              |    |    |    |   |    |    | June 30.                                                                                                                                                                                 | 2418 | 14 | 1  |   |    |    | July 14.                                                   | 2000                      | 0                             |
|                                                                                                                                                              |    |    |    |   |    |    | Sept. do.                                                                                                                                                                                | 2688 | 2  | 8  |   |    |    | Novr. 13.                                                  | 2968                      | 15                            |

| Amount subsequently received up to 31st December, 1856..... | £     |    | s. |   | d. |    | Amount invested up to the 31st December, 1856; as per Statement ..... | £    |    | s. |   | d. |    | Amount received between the 31st December, 1856, and 9th March, 1857..... | Amount invested since 31st December, 1856. | Balance of Permanent Fund.....£ | Authority for the Investment. |                                    |
|-------------------------------------------------------------|-------|----|----|---|----|----|-----------------------------------------------------------------------|------|----|----|---|----|----|---------------------------------------------------------------------------|--------------------------------------------|---------------------------------|-------------------------------|------------------------------------|
|                                                             | £     | s. | d. | £ | s. | d. |                                                                       | £    | s. | d. | £ | s. | d. |                                                                           |                                            |                                 |                               |                                    |
|                                                             | 13697 | 5  | 5  |   |    |    | Decr. 31.                                                             | 380  | 19 | 4  |   |    |    | Decr. 21.                                                                 | 2950                                       | 0                               | 0                             | Consolidated Municipal Loan Fund   |
|                                                             | 13782 | 1  | 7  |   |    |    | March 31.                                                             | 922  | 12 | 10 |   |    |    | do do.                                                                    | 1000                                       | 0                               | 0                             | Debentures .....                   |
|                                                             |       |    |    |   |    |    | June 30.                                                              | 1366 | 2  | 3  |   |    |    | 1856.                                                                     |                                            |                                 |                               | Lunatic Asylum Debentures.....     |
|                                                             | 11558 | 19 | 11 |   |    |    | Sept. do.                                                             | 1867 | 16 | 2  |   |    |    | Decr. 23.                                                                 | 491                                        | 0                               | 0                             |                                    |
|                                                             | 2223  | 1  | 8  |   |    |    | Decr. 31.                                                             | 2223 | 1  | 8  |   |    |    | £                                                                         | 11558                                      | 19                              | 11                            | Addition to Resident School House. |
|                                                             | 663   | 4  | 4  |   |    |    |                                                                       |      |    |    |   |    |    | 1857.                                                                     |                                            |                                 |                               |                                    |
|                                                             | 2886  | 6  | 0  |   |    |    | Jan. 19.                                                              | 1000 | 0  | 0  |   |    |    | Jan. 19.                                                                  | 1000                                       | 0                               | 0                             | Consolidated Municipal Loan Fund   |
|                                                             | 1445  | 0  | 0  |   |    |    | do do.                                                                | 445  | 0  | 0  |   |    |    | do do.                                                                    | 445                                        | 0                               | 0                             | Debentures .....                   |
|                                                             | 1441  | 6  | 0  |   |    |    | £                                                                     | 1445 | 0  | 0  |   |    |    | £                                                                         | 1445                                       | 0                               | 0                             | Addition to Resident School House. |

NOTE.—The Balance on hand will be required to meet the further Expenditure for the addition to the Resident School House. The Amount set apart by the Order in Council is £2629. The Amount hitherto expended is £936, leaving to be provided for, £1698, so that there is at present nothing to Invest.

BURSAR'S OFFICE,  
Toronto, 30th March, 1857.

DAVID BUCHAN, Bursar.

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# R E T U R N

To an Address from the Legislative Assembly of the 4th instant; for Statements of Work done, Payments made, and other information, relative to the Chats Canal.

By Command.

T. LEE TERRILL,

Secretary.

SECRETARY'S OFFICE,

Toronto, 22nd May, 1857.

## Ottawa Navigation.

ESTIMATE of WORK REMAINING to be DONE at and for the CHATS CANAL.

|                                                                              | £        | s. | d. |
|------------------------------------------------------------------------------|----------|----|----|
| Rock excavation, 70,000 cubic yards, at 9s. 6d.....                          | 38250    | 0  | 0  |
| Earth do and embankment, 10,000 do do, do 4s. 0d.....                        | 2000     | 0  | 0  |
| do do Puddle, 8,000 do do, do 2s. 0d.....                                    | 800      | 0  | 0  |
| Masonry lock-walls, 28,000 do do, do 41s. 9d....                             | £48012   | 10 | 0  |
| Stone Quarried and prepared,.....                                            | £7127    | 1  | 11 |
| Opening Quarries, &c.....                                                    | 1000     | 0  | 0  |
|                                                                              | 8127     | 1  | 11 |
|                                                                              | 39885    | 8  | 1  |
| Masonry at ends of Locks, 1,800 cubic yards, at 17s. 6d.....                 | 1575     | 0  | 0  |
| Concrete for foundation and rear of walls, 7,500 cubic yards, at 22s. 6d.... | 8437     | 10 | 0  |
| Retaining walls for spoil, 2,000 superficial yards, at 8s. 6d.....           | 850      | 0  | 0  |
| Oak timber for Metre Sill, &c., 6,000 cubic feet, at 4s. 0d.....             | 1200     | 0  | 0  |
| Pine do for foundation, 75,000 do do, do 1s. 8d.....                         | 4687     | 10 | 0  |
| Oak plank B. M., 50,000 do do, do 160s. 0d.....                              | 400      | 0  | 0  |
| Pine do do, 200,000 do do, do 80s. 0d.....                                   | 800      | 0  | 0  |
| Wrought Iron, 75,000 do 0s. 7½d.....                                         | 2848     | 15 | 0  |
| Unwatering Work.....                                                         | 3000     | 0  | 0  |
| 6 sets of Lock-gates, machinery, &c., complete.....                          | 10800    | 0  | 0  |
| Dams in Bays, south side of Canal.....                                       | 5000     | 0  | 0  |
| Construction of Piers, both ends of Canal.....                               | 5000     | 0  | 0  |
| Superintendence and contingencies.....                                       | 20470    | 16 | 11 |
| Total.....                                                                   | £ 140000 | 0  | 0  |

(Signed,) JOHN PAGE,  
Engineer, Public Works.

TORONTO, 2nd April, 1857.

STATEMENT of MONIES paid to Messrs. MACDONALD and SCHRAM  
Contractors, for WORKS on the CHATS CANAL.

|                     |    |                             |            | £       | s. | d. |
|---------------------|----|-----------------------------|------------|---------|----|----|
| November, 1854....  | To | Amount per Certificate..... | No. 10206  | 2000    | 0  | 0  |
| February, 1855....  | To | do do do .....              | No. 10632  | 725     | 8  | 0  |
| do do .....         | To | do do do .....              | No. 10633  | 1694    | 14 | 0  |
| March, do .....     | To | do do do .....              | No. 10769  | 1122    | 15 | 0  |
| April, do .....     | To | do do do .....              | No. 10844  | 903     | 7  | 6  |
| May, do .....       | To | do do do .....              | No. 11029  | 496     | 16 | 0  |
| June, do .....      | To | do do do .....              | No. 11138  | 450     | 0  | 0  |
| July, do .....      | To | do do do .....              | No. 11292½ | 1155    | 18 | 9  |
| September, do ..... | To | do do do .....              | No. 11427  | 955     | 8  | 7  |
| November, do .....  | To | do do do .....              | No. 11589  | 1032    | 19 | 6  |
| do do .....         | To | do do do .....              | No. 12038  | 1003    | 10 | 0  |
| December, do .....  | To | do do do .....              | No. 12091  | 1009    | 13 | 9  |
| do do .....         | To | do do do .....              | No. 13221  | 1064    | 0  | 6  |
| do do .....         | To | do do do .....              | No. 13222  | 941     | 8  | 0  |
| February, 1856....  | To | do do do .....              | No. 13501  | 1076    | 15 | 11 |
| April, do .....     | To | do do do .....              | No. 13916  | 4000    | 0  | 0  |
| do do .....         | To | do do do .....              | No. 13966  | 1590    | 7  | 10 |
| May, do .....       | To | do do do .....              | No. 14016  | 1609    | 17 | 6  |
| June, do .....      | To | do do do .....              | No. 14215  | 1753    | 19 | 9  |
| do do .....         | To | do do do .....              | No. 14272  | 1718    | 7  | 2  |
| July, do .....      | To | do do do .....              | No. 14454  | 1755    | 0  | 0  |
| do do .....         | To | do do do .....              | No. 14472  | 4000    | 0  | 0  |
| September, do ..... | To | do do do .....              | No. 14663  | 1801    | 7  | 0  |
| do do .....         | To | do do do .....              | No. 14664  | 1989    | 3  | 7  |
| October, do .....   | To | do do do .....              | No. 14861  | 1313    | 7  | 5  |
| do do .....         | To | do do do .....              | No. 14862  | 1748    | 7  | 3  |
| November, do .....  | To | do do do .....              | No. 14954  | 2009    | 6  | 2  |
| do do .....         | To | do do do .....              | No. 14909  | 3500    | 0  | 0  |
| December, do .....  | To | do do do .....              | No. 15183  | 1457    | 11 | 0  |
| February, 1857....  | To | do do do .....              | No. 207    | 3500    | 0  | 0  |
| Total.....          |    |                             |            | £ 49379 | 10 | 2  |

STATEMENT shewing the Balance of the Appropriations for the IMPROVE-  
MENT of the NAVIGATION of the RIVER OTTAWA remaining  
unexpended.

|                                                                                                                        |   | £     | s. | d. |
|------------------------------------------------------------------------------------------------------------------------|---|-------|----|----|
| <i>Appropriation, 16 Vic. caps. 156 &amp; 157.</i>                                                                     |   |       |    |    |
| Improvement of Navigation of Ottawa River, commencing at the obstruction<br>between Lake Chaudière and Lake Chats..... |   | 50000 | 0  | 0  |
| <i>Appropriation, 19 Vic. cap. —.</i>                                                                                  |   |       |    |    |
| Towards Improvement, Ottawa Navigation, 1856 .....                                                                     |   | 25000 | 0  | 0  |
| Amount expended.....                                                                                                   | £ | 75000 | 0  | 0  |
|                                                                                                                        |   | 63750 | 14 | 2  |
| Balance.....                                                                                                           | £ | 11249 | 5  | 10 |

FINAL.

**Ottawa Navigation.**

ESTIMATE of Work Done at and for the CHATS CANAL by ANGUS P. MACDONALD and PETER SCHRAM, Contractors. Work commenced, August, 1854. Suspended, 15th November, 1856.

| DESCRIPTION OF WORK.                                          | Quantities. | Prices. |       |    | Amounts. |    |    |
|---------------------------------------------------------------|-------------|---------|-------|----|----------|----|----|
|                                                               |             | £       | s.    | d. | £        | s. | d. |
| Rock excavation, Section 18, part of No. 2, cubic yards ..... | 8360052     | 0       | 11    | 3  | 47025    | 5  | 10 |
| do do upper end Section No. 2, do. do. ....                   | 2014570     | 0       | 8     | 6  | 8561     | 18 | 5  |
| Earth do on both sections, do. do. ....                       | 2274304     | 0       | 1     | 6  | 1705     | 14 | 6½ |
| Chopping and clearing on both sides of Canal .....            | 56          | 6       | 0     | 0  | 336      | 0  | 0  |
| Retaining walls for spoil banks, superficial yards. ....      | 488         | 0       | 3     | 6  | 85       | 8  | 0  |
| Unwatering work, namely, dams, pumping, &c. ....              |             |         |       |    | 1935     | 13 | 8  |
| Cut stones in quarries, cubic yards. ....                     | 1037½       | 1       | 15    | 0  | 1815     | 0  | 10 |
| Coursed work, do, do. ....                                    | 20167       | 1       | 7     | 0  | 2722     | 10 | 10 |
| Rough ashlar, do, do. ....                                    | 168112      | 0       | 13    | 0  | 1092     | 14 | 6  |
| Backing stone, do, do. ....                                   | 37421       | 0       | 8     | 0  | 1496     | 16 | 9  |
| Expenses connected with opening quarries .....                |             |         |       |    | 1000     | 0  | 0  |
| do making roads in vicinity of work. ....                     |             |         |       |    | 250      | 0  | 0  |
| Constructing wharf at quarry and foot of canal .....          |             |         |       |    | 500      | 0  | 0  |
| Total .....                                                   |             | £       | 68527 | 3  | 4½       |    |    |
| Amount of previous payments .....                             |             | £49379  | 10    | 2  |          |    |    |
| do paid Ordnance for powder .....                             |             | 132     | 0     | 10 |          |    |    |
|                                                               |             |         | 49511 | 11 | 0        |    |    |
| Amount due .....                                              |             | £       | 19015 | 12 | 4½       |    |    |

Total, Sixty-eight thousand five hundred and twenty-seven pounds three shillings and four pence half-penny.

Signed in duplicate.

(Signed,)

JOHN PAGE,  
*Engineer, Public Works.*

TORONTO, 1st April, 1857.

PRINTED BY ROLLO CAMPBELL, CORNER OF YONGE AND WELLINGTON STREETS, TORONTO.

# R E P O R T

OF THE

## COMMISSIONERS OF PUBLIC WORKS

FOR THE

YEAR ENDING 31<sup>ST</sup> DECEMBER, 1856:

FURNISHED

*IN ACCORDANCE WITH THE PROVISIONS OF THE ACT,  
9 VICTORIA, CAP. 37.*

.....  
*Printed by order of the Legislative Assembly.*  
.....



TORONTO:

PRINTED BY JOHN LOVELL, CORNER OF YONGE AND MELINDA STS.  
1857.

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**GENERAL REPORT**  
OF THE  
**COMMISSIONERS OF PUBLIC WORKS,**  
FOR THE YEAR 1856.

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*To His Excellency Sir Edmund Walker Head,*

GOVERNOR GENERAL OF BRITISH NORTH AMERICA, &c. &c.

MAY IT PLEASE YOUR EXCELLENCY,

The undersigned, Commissioners of Public Works, have the honor to submit to Your Excellency a general Report upon the several works, &c., under their charge and management, in conformity with the provisions of the Act 9 Victoria, chapter 37, section 14, which requires such a Report to be laid before Your Excellency and the two Houses of the Legislature, shewing the state of each work, and the amount of receipts and expenditure thereon.

The following statements are appended to the Report :

No. 1.—Statement of those works which yield revenue, shewing the cost of their construction to the 1st of January, 1857, the expenditure on them since the date of the last Report, and the cost of repairs, maintenance and management.

No. 2.—Statement of works from which no revenues are derived, the outlay thereon up to the 1st of January, 1856, and the expenditure from that date to the 1st of January, 1857.

No. 3.—Statement of the expenditure since the date of the last Report, on the erection, repairs and maintenance of light-houses, buoys, &c.

No. 4.—Statement of the amounts paid, or the awards made for damages since the last Report; shewing also the amounts paid to the Arbitrators or Commissioners, for services and expenses.

No. 5.—General statement, shewing the total amount expended by the Department of Public Works, as detailed in the foregoing.

## WELLAND CANAL.

*Opening and closing of the navigation.*—The great accumulation of ice in Lake Erie, and the backwardness of the spring, prevented the opening of the navigation of this canal in 1856, until the 26th of April, being ten days later than the previous year, and it was closed by frost on the 13th of December last; the navigation season for 1856 being thus 11 days shorter than that of the preceding year.

The number of vessels, however, which passed through the canal exceeds by sixty-nine that passed in 1855.

*Interruptions to the Trade.*—The only interruption to the trade during the past season, of any importance, was caused by the gates of lock No. 7 being carried away on the 11th of November, by which the navigation was suspended for four days. Otherwise but little detention or interruption was occasioned, and that only by the time occupied (not over a few hours) in the changing and hanging of a gate in lieu of one damaged by vessels.

A large expenditure on the construction of lock-gates and bridges has been unavoidable, in order to substitute new ones for those no longer to be trusted, owing to the length of time they had been in use, or from injuries received. On the opening of the navigation the canal will be in a very efficient state with respect to lock-gates, as every lock will have been provided with sound ones, besides there being a sufficient number of extra ones in readiness for any emergency.

In the progress of the work of re-building the bridges over the Dunnville Dam and Sulphur Creek, more work than had been anticipated was necessary, owing to the state of decay in which the piers were found to be. They have been completed in a substantial manner, and will last for many years without further repairs.

The increased number of steam vessels passing through the canal, and the effect upon the banks, caused by the surge therefrom, has made a large outlay necessary to protect the face of the banks.

On the 14th of December last, the severest storm that has occurred on Lake Erie since 1844, caused very serious injury to the piers at Ports Colborne and Maitland, the repairs of which will cost about £3000.

The following Table gives the comparative revenue from the Canal, for the last three years respectively :

|                                  | 1854.  |    |    | 1855.  |    |    | 1856.  |    |    |
|----------------------------------|--------|----|----|--------|----|----|--------|----|----|
|                                  | £      | s. | d. | £      | s. | d. | £      | s. | d. |
| Tolls collected at Port Colborne | 31,885 | 0  | 4  | 35,645 | 17 | 8  | 43,956 | 19 | 0  |
| “ “ Port Robinson                | 1,216  | 18 | 8  | 1,386  | 18 | 2  | 1,116  | 17 | 6  |
| “ “ Port Maitland                | 395    | 16 | 8  | 410    | 4  | 2  | 264    | 19 | 3  |
| “ “ Dunnville . . .              | 2,204  | 7  | 3  | 1,514  | 3  | 2  | 1,535  | 1  | 4  |
| “ “ St. Catharines               | 550    | 5  | 5  | 503    | 13 | 2  | 604    | 19 | 4  |
| “ “ P't Dalhousie                | 14,439 | 5  | 4  | 14,968 | 9  | 8  | 17,913 | 4  | 3  |
|                                  | £      |    |    |        |    |    |        |    |    |
|                                  | 50,691 | 13 | 8  | 54,429 | 6  | 0  | 65,392 | 0  | 8  |
| Annual water rents . . . . .     | 2,097  | 15 | 4  | 2,212  | 2  | 10 | 2,270  | 5  | 4  |
| Amount collected on land sales   | 1,098  | 6  | 5  | 72     | 16 | 2  | 159    | 0  | 0  |
| Fines and sums pd. for damages   | 162    | 7  | 6  | 391    | 7  | 6  | 440    | 1  | 3  |
|                                  | £      |    |    |        |    |    |        |    |    |
|                                  | 54,050 | 2  | 11 | 57,105 | 12 | 6  | 68,261 | 7  | 3  |

Shewing the gross receipts for 1856 to be 26 per cent. over those for 1854, and 20 per cent. over those for 1855.

The total amount of annual rents for water-power and other property leased on this Canal, is £2270 5s. 4d.

The rents for the year ending 31st December, 1856, are now being collected. The arrears of rents up to 1856 amount to £2,145 4s. 5d. These have been placed for collection in the hands of the Solicitor, who has received of them, since the first of January last, £307 6s.

|                                                                                                                                        |        |    |            |
|----------------------------------------------------------------------------------------------------------------------------------------|--------|----|------------|
| The amount of the proceeds of sales of lands not required for Canal purposes, disposed of up to 1st January, 1857, with interest, is.. | £6,978 | 10 | 8          |
| The amount paid on this to 1st January, 1857, is.....                                                                                  | 1,731  | 2  | 3          |
|                                                                                                                                        |        |    | £5,247 8 5 |

Of this balance there is due by the Welland Canal

|                                                    |        |    |         |
|----------------------------------------------------|--------|----|---------|
| Loan Company.....                                  | £2,064 | 3  | 3       |
| And by the Municipality of the County of Welland.. | 3,017  | 17 | 1       |
|                                                    |        |    | 5,083 4 |

Leaving a balance of £164 8s. 1d. due by individuals, which will be paid in instalments, as they become due.

|                                                                                                                           |      |   |          |
|---------------------------------------------------------------------------------------------------------------------------|------|---|----------|
| The amount of fines and compensation for damages to the works, imposed on vessels up to the 1st of January, 1857, is..... | £585 | 6 | 7        |
| Amount of do. paid up .....                                                                                               | 440  | 1 | 3        |
|                                                                                                                           |      |   | £145 5 4 |

Balance unpaid .....

A portion of which has been placed in the hands of the Solicitor for collection. For the remainder, being in small sums, it was deemed inexpedient to detain the vessels; but the amounts will be paid shortly after the opening of the navigation.

The partial enlargement of the Harbour at Port Colborne, for which provision was made by the Legislature, has been satisfactorily effected, with the exception of the removal of a few bars, which will be done on the disappearance of the ice. But much further accommodation for vessels there is indispensable, whether as regards the trade of the Canal itself, or that which must be provided for upon the completion of the Railway terminating there. The plan of this harbour was so designed as to be susceptible of extension from time to time, as the increase of trade required; and the improvements contemplated by it embrace not only such extension of the inner harbour or basin, but also an outer breakwater, to be constructed upon a ledge or shoal of rocks which extends from the shore south of the east pier to within about 700 feet of the outer end of the west pier, on which the light-house stands. This breakwater would embrace a considerable area, with ample water for any vessel navigating Lake Erie, and would be a most valuable addition to that terminus of this important work. The inner basin, however enlarged, will not be more than sufficient for the accommodation of the vessels about to pass through the Canal or discharge at the piers; but in the case of foul weather, a number of vessels frequently run for shelter into Port Colborne, and, until this outer harbour is created by the breakwater alluded to, such vessels necessarily have to run into the inner basin, to the great risk of themselves as well of those which have got in before them.

This outer harbour once made, the inner basin would be secure from being over-crowded; the passage of vessels from it into the Canal would be facilitated, and safe shelter would be afforded to vessels seeking it in stress of weather.

The work of deepening and widening the Canal, so as to do away with the present summit and adopt Lake Erie as the head water, has been steadily pro-

ceeded with during the past year. The increasing trade through it, and the annual failure of the supply of water from the Grand River, imperatively demand that no interruption or delay should be allowed to take place in effecting this object as soon as practicable.

The necessity for largely increasing the capabilities of the canal has been so repeatedly urged in the previous Reports from this Department, that the undersigned now feel called upon merely to state that this necessity is every day becoming more and more urgent.

The very able Report of Mr. T. C. Clarke, Civil Engineer, upon the trade of the West, contains so much information on the subject, and demonstrates so clearly the extraordinary and rapid increase which must take place, and the necessity of anticipating it by enlarging the channels through which it can with certainty be induced, by the adoption of a comprehensive policy, that the undersigned are induced to give the Report in full. (See appendix, letter A.)

In determining the manner in which the increased capability of the Welland Canal can be obtained most effectually, it should be considered that the portion of the line requiring the greatest amendment is that from Lake Ontario to the head of the Mountain Lock at or near Thorold; and for this three modes have been suggested: one, to leave the waters of Lake Ontario by the Niagara River, a little above the Town of Niagara, crossing the table-land and then ascending gradually by the valley of the Welland Creek, and entering the canal at or near the head of the locks: another, to follow the line of the present work nearly throughout, from Port Dalhousie, by St. Catharines, to Thorold: the third, to adopt the present line from Port Dalhousie to St. Catharines, and then to proceed in the valley of the Twelve Mile Creek and by Decew's Falls, and to enter the canal somewhere between Thorold and Allanburg.

This last is open to very strong objections, among which are, that the creek is subject to very heavy freshets, which carry down much deposit, and being confined chiefly between high clay banks, there would be no means of discharging the floods otherwise than through the canal, and the sudden ascent at Decew's Falls is such as would render a combination of locks necessary in very heavy rock cutting. Secondly, the course of the present works could not be followed as the line of the enlarged canal, inasmuch as there would not be space sufficient for the increased length of the locks; it would unavoidably cause such interference with the present navigation as to make an interruption of the trade necessary, would be attended by greatly increased outlay, and, when completed, the facilities afforded by it would be much inferior to those offered by the first mentioned line, viz., that from Niagara to Thorold.

The undersigned being aware that a careful survey, with estimates, had been made and prepared for this line by Walter Shanly, Esq., Civil Engineer, they had all the maps, reports, estimates, &c., connected therewith transferred to this Department, whereby the necessity and delay of another survey were obviated, and the requisite information was obtained through a most reliable channel.

For Mr. Shanly's Report, see appendix, letter B.

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### ST. LAWRENCE CANALS.

The several canals coming under this head, constructed to overcome the Rapids of the Galops, Point Iroquois, Rapids Plats, and Farran's Point, were opened on the 28th of April, and closed on the 6th December, 1856, giving a navigation term of 223 days, during which no accident occurred that in any manner interrupted the passage of vessels.

Since the date of the last Report the following works have been constructed, completed or repaired, namely :

The works hitherto known as those of the Junction Canal, connecting the Galops and Point Iroquois Canals, have been completed ; the channel has been excavated to a sufficient depth ; a regulating weir constructed ; the outer face of the new banks thoroughly guarded from the river by a facing of stone, and the inner face also protected from the wash of the canal water. There is now, therefore, a continuous canal from the head of the Galops to the foot of the Point Iroquois Rapids, which several of the passenger steamers made use of in the latter part of the season, instead of contending with the Rapids. The race-way and supply gates referred to in the last Report as being required, are now in course of construction ; but in order to perfect this canal as regards the proper regulation of the supply of water for it and for the mills at its lower entrance, a race-way with gates is also necessary at the Galops lift lock, for want of which, to keep up the lower levels, the water has to be passed through the lock-gates, and the working of the mill suspended occasionally.

A new bridge has been erected across the Point Iroquois lock, and the wharf below it has been thoroughly repaired.

The Pier at the head of the Rapids Plat Canal has been completed, and the effect of it in destroying the cross current which impeded the entrance to the Lock is most satisfactory, and much facilitates the ingress and egress of vessels.

The Bridges and Lock gates have been put into a state of good repair ; and the spare gates are sunk. (for preservation,) in the vicinity of those locks at which they are most likely to be required. The principal works for the present year, that must be provided for, are those for the further protection of the inner face of the Banks, and some repairs of wharves, involving an outlay of about £2100.

#### CORNWALL CANAL.

This Canal was opened and closed on the same days as the preceding. During the season no interruption to the navigation took place, except for about six hours on the 12th of November last, caused by breaking of a valve in one of the lock gates.

The works of this canal generally being in good working order on the opening of 1856, little expenditure has been incurred on them since that time, and that was confined to the ordinary light repairs, such as cleaning outside ditches, re-building slope walls, and occasional repairs to the lock gate machinery.

New lock gates had been substituted where they appeared to be most required. There are now on hand one pair of upper gates and three pairs of lower gates, intended to replace gates that are to be condemned in spring ; so that the Canal, on the opening of the navigation, will be furnished with new Gates throughout ; and as there will be only one pair of spare gates, three pair more have been ordered.

The extension of the landward pier at the lower outlet, alluded to in the last Report, has been built, and will be a great accommodation to the Trade, by affording facilities for vessels mooring there, when detained by stress of weather or other causes.

The principal works required this year are,

The re-building of portion of the chamber wall of the guard lock, which was built of wood and is now in a decayed state.

The re-building of the superstructure of the piers at the upper and lower entrances.

The embankment in rear of the Guard Lock to be further protected with stone, from the strong current of the River which sets against it.

The slope walling on the north side of the Guard Lock, about 1600 lineal yards, to be completed, to prevent encroachment on private property.

A house to be erected for the Superintendent, and another for the bridge tender. These, with the pointing of some of the Lock walls, and other trifling repairs, constitute all that is necessary for the proper maintenance of the works for the present year.

About the middle of January last an extraordinary rise of water in the River at the lower entrance of the canal took place, reaching to a height of twenty-four feet and a half above the ordinary summer level, being thus six inches over the surface water in the level from which the mills derive their supply. It carried large masses of ice into the canal, which completely covered locks numbers 15 and 16, with their gates &c. &c. It is believed that the gates of Lock No. 16 are uninjured, with the exception of some damages to the hand-rails &c.; but the masses of ice still remaining on Lock No. 15, prevent any satisfactory examination from being made as to the state of its gates, &c.

#### BEAUHARNOIS CANAL.

The navigation of this canal was opened on the 1st of May, and closed on the 1st of December, 1856, thus giving a working season of seven months. The trade was interrupted on the 10th and 11th of June, while a pair of gates destroyed by a steamer was being replaced (by a new one.)

Early in April last the water was drawn off, for the purpose of removing some slides in the banks, bars, &c., as well as with the view of more effectually securing the mitre sills of the locks, one of which had been displaced the preceding year. But owing to the quantity of ice which remained on the bottom, these works were but partially effected when it became necessary to fill the canal. The work so performed, however, much facilitated the passing of vessels during the year, and admitted of a dredge being put to work to remove the bars more completely, without interfering with the trade.

The operations of this dredge were continued for the remainder of the season; but it will require further dredging during the greater part of the coming summer to bottom the canal perfectly.

During the past season five pairs of new gates and one pair of repaired gates have been substituted for those worn out or destroyed by vessels. It will be necessary as soon as the ice will admit of it, prior to the opening of the navigation, to replace three pairs of gates in addition, for which purpose there are gates on hand; and the gates now being repaired or constructed will give a stock of three full sets to meet any emergency.

The dyke at the head of this canal, alluded to in the previous Report, has been completed, and fully answers all the purposes contemplated in its construction. It not only prevents the river water from flooding the low land to the south, but it has been the means of rendering useful several thousand acres of the Seigniorie hitherto considered worthless and unprofitable, due credit for which should be given in the arbitration for claims set up by the Seigniors for compensation.

The principal works of maintenance, &c., to be effected this year are, the repairs of two of the bridges now in progress, the pointing, painting and general repairs of the lock-houses, and the erection of a storehouse for canal property, such as tools, lock machinery, &c.

## LACHINE CANAL.

The navigation of this canal for the year 1856 commenced on the 1st of May, and closed on the 3rd of December, during which period the business was uninterrupted. The increased trade tells severely in the cutting up of the wharves, which now require much repair. This must be effected before the commencement of the spring trade. The stringers in many places are completely decayed, and the planks worn out.

Since the date of the last Report, about 160 feet of wharf has been constructed on the principal basin, immediately below Wellington Bridge, on the south side. It is used chiefly for the trans-shipment of railway and pig iron and other heavy articles. Two hundred feet of new wharf was also built on the south side of the canal, below St. Gabriel's Lock, for the convenience of the important manufacturing establishments in that vicinity. Still, very much further shed and wharfage accommodation is indispensable to meet the wants of the trade.

It is proposed to resume immediately the portion of the front of the basin that had been temporarily appropriated to the uses of the Grand Trunk Railway Company, for the landing of their rails, &c., and to wharf the front of it for general purposes. Also, to re-model the basin hitherto occupied by Mr. Ostell; to construct a commodious wharf around it, and a mole in the centre of it, 150 feet wide, with a range of sheds on each side, thus giving four lines of wharf about 600 feet in length each and 1,200 feet lineal of shed, which, from the position of the basin, and the number of avenues to it, will prove an important addition to the wharfage accommodation.

The possession of the Island above St. Gabriel's Lock it is proposed to resume, and to improve it so as to render it serviceable as a convenient place for the trans-shipment of manufactured lumber, an article which, in the exports of the Province, now occupies a very important place.

The principal work of repairs to be attended to this year, independent of the wharves already specified, are :

The repairs to the pier at the lower entrance of the canal, injured by the ice in December last.

The removing of the upper portion of the guide piers in the basin at Lachine, and the repairs of part of the south pier wall.

The walls of locks Nos. 3 and 4 leak much, and the mortar, in some places, is so completely washed out from the beds and joints, that several of the face stones have been found out of their positions. It will be necessary, therefore, to take down portions of the recess walls at both ends of the locks, and to re-lay them in cement, as low as the bottom of the upper level.

To permit the effecting of these repairs, and to have the channel cleaned out, it will be necessary to empty the canal about the end of this month. Upon the state of the weather, however, must depend the selection of the most fitting time for discharging the water, as well as the length of the period during which the canal must be kept emptied, which, it is believed, will not exceed three weeks at furthest.

The extension of the river piers at Lachine has progressed slowly during the past summer; but a large proportion of it being carried to its height, and the remainder of the cribs sunk, there is no reason to apprehend that the entire will not be completed this ensuing season.

Such of the old lock gates as have not been replaced will be taken out and good ones substituted in lieu of them, before the opening of the navigation. After supplying these gates, as there will then remain on hand but three pairs of lower spare gates, steps have been taken to secure two pairs of additional spare gates without delay.

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The necessity for the several additional works recommended in the last Report from this Department, but for which no appropriations were made, is every day becoming more urgent. The principal of them are :

“The widening and deepening of the canal through the rock cutting ;”

“The construction of regulating weirs at locks 3 and 4. A regulating weir at the upper end of the race way leading to the mills on the north side of the canal at St. Gabriel Locks ;”

“An extensive Boom with sufficient gates and mooring piers at the upper entrance to the canal.”

“The erection of a good store-house for the storage of the various articles for the Provincial light-houses for canal purposes, &c ;” and

“The erection of Lock and Bridge Tenders houses.”

For all of which estimates shall be duly submitted.

The Department is now in treaty with parties for the immediate erection of the buildings &c., necessary for the effective lighting of the canal, its wharves, locks, and bridges, with gas, the importance of which the undersigned have at all times duly appreciated : and they trust that they will be enabled shortly to carry out this improvement on more advantageous terms than have hitherto been offered.

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#### RIVER RICHELIEU.

The navigation through the St. Ours Lock was opened on the 18th of April, and closed on the 2nd of December, 1856. It was interrupted but once during the season, and that only for a few hours, while one of the cables which suspend the lock gates was being replaced.

The abutments of the dam have been protected ; the centre and most defective portions of the lower apron to it secured ; and such other parts of the works as most required it have been repaired.

A close examination of the works connected with the dam was made last season, during low water, and the main body of it was found to be in much better condition than what the appearance of the upper portion (washed away,) indicated.

The principal matters requiring attention this season are :

To secure the Piers above and below the lock by a crib, to be sunk at the extreme end, and to receive the shock of vessels or of the ice which shoves heavily there ;

To provide a new set of lock gates, as the present ones shew symptoms of coming decay ;

To complete the repairs to the apron, as commenced, and to protect the dam side with stone.

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 CHAMBLY CANAL.

The Chambly Canal was opened on the 28th day of April, and closed on 1st of December, 1856, during which period the navigation was uninterrupted.

The repairs of the upper recess walls of locks Nos. 3 and 6, the necessity for which was stated in the last Report to be most pressing, were effected early in the year, and by their means the Canal was kept in operation during the season; but the lower recesses of the same Lock, and the walls generally of lock No. 5 are in such a state as to require to be taken down and re-built, so soon as the weather admits of it, otherwise it will not be possible with safety to open the navigation in spring.

In the several annual reports from this Department, since 1852, up to the present, the works of this Canal have been represented as being "in a very ruinous condition," that "locks 2, 3, 4, and 5, were in so bad a state as to render it necessary to rebuild them," and that "to put the Canal into an effective state even in its present insufficient scale would require a very large expenditure;" in short that the whole of the works, with the exception of the Guard Lock and the combined locks, (built under this Department,) were so defective and unsafe as to render much outlay short of that of reconstruction unadvisable, and that such reconstruction could not be recommended until the important question as to the line and construction of a Canal to unite the St. Lawrence with Lake Champlain had been decided by the Legislature. This subject has been frequently brought under the notice of the Legislature by the Reports of this Department and otherwise, but as it is still in abeyance, further outlay on the repairs of the Chambly Canal cannot be postponed without involving the stoppage of the trade through it.

The great floods consequent upon the late thaw, caused considerable damage to the embankments.

The chief works of repairs now indispensable are :

The taking down and rebuilding the lower recess walls of lock No. 3 and No. 6, and the rebuilding of lock No. 5, as above stated.

The repairs of the breaches in the embankments, above adverted to, and some other repairs of more consequence, involving in all a cost of between £2000 and £3000.

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 THE OTTAWA WORKS.

(*Navigation.*)

Hitherto the only completed works connected with the artificial portion of the navigation of this river, conducted by and under the control of this Department, were the Lock and Dam at St. Anne's. To them, therefore, and to the works then in progress to connect Lake Chaudière with Lake Chats, the last report was confined; but, the Ordnance Canals having since been transferred to the Province, it is now necessary to include them under this head.

In ascending the Ottawa, the first work met with for the improvement of the navigation are those at St. Anne's, consisting of the lock and dam already adverted to.

## ST. ANNE'S LOCK AND DAM.

This part of the navigation was opened on the twenty-fifth of April, and continued without any interruption until the first of December, 1856.

The works connected with this Lock are in a good state generally; but the upper portions of the guide piers require to be renewed, and three additional ones built.

Spare gates have been provided, and are delivered in the vicinity of the lock.

A house for the lockman, and a Collector's Office should be built.

The pier, the construction of which was rendered necessary and the cost agreed to be borne by the Grand Trunk Railway Company, in consequence of the injurious direction their works gave to the current at the entrance to the Lock, has proved very advantageous to vessels, whether entering or leaving.

The deepening and enlarging of the channel proceeds satisfactorily, although the operations are necessarily tedious, in consequence of the nature of the rock, which it is found very difficult to bore, as well as from the work being wholly under water, and subject during the season of navigation to repeated interruptions by the passing of vessels.

To avoid these interruptions as much as possible, the boring and blasting were continued throughout the winter, and the stone so detached will be removed on the ice leaving the river. By these means a channel of from 50 to 60 feet in width, and of a depth not less than  $5\frac{1}{2}$  feet below ordinary low water mark has been obtained, both above and below the Lock.

## CARIILLON AND GRENVILLE CANALS.

In proceeding up the river, the next works that present themselves are the small Canals generally known as the Ordnance Canals, which were constructed under military authority, to overcome the rapids on that portion of the river. Prior to these Canals being surrendered to the Province, many memorials had been addressed to this Department by parties engaged in the Ottawa trade, representing the serious obstructions caused to it by the want of uniformity in the scale upon which the locks had been built, and the ruinous state of the works. But until they were placed under the control of this Department, no action could be taken by it in the matter.

Immediately upon the general survey of the Ottawa, to ascertain how far it was practicable, at a commensurate expense, to open by it an uninterrupted water communication from Montreal to Lake Huron, being ordered, Mr. Walter Shanly, Civil Engineer, to whom was entrusted the general direction of the survey, received the necessary instructions from this office, and by them his attention was directed to the state of the Ordnance Canals.

Pending his general examination of the entire route, he was requested to report specially on the condition of these Canals, and to state what work was necessary upon them prior to the opening of the navigation, as well as during the after season, to prevent interruption to the trade. (See Appendix, letter C.)

From Mr. Shanly's report upon these Canals, it appears they are in three sections,—namely:

The *Carillon*, 2 miles and  $\frac{2}{100}$  of a mile in length, with—3 locks.

The *Chute-à-Blondeau*,  $\frac{6}{100}$  of a mile in length, with—1 lock.

The *Grenville*, 5 miles and  $\frac{3}{4}$  in length, with—7 locks.

The sectional area of the Canals is irregular, that of the Grenville being the least; the width of bottom at 5 feet below water surface being generally but fifteen feet.

The Locks are of different dimensions, but the servicable capacity of the entire may be considered as restricted by lock No. 11, to 19 feet  $3\frac{1}{2}$  inches in width, and in length by lock No. 9, to 106 feet 8 inches. These dimensions would limit those of the vessels to about 18 feet 6 inches in beam, and 95 feet in length over all. The maximum draft of water is assumed at 5 feet; but at seasons of low water boats cannot carry through that depth.

The Locks are all more or less out of repair; but numbers 1 and 2 on the Carillon section, are in a very dilapidated state,—the walls of lock No. 1 overhanging, and those of lock No. 2 so leaky as to admit of the water running through them. None of the lock walls are water-tight, and this has been the case so long that most of the cement or mortar in the masonry has been washed out, and a current of water runs at the rear of all the chambers.

Some obstructions of another nature exist, viz:

At the head of the Grenville Canal, from a deposit of gravel and small boulders.

At the foot of the same a ledge of rock, which had never been properly removed, crosses the entrance.

At the foot of the Chute-à-Blondeau an obstruction is caused by the stones of the protection wall thrown down by the ice lying in the channel; and at the head of the Carillon Canal there are the remains of an old clay dam. This latter canal ascends from the Ottawa, and its summit is supplied from the North River, by a feeder, at the head of which there are dams across that River. These dams consisting merely of loose stones thrown in, which are subject to be washed away, have to be renewed every spring, and in consequence of the insufficiency of them the navigation is much impeded every season.

Mr. Shanly estimates the outlay necessary to put these works into a condition likely to serve for the next five years at £6655.

Instructions have been given to have such small repairs effected prior to the opening of the navigation, as will remove some of the evils complained of; but it is, manifestly, not desirable to incur any large expenditure on these Canals in their present state, as the dimensions of the Locks should be made to correspond with those of the St. Anne's Lock, or with such as may be finally determined upon as most suitable to the navigation of the Ottawa throughout,—to determine which, the important survey upon which Mr. Shanly is now engaged was instituted.

In ascending the River, the next works of importance to improve its navigation are those required to overcome the falls at the Chaudière and the Rapids immediately above them, a survey and estimate for which had been made under the direction of this Department about two years since, based upon the principle of the locks being of the same dimensions as that at St. Anne's; but under present circumstances, and until the result of Mr. Shanly's exploration of the entire line to Lake Huron are known, and it is ascertained thereby to what extent natural facilities present themselves for the opening of such a communication, and the most suitable dimensions for it, any further observations on the works here required would be of no practical use.

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### CHATS CANAL.

The extensive tract of country on both sides of the Ottawa above the City of Ottawa rapidly becoming settled and improved, the trade upon the Chaudière and Chats Lakes has correspondingly increased, and to overcome the obstructions to navigation in the River between these two lakes, the construction of the Chats Ca-

nal was undertaken, on the same scale as that at St. Anne's, which was then intended to have been adopted for the Carillon, Grenville, and Chaudière Canals also.

All the serious difficulties stated in the last Report to have been found in the prosecution of this work, continued to present themselves even in a more formidable manner and to a greater extent than was apprehended. The prices at which the work was undertaken proved to be wholly inadequate; the amounts of the monthly returns, based on these prices, and the quantity of work done were, in many instances, not a fourth of the actual expenditure. To enable an idea to be formed of the difficulties in removing the rock, of which much the greater portion of the excavation consisted, it is only necessary to state that in a great part of it from fifteen to twenty well-tempered cast steel drills were "used up" and had to be re-sharpened, without the sinking of a hole of more than one inch in depth being effected.

During the season the lock pits have been examined chiefly to the required depth; a large portion of the prism of the Canal has been formed, and a considerable quantity of the stone for the locks quarried, cut and prepared.

After having struggled most pertinaciously against the difficulties of the work, having expended a large amount of private means and exhausted their credit, the contractors found themselves under the necessity of representing that they were unable to proceed further unless an advance was made to them to enable them to pay the men to whom they were then in arrears, and unless their prices were raised.

The subject was brought fully under the notice of the Government, and after much consideration it was determined on, as the best step to be taken to amend the contract, to have the various classes of work measured and estimated at fair remunerating rates by the Engineer of the Department, and to pay off the Contractors accordingly. By adopting this course, the proceeding with the masonry is suspended, and no alteration made necessary or extra cost involved, in case locks of greater dimensions are ultimately adopted, should the results of the general survey render it expedient to do so; all the remaining portions of the works are suited to either scale.

A settlement upon this basis will be made with the contractor, so soon as the Engineer is enabled to furnish the required estimates.

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## OTTAWA WORKS.

*Connected with the passing of lumber.*

The various slides, dams, booms, raft channels, &c., constructed along the course of this River and its tributaries, for facilitating the lumber trade, have been maintained in an efficient state of repair throughout the season, at comparatively very small cost, when their extent, the difficulties of their position, and the floods, &c., to which they are exposed are taken into account:

The outlay has been chiefly confined to ordinary repairs, such as the repairs and renewal of such portions of the works as are subject to injury from the action of the passing timber or ice. Considerable improvements have also been made or are in progress, tending importantly to the safety of the works, and the facility of sending down the timber.

An additional boom and some minor alterations have been made to the Mountain slides, on the Ottawa, and substantial crib-work is being substituted in lieu of the trestle work under the slide at the High Falls on the Madawaska River. The dams and channels of that River are also being improved, and these works are in such a state of forwardness as to leave no doubt of their being fully available on the opening of the spring business,

The painting and repairs of the Union Suspension Bridge over the Ottawa, at the Chaudière Falls, referred to in the last Report, have been duly attended to.

Mr. Merrill, under whose very efficient management and superintendence these works have been directly constructed and maintained, reports that the various works on the Ottawa River and its tributaries were never in better condition than they will be on the opening of spring; and that the cost of maintaining them so, for the whole of this year will probably not exceed £400.

He urges, in the strongest manner, the necessity for additional improvements, among the principal of which are: The construction of a slide on the north shore of the Little Chaudière; a strong retaining boom near the mouth of the Black River; a boom and piers at the Remous rapids; three cribs in the Chats rapids, for rafts to be made fast to, as anchors do not hold there; the several improvements of the Petewawa River, (referred to in the last Report); and the wing dams and other works so much required to enable late timber to be got down the Lower Ottawa, at the Long Sault and Carillon Rapids, in the Ecores and Desprairies Rapids, and in the Little River, back of the Island of Montreal. For these works, nearly all the parties most extensively engaged in the lumber trade have repeatedly memorialized. They expressed their willingness for the imposition of reasonable tolls; and there is no doubt that the revenue from the works will shortly repay the outlay, as all the other works of this nature on the Ottawa and its tributaries have done. The cost of these will form an item in the general estimates to be shortly laid before the Legislature for their decision.

Besides the foregoing, the building of a wing dam above the Suspension Bridge, in order to maintain a uniform head of water at the Hydraulic properties there, is the only work of importance represented to be necessary that calls for special notice.

#### GATINEAU.

The boom and works at the mouth of this River are in an effective and safe state. A small pier being much required to moor log rafts to before the opening of the season, the Superintendent has received orders to frame and sink it.

#### THE RIDEAU CANAL.

But a few days having elapsed since intimation was given to the undersigned that the works of maintenance and repair of this Canal were placed under the management of this Department, they have had no opportunity of having a thorough examination made, so as to ascertain in what state of repair it is. Indeed, independent of there not having been time for it, the season of the year and quantity of snow would have rendered any detailed and satisfactory survey of it impracticable.

The following is an abstract of information taken from the Report of Col. Coffin, Ordnance Land Agent:

The Office establishment on the Rideau and Ottawa Canals is divided into two branches, viz.:

The Storekeepers' Department, which consists of—

|                                    |      |    |    |           |
|------------------------------------|------|----|----|-----------|
| " P. Monsell, Store-keeper.....    | £456 | 16 | 11 | sterling. |
| " J. McDonald, First Clerk.....    | 243  | 19 | 9  | "         |
| " J. Duff, Second do.....          | 203  | 19 | 9  | "         |
| " T. Forester, Bailiff.....        | 85   | 3  | 4  | "         |
| " J. Callaghan, Office Keeper..... | 45   | 12 | 6  | "         |

*Engineer Department.*

“ C. H. Harvey, Clerk of Works..... £311 4 4 sterling.  
 “ P. Cooke, Messenger..... 60 9 10 “

“The total of the annual Salaries of the Officers of these two Departments amounts to £1407 7s. sterling, equal to about £1710 13s. 8d. cy.”

Under the head of the Engineer Department, however, Col. Coffin has not included the pay and allowance of the Royal Engineer Officer, under whose immediate control and direction these works have hitherto been, and who has thus filled the office of Engineer to the works.

Besides the departments above detailed, there are,—“The Canal Establishments,” consisting of thirty lock masters, fifteen permanent labourers, and fifty-seven temporary labourers, or those employed during the season of navigation only.

The aggregate annual expense of the Rideau and Ottawa Canals is stated by Col. Coffin to be as follows :

|                           |       |    |   |
|---------------------------|-------|----|---|
| Office Establishment..... | £1710 | 13 | 8 |
| Canal do. ....            | 4814  | 0  | 6 |
| Repairs.....              | 3890  | 0  | 0 |
| Expenses, fuel, &c.....   | 150   | 0  | 0 |

£10564 14 2 cy.

The average revenues of the Canals, for the last three years, have been as follows :

|                   |       |   |   |
|-------------------|-------|---|---|
| Rideau Canal..... | £1636 | 9 | 3 |
| Ottawa Canal..... | 856   | 5 | 8 |
| Wharfage, &c..... | 66    | 6 | 2 |

£2559 1 1

The excess of the expenses, therefore, including the charge for the Engineer, omitted, may be taken at about £8500 over the revenue. It is apprehended that a considerable sum will be required to place the works in a proper state of efficiency ; on the other hand, it is believed the cost of management can be reduced, and so soon as the works are properly repaired the maintenance will be less costly.

The foregoing statements agree very closely with the results arrived at by the Assistant Commissioner of Public Works, upon an examination of the Rideau Canal, and reported by him about three years ago.

In Col. Coffin’s report are embraced some suggestions for the future management of these Canals, which the undersigned will have the honor of bringing under the attention of Your Excellency in Council.

*River Lights and Beacons.*

The various light-houses and other works usually embraced under this head have been maintained in an efficient state during the past season. The repairs made to them were of a more general character than those of the preceding years, and, in consequence, the aggregate outlay was greater. The nature of these repairs was of the ordinary description, with the exception of those to the light-house at Grosse Pointe, Lake St. Francis, and that on Pelée Island, Lake Erie ; the former of which required a general renewal of the superstructure, while considerable expenditure upon the latter was rendered necessary by the great storm which visited Lake Erie in October last, during which the waters encroached so far upon the Island as to undermine the foundation of the house, and endanger its existence.

The light-house at Coleman's Creek, between Kingston and Prescott, and that on the Scotch Bonnet, in Lake Ontario, both of which were in course of erection at the date of the last Report, have been since completed and brought into use.

It is proposed to remove the framed light-house now standing on "Fiddler's Elbow" to "Hemlock Point" on Wolf Island, about midway between Gananoque and Kingston, a recommendation to that effect having been made by the captains of the steamers generally.

An appropriation was made by the Legislature, last session, for the erection of a light-house at the entrance to the Bay of Kingston, to assist mariners in keeping clear of the dangerous reef called Snake Island Shoal. The commencement of this work was deferred until the best information could be obtained as to the most fitting site for the light; and, from the representations of several intelligent nautical men, as well as of the principal proprietors of the steamers and other craft plying to and from Kingston, it has been decided to place it on the south-easterly point of the shoal, at a place commonly known as the "*wreck bar*." A contract has been entered into for the erection of this light-house, and the work is to be proceeded with at once.

The light vessels in Lake St. Louis and Lake St. Francis were, by constant care and attention, kept in an available state during the past season; but they are now so much decayed as to require considerable repair to make them answer for the present year, on the expiration of which they will be utterly unserviceable.

In lieu of these, fixed lights on massive piers or floating lights in new vessels, could be substituted; but as the construction of the piers, &c., would cost about three times the amount which would be sufficient to provide the best class of iron vessels, the adoption of the latter is, of course, most advisable.

The works of the light house pier on the extremity of Pointe Pelée Reef, have been beset with difficulties from the commencement, as was anticipated; but the continuance of more than ordinarily high winds and rough water, upon Lake Eric, from the middle of August to the close of the year 1856, has retarded the prosecution of the works much more than was calculated on, notwithstanding every possible exertion being made by Mr. Scott, the engineer specially in charge of the work, and by the men under his direction. The importance of the establishment of this light is made more and more obvious by the wrecks which occur annually on this dangerous shoal.

Some deviation from the mode of construction originally proposed, has been found necessary, consisting chiefly in the adoption of a large *caisson* for the foundation of the light-house.

From the long experience Mr. Scott has had in such works, the undersigned entertain no doubt whatever of these being carried to a successful termination early this season.

After enumerating the many difficulties he had to contend with during the season, Mr. Scott reports as follows:

"Independent of all these draw-backs, the works have progressed rapidly for the time and the numbers employed; and the manner in which the work is put together insures its being one of the best pieces of heavy framing ever put together on this continent.

"Reviewing the whole work after an experience of four or five months with the character of the Lake during a very stormy season, I am the more fully confirmed in the opinion that the structure now in progress is the best adapted for the purposes it is designed for, and I have not the smallest doubt of a successful termination of my labours."

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 LIGHT-HOUSES, LAKE HURON.

The present state of these light-houses is as follows :

*Christian Island.*—The dwelling-house is completed, and the tower ready for the setting of the lantern, &c. The lantern and lighting apparatus have been received from France, and are now in this city. They shall be forwarded and placed in their positions immediately after the opening of navigation.

*Nottawasaga Island.*—The dwelling-house and light-house tower are erected and are equally advanced with those on Christian Island. The lantern and lighting apparatus have also been received here, and will be sent up and placed as soon as the weather will admit.

*Griffith's Island.*—The foundations are prepared, and the stone is all quarried and dressed. If proper exertion is made, the house and tower will be completed by the first of next August, by which time it is expected the lantern and lighting apparatus will be delivered, so that the light may be exhibited in the Autumn.

*Isle of Coves.*—The dwelling-house and light tower are completed and ready for the setting of the lantern, &c., when they arrive. The light to be exhibited here is to be a flashing one, of great brilliancy. During the past season a light was maintained here on a temporary structure, it being indispensable for the safety of steamers entering Georgian Bay by this channel.

*Chantrey Island, off Saugeen Harbour.*—The materials for the dwelling-house are prepared. The shaft of the tower is carried up to within ten feet of its full height, and the materials for its completion are delivered. The whole will be ready for the fixing of the lantern and apparatus on their arrival.

*Point Clark or Pine Point.*—The cut stone for the house and tower is prepared, and the other preparations are so advanced as to insure the completion of the structures this season.

The other works of this nature contracted for are as follows :

A house and tower at the Mississagua Strait ; one on Isle St. Joseph ; one on Clapperton Island, and one on Badgley Island. If to these be added one on the " Ducks " Islands, about midway in Lake Huron, and lying directly in the course of vessels making for Georgian Bay, there will be no reason to complain of want of lights on the Canadian shores of Lake Huron.

The prosecution of these works, so far, has been attended with a great deal of difficulty and loss. In some instances the cut stone and sand have to be brought distances varying from 40 to 150 miles ; the cement also involves a carriage of nearly 300 miles to each place. During the progress of the works two steamers, a schooner, and two scows were totally wrecked, and much loss of timber, &c., was incurred. For the completion of the remainder, satisfactorily and with due despatch, considerable outlay upon steamers, scows, &c., &c., will be necessary.

The work of the break-water pier at Chantrey Island, in connection with the light-house there, is completed ; it has withstood the heavy storms to which it was exposed last fall, without sustaining any damage, and the amount of shelter and other benefits already derived from it, although carried out to a very limited extent, establishes the fact beyond doubt that if an additional length of from 1000 to 1500 feet of break-water is constructed, a most valuable and capacious asylum would be created, for which vessels engaged in trade on that otherwise very much exposed coast could run in stress of weather. 500 feet of such extension might be first un-

dertaken, and as the benefits from it were manifested, the expediency of further extending it would be decided. About 300 feet of the pier at Inverhuron has been sunk, reaching to water about fourteen feet in depth. Owing to the nature of the bottom, the cribs have subsided a good deal, and they still continue to go down; it was considered desirable, therefore, not to carry them up to the full height until after the ice leaves the lake, and they have withstood some more storms.

At Kincardine, or Penetangore, two large cribs had been sunk to form the centre portion of a main break-water, intended to protect the works of piers to be continued from it, which were to afford shelter to vessels lying under their lee. One of these cribs was well filled, the other not so, when the place was visited by a very heavy storm in September last, which broke them up and drove them ashore. After this occurrence, the principal parties (including the Reeve and Municipality) interested in the formation of accommodation for vessels there, pressed for the expenditure of the appropriation upon the carrying out of piers from the shore, and the opening of a channel across the bar, so as to give access from the Lake, directly between the piers, into the inner basin or river. An arrangement to that effect was made with the contractor accordingly. It is to be apprehended that the entrance will be subject at times to obstructions by silt; but this will be obviated to a great extent if the piers are hereafter carried out to a greater depth of water. Under any circumstances, however, it is believed that recourse must be had to dredging.

The expenditure of the small amount appropriated towards the construction of a pier at Meaford was entrusted to the Municipality, who added considerably to its amount from taxation upon themselves. The work has been carried out to the extent contemplated, and is reported to be substantially performed.

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### THE NARROWS BRIDGE.

A Bridge was built some years ago by the Province across "The Narrows" of Lake Simcoe, and a draw-arch was constructed in it to allow of the passage of the vessels then navigating the Lake. As the surrounding country became settled the trade increased much, and the steamboats now engaged in it are of such a size as to render their passage through the draw-arch very difficult, in fact impossible, without constantly coming into heavy collision with it; partly from which cause, and partly from decay of materials, this portion of the Bridge was in such a state of ruin that it became necessary to undertake the removal of one of the abutments, the remodelling of the other, and the general repairs of the Bridge and improvement of the channel leading to it.

The channel will be effected by the first of next June; the timber and other materials for the new swing-bridge, with its piers and abutments, are being delivered, and it is expected that the entire will be completed by the first of July, and that no stoppage to the navigation will be caused by the prosecution of the works.

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### RIVER TRENT WORKS.

About the close of the season, the Assistant Engineer of the Department was sent to examine and report upon the state of the works at Buckhorn and Bobcaygean. The commencement of these works, their character, and the objects for which they were undertaken, have been described in the last Report to the Legislature, which also explained the more than ordinary difficulty which had to be con-

tended with in unwatering the works and getting in the foundation. These difficulties continued, and it became necessary to lay the whole of the masonry in cement, and to keep the pumps going to the last. It was stated in the report referred to, that the works and preparation of materials were then so advanced as to enable the contractor to calculate on being able to complete the entire lock, with all the dams, mill-races, &c., connected with it; within two months after the weather would admit of the masonry being commenced. Prior to this being the case, a deputation consisting of several gentlemen, either resident or interested in the locality came to the undersigned, for the purpose of representing that if the waters of the Lake were lowered for the purpose of building the lower part of the Lock, before the warm and dry season was over, they apprehended most dangerous effects upon the health of the inhabitants, from the miasma which would arise from the mass of decayed vegetable matter that would necessarily be laid bare. It was stated to them that the suspension of the works would add seriously to the cost of the lock, that it would prevent its being completed this year, and that it would be followed by well-founded claims for compensation by the contractor. But from the very strong feelings of alarm for the health of the vicinity, evidenced by the members of the deputation, the undersigned were induced to instruct the officer in charge of the works that the waters were not to be let off before the tenth of August. The consequence was as anticipated—the contractor was put to much loss, and the completion of the work that year was not practicable.

The report of the engineer upon the state and character of the work is very satisfactory. He states the walls of the chambers and recesses, all laid in cement, to be up to the bottom level of the upper reach; the lock floor and mitre sills, all in their places. The entire of the cut stone for the remainder is quarried and dressed, and lies on the bank, ready for laying. The anchor stones, coping, and hollow quoins, are all prepared. The upper wings are left unfinished, in order to put in the heads of the mill race-ways. The bridge piers are constructed in good ashlar work, and the swing bridge is completed and in place,—the wood work requiring painting only.

The conduit of the canal, for 400 or 500 feet through open rock, is closely sided up with timber and planking, laid in light joints and well spiked, carried up to the top of the bank, and protected with wale-timbers of oak. The bottom of the Canal is puddled, staunched, and double planked. For the remaining portion of it, the natural banks are raised, and the sides and bottom well puddled. The dam at the upper entrance is made staunch and tight,—the lock gates are being framed.

The gravel and filling in front of the main Dam across the river had been removed, in order to repair the planking during the low summer water, after which the filling will be replaced.

The running down of the square timber is generally over by the twentieth of May, after which the descent of the saw-logs takes place, and occupies about two weeks, so that the letting off the water cannot be commenced before the first week in June, nor the masonry before the fifteenth of the same month. If this is permitted, the work will be finished early in August; but if the control of the water is not left so with the contractor, it will be impossible to complete it before November, and much extra expense will be again incurred.

The suspension of the works for such a large portion of the last year necessarily involved the further stoppage of Mr. Boyd's Mills at Bobcaygean. The dams put in to keep off the water, in order to excavate for the bottom of the lock, had interfered with the working of the mills, the two preceding seasons, for which arrangements had been made with Mr. Boyd, and it will now be necessary to come to a compromise with him for the suspension of his business, which must take place for part of this season also. But from the fair spirit hitherto evinced by that gentleman, no difficulty is apprehended in coming to a reasonable settlement with him.

The repairs of the Dam at Buckhorn have been fully effected. The discharge flumes on each side of the river, and the repairs of the slide, are completed, as are also those of the part of the bridge which was contracted for. But the remaining portion of the bridge, nearly 500 feet in length, is now, from decay of material, in a very dangerous state; in fact it has been kept passable during the winter by means of supports from below.

This bridge is built on and framed into the dam, of which it may be considered part; and independent of its importance as being the only means of land communication for a distance of 16 miles between the several newly filling up Townships to the north, and the settled country on the south of the river, it is indispensable for lumbering purposes, and as a means of communication with the piers and slides. Its maintenance is, therefore, unavoidable, and the sum required for its repairs will be inserted in the estimates to be submitted to the Legislature.

The dredging and opening of the new channels contracted for to avoid the awkward bends in the Scugog river, have been satisfactorily effected. The only works which now remain to complete this portion of the navigation are,—the building of a new and enlarged lock at Lindsay, and the deepening of about two-thirds of a mile from the tail of it, through rocks. Also, the improving of the channel in several places between the lock and Lake Scugog, and the construction of two or three landing piers. These are all loudly called for. The present old wooden lock cannot be calculated on even for the season; and it is very desirable that the improvements in the river should be at once authorized, while the dredge and pumping machinery are on the spot,—as the expense will, otherwise, be very seriously increased.

#### RIVER ST. MAURICE WORKS.

The cost of maintenance and the expenses connected with the works of the slides and booms on this river, have been considerably less during the past season than those of the preceding year,—which is chiefly attributable to the improvements effected in the winter of 1855-6, and to the comparatively low height of the water at the time of the spring floods.

The workmanship having been originally of a good and substantial character, and the plans of the work having been altered and amended from time to time, as experience dictated, it may reasonably be calculated upon that they will continue to be maintained in an efficient state of repair at a moderate annual expense.

The principal works undertaken last season were :

The filling of the main body of the larger dam at LaTuque with stone, and the building of an additional pier in rear of it.

The deepening of the channel through the Managance Rapids was contracted for, and the work carried on as well as circumstances admitted; until, the river having suddenly risen, the operations had necessarily to be suspended until the subsidence of the water next season. The estimate for this work was £300, but the engineer reports that £250 in addition will be required, to blast out certain rocks and clear the channel.

At Shawenegan, some of the works referred to in the last report, and provided for, have been completed, and the remainder are in progress; but here, also, it is reported that the sum estimated and appropriated will fall short of the actual expenditure required by about £250.

At the Grais Falls, the crib slides and other works connected with them have been placed under contract.

At the mouth of the River St. Maurice an additional pier was built in the east channel above the bridge; boom-posts were put up, and the necessary chains, &c., provided.

The undersigned, not satisfied that the large proportion of the expenditure on these works should be carried on by day labour, as hitherto, have insisted that the whole of the work shall be let and executed by contract.

Considerable loss of time has taken place in proceeding with the work of the slide at the Grais, latterly, owing to the inadmissibility of several of the persons offered as security for the due performance of the work by the party to whom it was allotted. This difficulty has been removed within the last day or two.

Upon the advantageous results from these works, apart from the aid they give to the developing of the timber trade of that part of the Province, Mr. Dawson, the engineer in charge of the construction of the River St. Maurice works, thus reports:

“ I would respectfully invite attention to the extraordinary rapidity with which colonization is progressing in the section of the country more immediately affected by the works. From the settlements back of Berthier to those in rear of St. Anne de la Perade, a great movement is being made towards the St. Maurice territory. Lots are occupied almost as fast as they are surveyed, and it is worthy of remark that the settlers generally are of opinion that the further back they go the better they find the quality of the land. The principal new settlements are those extending back from St. Barnabé and Shawenegan to the west of the St. Maurice, and from Lac Cossette and the River des Envies to the east. This movement on the part of the settlers has its origin in the demand for agricultural produce which the lumber trade is creating in the interior; this, it is needless to say, is due to the works which has rendered the St. Maurice River available to the enterprise of the lumbermen.”

Mr. Dawson adds that he is informed by the Crown Lands Agent that the revenue this year arising from the timber duties, ground rents, &c., will be about £10,000. He also reports further works to the amount of £3,793, to be required for the completion or security of those already constructed. (See Mr. Dawson's Report, Appendix D.)

### PORT STANLEY HARBOUR.

The works connected with this Harbour, referred to in the last Report, have been proceeded with but slowly, and in some respects very unsatisfactorily. The cribs forming the base of the protection docking on the west side of the inner harbour having been left by the contractor, at the close of the season, in an imperfect and but partially filled state, and not properly backed up in the rear, the result is that 350 feet lineal of the work has been forced out of its place, part of it upset, and the remainder so much disturbed as to render it necessary to take up and re-sink that whole length.

All this was owing to the negligent manner in which the work was left, which, from not being filled with stone and securely backed, was unable to withstand the thrust of the ice when pressed upon by the flood which came down in February last.

The forming and deepening of the inner harbour was carried on with greater energy during the past year than at any other previous period. Much delay and additional dredging, however, has been caused by the *detritus* annually brought down by the Creek being deposited in the channel and basin; especially in the

Spring of 1856, when the ice jamming above the bridge, the water cut in part a new channel to the westward, carrying with it not less than 15,000 cubic yards of earth, which, with that brought down from higher parts of the stream, cannot be calculated at less than 21,000 cubic yards.

As has been stated in former Reports, the position of this Harbour, situated at the mouth of a stream passing for the most part through a soil of a purely argillaceous character, and subject to very heavy floods, during which a great deal of earthy matter is carried down and deposited in the comparatively still water at the outlet, will ever subject it to obstruction and to silting up, so long as the Basin itself, and the channel between the piers thence to the Lake, form the *debouche* of the creek.

This tendency to silting was further increased, in the first instance, by the contracted space between the original piers.

Upon the late damage being sustained by the works, the Engineer of the Department was sent up to examine and report upon the condition of the Harbor, and he has made an able and elaborate report upon the subject, repeating what has been above stated regarding its tendency to silt up, and giving it as his opinion that permanently to maintain the accommodation required for vessels, one of two courses must be adopted,—first, to prevent the creek from entering the Harbour, and to direct it by a new channel into the Lake, west of the present piers. The objection to this course he points out, truly, to be, that it would be very expensive, inasmuch as the channel would traverse a considerable extent of ground, all laid out in building lots, upon which a high value is set, as the sides of it should be securely lined for their whole extent, and as it should be of capacity to pass the greatest floods.

Besides the question of expense, the small volume of water, in dry seasons, would be insufficient to prevent a bar of shingle from being formed across the mouth of the channel, where it would remain until removed by the next high freshet: the vicinity in the meantime, being rendered unhealthy by the stagnant water which would lie within such bar: and the effect of the cut so directed would soon cause deposit and obstruction at the entrance to the Harbour.

The second course suggested, is, to build a new pier one hundred feet to the eastward of the present east pier, and to remove the narrow portion of the latter, leaving only the outer and wide part it. By these means two entrances, in all about 180 feet in width, would be obtained, and being about equal to that of the inner basin, the Engineer considers the tendency to silt would be much lessened, and that floods, when they take place, would rush equally over all, and thus keep the basin and outlets clear. But inasmuch as the source of this evil, namely, the great amount of *detritus* annually brought down would not be removed, and this *detritus* would necessarily continue to be deposited in the still water of the lake near the mouth of the channel, the undersigned apprehend that, although occasional floods of considerable magnitude might be powerful enough to carry such deposit into water so deep that the entrance may not be for some time obstructed, yet that the ordinary freshets, although they also bring down great volumes of earthy matter, would not, from the greatly increased breadth of the entrance, prove sufficient to carry out the silt which would continue to be deposited within the piers, and thus periodical recourse to dredging be rendered indispensable. Under these impressions, and taking into consideration the large outlay involved in the adoption of such a course (not less than £40,000) the undersigned are not disposed to recommend it, and they are of opinion that all it would be expedient to undertake at present, is to complete the basin as contracted for, extend the western pier moderately, and erect two leading lights upon it, leaving to be removed by dredging any obstructions that may from time to time be caused in the basin by deposit.

It has also been proposed by others, to construct a dam across the creek above the basin, for the purpose of creating a cess pool for the deposit to take place in; but the effect of this would shortly be to fill up the bed of the creek to the level of

the dam, thus causing much injury to the property above it,—to interfere seriously with the lower mills on the stream, and to prevent their being reached by bateaux, as they now are.

The undersigned have heard it stated that this creek, at a remote period, entered the harbour by a wholly different channel. If this should be proved to have been the case, it would be a matter well deserving of being examined into, with the view of ascertaining whether the creek could be restored to such its original course, there being no doubt that the efficiency of the Harbour could in that case be more effectually and cheaply secured.

The position of this harbour is every day becoming of greater importance, it being the outlet of a very extensive tract of country second to none in the Province in fertility and rapidly increasing settlement and productiveness.

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### BURLINGTON BAY CANAL.

The additions to the piers at both ends of this Canal, which were in progress at the time of the last Report, have since been carried out to the full length, and raised to the intended height. Considerable outlay upon repairs was unavoidable during the past year.

The most defective parts of the old superstructure have been removed and rebuilt; but some other portions of it, in consequence of decay of material and subsidence, require to be taken down and renewed.

On the eighteenth of July last, the light-house tower and keeper's house were destroyed by fire, supposed to have been caused by sparks from a passing Steamer. A temporary light was immediately substituted, and was maintained during the continuance of navigation. The erecting suitable buildings is now necessary,—the cost of which will form an item in the estimates to be laid before the Legislature.

It was necessary, also, to provide a new ferry scow for the crossing of vehicles, &c.; as well as a smaller one for the ferrying of foot passengers.

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### TUG BOAT SERVICE ABOVE MONTREAL.

The amount of Tug service performed during the past season between Lecline and Kingston has exceeded that of previous years, and, from no complaints having been received, the undersigned have no reason to believe that it was not performed in an efficient and satisfactory manner.

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### PIERS BELOW QUEBEC.

The Piers at Berthier and L'Islet, since they were completed and taken off the hands of the contractor, continue in a good and efficient state. The piers at Malbaie, at Eboulements, and at Rivière du Loup, having suffered somewhat at their extreme outer ends by the action of the ice, to which they are much exposed, it was considered necessary to protect those ends and each of the sides, for about 20 feet in length, with oak or rock-elm planking. The exposed angles have also been well secured with iron straps. Thus protected, it is expected that these several works will remain in a good and safe state for a number of years, without further repairs.

To the pier at Pointe aux Orignaux, a wing of about 120 feet in length has been constructed, on the up-stream side of the extreme outer end. The fenders were

put on, the mooring-posts placed, and the floor was planked; and the entire of the work was completed before the winter set in, with the exception of a few iron straps at the angles. These the high spring tides which occurred at the close of the work prevented being put on; but they will be attended to when the Spring opens.

At Rimouski pier nothing was done during last summer. The construction of a wing, as before recommended, is considered to be very important, not only for the convenience and safety of vessels approaching the pier, but also from the additional strength and security which the pier would derive from it.

The erection of a small light-house and the fixing of two cranes of moderate power on each of the above mentioned piers, are considered essential for the safe access to and convenient uses of them. A building should also be provided at each, for the accommodation of a person whose duty it should be to maintain the light, have charge of the supplies connected therewith, and collect the wharfage, a rate for which should be established. The necessity for such an appointment at each pier was urged in the last Report, as being evident from the manner in which they are abused by parties kindling fires on them, and otherwise endangering their existence, for want of proper local authority to prevent such trespass.

#### LIGHT-HOUSES BELOW QUEBEC.

The Keepers' houses at each of the respective places where light-houses are being erected may be considered as completed, as also the light towers at the West point of Anticosti and Cap Rosier, which are ready for the setting of the lanterns and fixing of the lighting apparatus.

At Pointe d'Amour and the Island of Belleisle the towers were, at the period of the last reports, completed, with the exception of the upper story and light-room; and it is expected that by the time the next report can be received, they also will be fully ready for the erection of the lanterns and lighting apparatus.

The works of all these buildings have been executed with more than ordinary care, of the best materials, and in the strongest and most substantial manner. The remoteness of most of them from all settlement, their very exposed positions, and the great difficulty of access to them, rendered it doubly necessary that they should have been so constructed.

As stone fit for dressing and suited to the exterior of buildings in such situations could not be had in the vicinity of any of them, and as the construction of wharves or places to land, if such stone was brought from a distance, would have been attended with great expense, it was determined that the exteriors should be built of two tiers of the best class of English fire-brick, laid in cement.

Instead of the ordinary stone masonry of which it was originally specified the interior face of the works should consist, it was soon found desirable to substitute well dressed and closely jointed *stone work*; by doing so a much better description of work was had, and useful winter employment was provided for the men, who, it was decided, should remain there, and for whose safety and comfort ample provision was made, the experience of the first year having shewn that nearly half the working season was lost between the early date at which the men had necessarily to be removed, to the time when it was possible to convey them again to the places of their occupation. The expense of the wages and maintenance of the men so wintered was therefore, in some degree, covered by the materials prepared by them during that time. The necessity of plastering the inner surface of the walls was also obviated, a matter of no little consequence, when the distance from which lime and sand had to be procured, and the difficulties of landing materials of every description and then getting them up from the shores to the sites of the works, are taken into consideration.

As stated in the last Report, extraordinary difficulties had to be encountered in the prosecution of the works. The great bulk of the materials had to be transported a considerable distance, and then landed on a bare unsheltered bank, against which a heavy rolling sea constantly beats, involving much risk to life and property. In very many instances, when the vessels with supplies, materials, &c., had reached the vicinity of the works, it was found impossible to land, and delays of from two to six weeks have frequently taken place before it was safe to approach them. Ruinous loss of time both of men and horses was thus unavoidably caused, and since the date of the last report six vessels of from 80 to 100 tons, and one sea-going steamer, with all their cargoes, have been completely lost. These difficulties are more or less experienced at all the works, but more particularly at the island of Belleisle, on which a large establishment of men and horses had to be maintained. Independently of the loss of time caused by the impossibility of the vessels approaching the island to land materials and stores with any degree of regularity, the whole of the horses were lost, the steamer in which fodder was sent for them having been wrecked, and the island being so utterly barren as to produce no grass, &c., of any description, to keep them alive. The poor brutes were thus starved, and before relieved by death from their sufferings became mad and attempted to devour one another.

Towards the close of the year, Mr. Gauvreau, the immediate Superintendent of these works, was sent down in another steamer to make a general inspection, and, on his way down, having met with the wreck of the steamer *Doris*, above adverted to, he at once proceeded to Belleisle, in order to prevent any inconvenience to the party there. When it was safe to approach the Island, he proceeded to land some stores, but the weather becoming very threatening before he had been enabled to deliver a sufficient quantity, he very properly determined on taking all the men up to Quebec.

The working party, with all necessary supplies, &c., will be sent down as soon as the state of the river will admit, and it is expected that the whole of the masonry, &c., will be completed, and the lantern and lighting apparatus be in their places ready for lighting, by about the middle or latter end of August, at furthest.

Prior to these works having been commenced, that such difficulties had to be encountered was calculated upon, but not to the extent which has been actually experienced. In making an arrangement, therefore, for their construction, the then Commissioners, in selecting Mr. Baby, were governed by the fact that that gentleman had superior advantages towards the carrying on of such works, having the command of steamers and other vessels, machinery, materials on hand, &c. &c. To make anything like an approximating estimate of the cost, under the circumstances, was considered next to impossible, and in agreeing to sign a contract for the execution of the works at prices a certain per centage over those then paid in the City of Quebec, he particularly stipulated that it should be distinctly understood that a trust-worthy officer of the department should be stationed at each work, whose duty it should be, in conjunction with the Chief Superintendent, to keep a strict account of all expenses whatever incurred, including cost and freight of vessels, cost of materials, wages of men, &c. &c. : and that in the event of the rates stated in the form of contract being clearly found not to cover the cost attending the works, he should be settled with on the principle that such expenses should be paid, and that he should be allowed a reasonable per centage for his trouble, anxiety, and outlay. This was agreed to by the then Commissioners, and, on this principle it will be necessary, as shewn by the foregoing, that the works should be settled for.

## TUG BOATS BELOW QUEBEC.

As stated in the last report, the contractor for the tug service below Quebec had been bound by his first contract to provide vessels of a certain power and class, but upon representations made to Government by the Board of Trade of Quebec, and many other parties interested in having such service effectually performed, he was requested to suspend the arrangements he was then making for the boats required by his contract, and, after some negotiation on the matter, upon a report by this Department, an Order in Council was made authorising the cancelling of the contract and the making of a new one, by which iron screw vessels of vastly greater power, &c., than that required by the first contract, were to be provided by him. Such vessels have been furnished, accordingly, and since their being placed on the line, which was done within the time stipulated, the service is reported to have been performed in the most satisfactory manner.

As in the outset of all such enterprises, however well carried out, and however valuable towards the aid and encouragement of the best interests of the country, the results of this present one, so far, have unfortunately been productive of serious loss to the Contractor.

A statement has been rendered by the Contractor for this service, from which it would appear that the total expenses of the year, for working the line, up to the first of January, 1857, have been £27,804, in which sum is embraced interest upon the cost of the vessels, insurance, supplies, such as coal, tallow, &c., and the wages and boarding of the Officers and men. On the other hand, the receipts for services rendered during the season, according to the rates of the tariff fixed on, amount to but £3,933 0s. 1d. If to this sum is added the Government bonus, £11,300, the total receipts will be £15,233 0s. 1d.—deducting which from the expenditure shews a loss of £12,521 on the year. It is evident, therefore, that the service cannot be carried on unless the Contractor receives some further aid or other means be adopted. The undersigned are deeply impressed with the value of the establishment of an efficient Tug Service on the line below Quebec. There can be no doubt that, by means of it, insurance will be importantly reduced, and the trade by the St. Lawrence proportionably encouraged and enlarged. They are also firmly of opinion that the direct receipts under the tariff, (even if such rates are reduced, as the Trade now demand), will, after a year or two be very considerably increased; so that ultimately, after some years, the line will support itself, independent of assistance in the shape of bonus; but in the meantime the enterprise must be fostered. In recommending further aid, it should, in the judgement of the undersigned, be regulated by the Contractor's receipts under his tariff, and altogether withheld when it should appear that the amount of the Contract bonus and receipts of the season would prove it to be no longer warranted.

## OCEAN STEAMERS.

The form of Contract under which the line of Ocean Steamers is established to ply between the Ports of Montreal, Quebec and Liverpool, during the navigation season of the St. Lawrence, and between Liverpool and Portland during the winter months, was appended to the last Report of this Department.

That the service has been performed in the most satisfactory and creditable manner, is admitted by every one; but, unfortunately, the observations just made under the preceding head, as to the losses and difficulties to which all such enterprises are in the outset subjected are equally applicable here. No pains or expense have been spared to put vessels of the first class on the line and to equip them in all

respects in the very best manner. Yet it is satisfactorily shewn by the Contractors that the line has been far from being remunerative during this its first season.

The advantages to the Province that must necessarily result from the establishment of such a communication are every day more and more developed; but that they shall be such in number and extent as it is capable of insuring, the trips must be more frequent, and corresponding aid afforded by the Province. As this subject, however, has been already brought under the notice of the Legislature by the highest authority, it is unnecessary to dwell further upon it here.

The trips made by the vessels of the Canadian Ocean Steam Company have established indisputably the importance and safety of the passage by the Straits of Belleisle for a large portion of the year. Upon this subject a leading proprietor of the line, Hugh Allan, Esq., in a late communication to one of the undersigned, thus speaks.—“The Straits of Belleisle have been extensively used by our Steamships during last year, from the beginning of June until the close of navigation in the St. Lawrence; and although icebergs were occasionally met with, the result of last year’s experience proves that these Straits can be navigated in safety by Steamships during nearly the whole time that the River St. Lawrence is open.”

In another communication from the same gentleman it is stated that—“Notwithstanding an unusual number of icebergs which have prevailed in the Strait and the neighbourhood of it this year, (1856), our steamers have on every passage, both outwards and homewards, since the middle of June, taken that course, and it is our intention that they shall continue to do so till the close of the season, thus establishing the value and entire practicability of that passage certainly for Steamships.”

After commenting on the great importance of the lights now in course of erection, Mr. Allan, from the experience of the Captains of all his vessels, and of others which take this passage, urges the necessity of adding to the number of them.

The establishment of the following additional lights is strongly recommended by him, and in the order in which they are here set down.

#### *First Season.*

|                     |                                                                                                                                                                                            |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Superior Class.     | { Cap Ray, or Cap Enragé, Newfoundland. (The Light at the South end of St. Paul’s, being unnecessary there, might be removed to this position.)<br>Cap Whittle, on Labrador, in the Gulph. |
| Inferior Class..... |                                                                                                                                                                                            |

#### *Second Season.*

|                     |                                                                                                                                                                |                              |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| Superior Class.     | { Point Ferrol in Newfoundland, West entrance of the Straits<br>Battle Island on Labrador, East entrance of Straits.<br>Manacouagan Shoal, River St. Lawrence. |                              |
| Inferior Class..... |                                                                                                                                                                | Crauc Island. Madame Island. |

#### *Third Season.*

|                 |                                                                                                                                            |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Superior Class. | { Cap Norman, Newfoundland coast, at entrance to Straits.<br>Point Observation, on Anticosti.<br>Cap Chats, and Metis, River St. Lawrence. |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------|

In addition to the foregoing it is believed that two or three more small Lights between Madame Island and Quebec would be of great service. The positions for these would be best pointed out by the Pilots.

Each of the principal Lights should be provided with a fog gun.

From the heavy expense and delay with which the erection of stone buildings is unavoidably attended in this climate, in positions so remote and difficult of access as several of the above would be, the undersigned are inclined to believe that the substitution of light-houses of iron would be attended with a considerable saving of expense, and they have, accordingly, taken steps to ascertain as closely as possible for what price they can be erected.

Four sets of the lantern and lighting apparatus ordered from the patentee have been delivered, and it is understood that the remainder are in a state of readiness to be shipped as soon as the season will safely admit.

The following statement shews the average passages made by the principal lines of Atlantic Steam Vessels.

|                    |                      | Westward. |        | Eastward. |        | Out & Home. |        |
|--------------------|----------------------|-----------|--------|-----------|--------|-------------|--------|
|                    |                      | Days.     | Hours. | Days.     | Hours. | Days.       | Hours. |
| Cunard Line....    | { Boston Branch..... | 13.       | 7.     | 11.       | 12½.   | 24.         | 19½.   |
|                    | { New York Branch... | 11.       | 22.    | 11.       | 13.    | 23.         | 10.    |
| Collins' Line..... |                      | 12.       | 16½.   | 12.       | 8.     | 25.         | 0½.    |
| Bremen Line....    | Southampton.....     | 15.       | 0.     | 14.       | 12.    | 29.         | 12.    |
| Canadian Line..... |                      | 12.       | 20½.   | 11.       | 2.     | 23.         | 22½.   |

#### EXTENSION OF THE TELEGRAPH TO NEWFOUNDLAND—RAPIDS OF THE RIVER ST. LAWRENCE—ST. LAWRENCE AND LAKE CHAMPLAIN CANAL.

So far, the various subjects referred to in the last Report have been followed *seriatim* in this, with such observations upon each as the expenditure upon it or other change required. But upon the next three important items, namely: the extension of the Telegraph to Newfoundland, the improvement of the Rapids of the St. Lawrence, and the construction of the St. Lawrence and Champlain Canal, as the views of the undersigned upon the great advantages to be had from each are set forth at length in that Report, and no action has since been authorized, it is unnecessary here to notice them further than to point to it for any information that may be required on these subjects.

#### COMMUNICATION BETWEEN CANADA AND NEW BRUNSWICK.

The works of this Road have been carried on during the past season by separate parties, working from each end. A considerable portion has been completed, as to draining and grading, which has been effected in a very superior manner. The undersigned had an opportunity of passing over a few miles of the Northern end of this Road late in August last, which the gentleman in charge of the road represented as a fair specimen of the remainder of it upon which similar work had been effected. But they were much dissatisfied at finding a considerable expense incurred on the two miles adjoining the Town of Rivière du Loup, upon which, in their judgment, no outlay should have been incurred until other portions of the road, which were in all but an impassable state, had first been improved; as the part alluded to, next the town, was, previous to such outlay, sufficiently good in all respects for such a communication as is contemplated; and more especially as the small amount of appropriation compared with the great extent of work to be effected, will certainly not be sufficient by any means to improve the road throughout, on a similar scale, and some of the bad parts may thus, necessarily, be left still unfinished.

As before stated, the draining and grading of those parts of the road upon which they have been effected, is done in a very superior manner; and where the line passes through soil comprising a moderate proportion of gravel or other hard material, the road continues to be in a good state for travel. On the other hand, many parts of it lie through a low tract of soft argillaceous clay, which cuts up into very bad holes and ruts from the travel upon it while in a new state; and unless means are found for the gravelling or macadamizing of such portions, it is to be apprehended that they will shortly become as impassable as ever. The traffic over this road is increasing daily, and, in fact, is only checked by the bad state of the portions of it not yet improved.

This may be considered the chief, if not the only line, by which the supplies can be furnished from Canada to those engaged in the lumber trade in the north-western part of the State of Maine, and of New Brunswick.

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### GROSSE ISLE.

The works referred to in the last Report have since been completed. They comprised chiefly the erection of a wash-house, a dead-house, and some other necessary buildings.

The whole of the houses annually required are generally in a state of good repair; but the temporary ones, put up some years ago, are in a ruinous condition. It is proposed to take them down, and lay by the materials, (chiefly planks) for such other purposes as they may be fit for.

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## PUBLIC BUILDINGS.

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### *COURT HOUSES AND JAILS*

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#### MONTREAL COURT HOUSE.

It was stated in the last Report, that it was expected the works of this extensive building would be in such state of completion as to enable the Department to hand it over to the proper officer on or before the early part of May following, (1856.) On the first of that month, the Prothonotaries were put in possession of the premises, and from that period the Courts of Judicature have been held, and all business connected with them has been transacted in the building.

Requisitions from the Prothonotaries and other officers of the Courts—in many cases supported by the Judges—for interior fittings and other improvements, have, from time to time, been referred to this Department, to be carried into effect.

Additional steam tubing, to warm the distant upper portions of the building, has recently been laid.

The total expenditure amounts to the gross sum of £74,142 5s. 11d., which embraces not only the amounts paid, but those of all existing contracts and liabilities unpaid, so far as have been collected up to the first of February, 1857, viz :

|                                              |         |    |     |
|----------------------------------------------|---------|----|-----|
| Contract and measured works.....             | £32,885 | 10 | 8   |
| Extra works on building.....                 | 11,064  | 16 | 5½  |
| Damages and awards.....                      | 6,035   | 17 | 3   |
| Fire-proofing and contingencies.....         | 3,042   | 10 | 10½ |
| Heating and ventilation.....                 | 4,301   | 11 | 11½ |
| Plumbing and gas-fitting.....                | 1,688   | 8  | 1½  |
| Furniture and fittings.....                  | 6,063   | 14 | 2   |
| Carpets, matting, and grates.....            | 976     | 16 | 6   |
| Outside works and approaches.....            | 674     | 15 | 2   |
| Labourers, Firemen, and Watchmen.....        | 315     | 8  | 11  |
| Fuel accounts.....                           | 1,088   | 1  | 10  |
| Special accounts, cleaning building, &c..... | 1,781   | 5  | 1   |
| Supervision, Architect's commission, &c..... | 3,942   | 16 | 0   |
| Do do.....                                   | 281     | 1  | 11  |
|                                              | £74,142 | 5  | 11  |

The undersigned are not aware of any further expenditure being required upon these premises, beyond that of inclosing them with a suitable railing; in doing which it is very desirable that the portion of it next Notre Dame Street should be set back so as to increase the breadth of the street, which, at present, is much too confined in front of a public Building of such importance.

Representations have also been made by the City authorities, as to the propriety of removing the part of the old building which is left standing, and which, from its unsightly appearance, detracts much from the effect of the new one.

#### MONTREAL JAIL.

Under the head of "Jails," the Commissioners of Public Works for the time being have made repeated representations of the inadequacy of this building in every essential requisite of a proper prison, whether as regards inclosure, employment and safe keeping of the prisoners, separate airing yards, worksheds, day rooms, ventilation, classification, &c. In their last Report the undersigned also made a similar representation, and added,—“that this statement applies to every one of the Jails with which this Department may be considered as connected, inso far as the repairs are effected under its control. In fact some of them are a disgrace to any civilized country, and it is with much reluctance the Commissioners have found themselves the medium, unavoidably, through which expenditure has, from time to time, been incurred on a number of them, which are not only unfit for their purposes, in their present state, but incapable of being made suitable at any cost.” This representation the undersigned again feel called upon to repeat.

The Montreal Jail building remains as when last reported on. In consequence of a Presentation by the Grand Jury of the District, submitted to the Executive Government by the Hon. the Chief Justice of the Court of Queen's Bench, together with the recommendations made by Dr. Nelson, Inspector of Prisons, an estimate was prepared of the cost of carrying out the improvement of the south west and north west wings, according to the suggestions of the latter Officer. The estimate amounted to £4434 Os. Od. the expenditure of which abides the decision of the Legislature. But before any outlay is incurred, it seems to the undersigned to be in the highest degree desirable that some comprehensive and general plan should be considered adopted, by which the Province will be freed from the stigma under which it must justly labour so long as the present dens are made use of for the incarceration as well of convicted criminals as of untried prisoners and debtors.

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### KAMOURASKA COURT HOUSE AND JAIL.

Upon this edifice, originally a private dwelling of moderate dimensions, a small outlay, when the District was set off, was incurred, to make it serve the purposes of a Court House and Jail. How imperfectly it answers as such, it is needless to say. A proposed addition or wing, to be used for the prison purposes, has been recommended by Dr. Nelson, the amount of the estimate for which is £2087 16s. 4d. No authority for this expenditure has yet been given.

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### AYLMER COURT HOUSE AND JAIL.

Further Jail accomodation, and some alterations, are required to this Building. The officers connected with it complain justly of its being very imperfectly heated. The heating was to have been effected by means of a hot air apparatus, the constructor of which guaranteed its efficiency. On being called upon to remedy the defects, he attributed the failure to the nature of the flues and chimneys, and it is true that to a certain extent, they are defective. A compromise has been made with him, and it is hoped the evil will not continue.

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### QUEBEC JAIL.

Repeated presentments of the Grand Jury have called attention of Government to the absolute necessity for a new Jail, in a more suitable locality. The undersigned were, in consequence, authorized to advertise for plans; and it was intended that buildings in accordance with those most approved of, and with any improvements that might be made to them, should be erected on part of the property acquired by the Province, outside the walls, and known as the "Bonner Property."

Prior to such step being finally taken, it was deemed expedient to submit the matter for the consideration of the Military authorities, and upon their strong representations of the injurious interference with the defences of the City which the erection of such buildings, in that position, would cause, and of the certainty of their having to be destroyed in the event of the City being attacked, negotiations were entered into, and are still pending, for an exchange of that property for Ordance property of equivalent value, suited in all respects for the site of a Jail. So soon as this question is satisfactorily decided, the new Buildings will be proceeded with. In the mean time, repairs to the amount of about £200 must be made on the water closets, doors, windows, surrounding walls, and pointing the exterior walls of the building.

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### QUEBEC COURT HOUSE.

This building is in a good state of repair, with the exception of some of the floors, which must be secured at the cost of about £100.

The Court of Appeals Room has been fitted up for the Seigniorial Tenure Commission, and the latter being now closed, the room must again be altered to its former purpose, at an expenditure of about £100.

The works connected with the introduction and distribution of water through both these buildings has been completed.

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### SHERBROOKE JAIL AND COURT HOUSE.

The state of this Jail and Court House, especially the former, is such as to make it the subject of a condemnatory presentment by each successive Grand Jury of the District. It is not possible to remedy the evil construction and arrangement of the present Jail; and as to the Court House, the foundation, the roofing, &c., were from the first so very defective, and the arrangements so bad, that it has been and still continues to be a source of constant complaint and expense.

Under such circumstances, the undersigned have been desirous to recommend or incur as little outlay as possible upon these buildings, and they are of opinion that, until the subject of ameliorating Jails generally is taken up and decided, any expenditure should be confined to what is barely necessary to preserve this building from going to decay. An examination of the buildings, based on this principle, has lately been made, by order of the Department, and an estimate furnished of the cost of such work as is considered indispensable, which amounts to £650 for the Court House, and £300 for the Jail.

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### ST. HYACINTHE JAIL AND COURT HOUSE.

The observations just made upon the Jail of Sherbrooke apply even more strongly to that of St. Hyacinthe. The Grand Jury of the District presents the Jail as being too small, insecure, and dilapidated, and utterly unfit for the purposes of a Jail. An officer of the Department was directed to examine and report upon it also, and he estimates the cost of exterior reparation at £157 15s. Od., but adds "that a considerable outlay on the interior is required, but the building being so old and decayed he has only recommended the above indispensable outlay."

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### THREE RIVERS JAIL AND COURT HOUSE.

Certain repairs and improvements applied for by the Prothonotary and Sheriff have been authorized. They consist, principally, of re-building chimney tops—laying down a side walk—providing lightning conductors—pointing the walls, and supplying gas.

The roof is in a very defective state, and tenders have been called for and received both for the repair of it and for its general renewal—the lowest tender for the first being £150, and for the second £437.

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### QUEBEC CUSTOM HOUSE.

The plans for the intended Custom House having been selected, with the approbation of the Government, from a number of competing designs, tenders for its erection were advertised for and received, and the contract was awarded to the lowest—that of Mr. Mc. Greevy, amounting to £39,875. The total ultimate cost will be about the amount of the Architect's Estimate, namely £46,874, which may be considered divisible into nearly equal parts, one being for the building itself, and the other, what is scarcely less essential, being the filling in of a large area in front, with the necessary approaches and extensive docking required to protect them and the building from the action of the sea.

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Hitherto the works have been chiefly confined to those of the building, its foundations, &c. &c.

The contractor has proceeded with unusual energy, and the progress and style of the work, thus far, have been most satisfactory. He wisely took advantage of the winter season for the providing and delivery of nearly the whole of the materials of all classes; and in addition to the facilities of carriage, which he then had, he commanded the services of the necessary number of labourers, which he could not do after the opening of the navigation, and he had them at rates considerably below what he would then be obliged to pay

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### MONTREAL CUSTOM HOUSE.

The present Custom House at Montreal, and that at Toronto, are inconveniently small, and insufficient for the present and increasing wants of these flourishing ports.

The position of the Custom House in Montreal renders any serviceable enlargement of it impracticable. Repeated requisitions for a large expenditure upon it have been made by the Collectors and others; but for the reason above assigned they have not been acted upon; and in the last annual Report of this Department it was recommended that a suitable site should be acquired for the erection of a new and sufficient building, and then to dispose of the present site, which would contribute considerably towards defraying the cost of the new edifice.

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### TORONTO CUSTOM HOUSE.

It appears to the undersigned that the present is a desirable time to select a place for a new Custom House, which must, ere long, be built in the City of Toronto. There are vacant lots just now to be had in suitable positions, which will shortly be occupied and not attainable but at a much greater cost—and how far such site should be governed by the principle adopted of having a central dépôt and wharves for all the Railways which enter the City is deserving of consideration.

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### KINGSTON CUSTOM HOUSE.

The contract for the erection of the new Custom House for the Port of Kingston was given to Mr. Thomas C. Pidgeon, Master Builder, his tender being the lowest. By the terms of the contract, the entire of the work specified is to be completed for a bulk sum £6965, being £1458 over the amount of the Architect's estimates.

The work is progressing satisfactorily.

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### HAMILTON CUSTOM HOUSE.

Plans have been provided for Custom House Buildings for the Port of Hamilton, and it is intended to proceed with the works so soon as the necessary appropriation is made by the Legislature.

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*POST OFFICES.*

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## QUEBEC POST OFFICE.

No authority having been received for proceeding with the contemplated new Post Office at Quebec, nothing has been done. It is believed the delay is owing to the site not having yet been decided on.

## HAMILTON POST OFFICE.

This Post Office is finished, and has been available for the transaction of the business during the past year.

## TORONTO POST OFFICE.

An unavoidable expenditure has taken place on the the Post Office premises of this City, the drainage having been found very defective; and some outlay has been incurred in fitting up several additional letter-boxes, which the greatly increasing business of the office required. More effectually to exclude the cold, the entrances and vestibules have been altered, and outer sashes furnished for the sorting Office, &c.

## KINGSTON POST OFFICE.

The erection of the new Post Office at Kingston is being proceeded with by Messrs. Overend and Mathews, whose tender for the work was the lowest. It amounted to £6745, being about £1568 over the Architect's estimate. The work is progressing satisfactorily.

## LONDON POST OFFICE.

The site for a Post Office in London has been acquired by the Postmaster General, for the sum of £2160. The appropriation made for this purpose was £2500.

The building will be proceeded with so soon as the necessary funds are granted.

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*NORMAL AND MODEL SCHOOLS.*

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## MONTREAL.

Expenditure to the amount of about £1114, has, within the last six months, been incurred in effecting certain alterations required by the Superintendent of Education for Lower Canada, in the old premises fronting on Notre Dame Street, near Jacques Cartier Square, and formerly used as Government offices, to make them serve as Normal and Model Schools for the Roman Catholic portion of the population.

With the view of obtaining, without loss of time, similar advantages for the Protestant portion of the community of Montreal and the adjoining district, the authorities of McGill College proposed to Government that a sum of about £2629 should be authorized to be expended in repairing and fitting up the dilapidated building formerly occupied as a High School, upon Belmont Street, and they undertook that the School Board would, through their own Officer, take care

that the outlay should be economically and judiciously managed. After due examination, an officer of the Department having reported that the repairs, &c., were indispensable and the estimates moderate, such an arrangement was made with the School Board, accordingly, on the understanding that the sum named should be deemed sufficient.

This building, also, was opened for instruction on the fourth instant.

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### QUEBEC.

The expenditure of a sum not to exceed £2000, to repair and fit up the remaining portion of the old Chateau or Castle of St. Louis, to accommodate the Normal and Model Schools for the City and District of Quebec, has been authorised. The repairs required must be extensive, owing to the very decayed state of the timbers and flooring, and of the roof; in fact, it may be necessary to renew the latter *in toto*. Since the authority for this expenditure was issued, a storm of wind, on the 4th of November last, damaged the roof and masonry to the extent of, at least, about £200.

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## LEGISLATIVE BUILDINGS.

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### TORONTO.

During the recess, since the last meeting of Parliament, means have been taken to render the back wings and new Libraries more safe, in the event of a fire occurring in the main building, by closing the communication with it by means of double iron doors, putting outer iron shutters to the windows, carrying up brick *coup feu* through the roof, where that of each wing joins the roof of the central building, and covering the wings with slating. Further provision against fire has been made by the erection, within the building, of two capacious water tanks, having hydrants and connecting-hose for the immediate use of the Libraries and other parts of the house.

The new Library has been completed, and now holds the additional books recently purchased in Europe, one side of it being hung with portraits of Her Majesty, and of the Speakers of the Legislative Assembly. As the plan for this building was first furnished by this Department, it was to have been of brick, with a slated or tinned covering; but for economical reasons timber in lieu of brick was decided on by the Library Committee.

The old shingle-covered roofs of the central Parliament Building and side wings are in a very defective state, especially the former. To stop the leakage and in some degree guard against risk of fire from sparks falling on the roof, it was proposed to cover it with the Mackintosh composition, which is as much as the weak nature of the roof would admit of. Authority for this work is granted, and it will be proceeded with so soon as the weather will allow.

The Receiver General's Department having been removed to a separate building, the western wing, with the exception of a few rooms appropriated to the Clerks of the Legislative Council, is now occupied by the Inspector General's Department, including its Customs and Audit branches. Means for a supply of water for daily use and protection against fire have been provided.

The Receiver General's Department is now accommodated in a detached new brick building, in the vicinity of the Parliament Houses. Hitherto serious

risk was incurred in having all the books, duplicate vouchers, and public accounts of that Department under the same roof with those of the Inspector General.

The house occupied by the Public Works Department, in York-street, having been found altogether insufficient, was, on the expiry of the lease, given up, and the Department is now amply accommodated in a building at a little distance from the Receiver General's office.

But trifling expenditure has been incurred, since the last Report, upon the premises occupied as offices for His Excellency the Governor General, the Executive Council, Provincial Secretary, and Crown Law Officers—also upon those occupied by the Bureau of Agriculture, Adjutant General's Department, Indian Department, and Ordnance Land Agent.

The premises in which the Post Master General's Department and the Crown Lands Department are accommodated have required considerable outlay during the past year. To guard against the severity of the cold, winter sashes had to be provided for a large portion of the building, and a good deal of expense was unavoidable to prevent the freezing of the cisterns and water-closet pipes, &c.; and to staunch around the pediments and chimneys on the roof.

The expenditure on the Governor's residence, during the past year, has been confined chiefly to adding to the precautions against fire, by the establishment of hydrants, &c., and to the furnishing of winter sashes.

In consequence of the over crowded state of the Provincial Lunatic Asylum in this City, it became necessary, during the past year, to provide accommodation for about 80 female lunatics. This was effected by an expenditure of about £2622, upon the premises known as the "Old University Building." Its imperfect drainage had to be remedied; the decayed floors relaid; the roof repaired and coated with water-proof composition; wire guards fixed to the windows; airing yards inclosed: and gas and water introduced. Such arrangement, however, is considered but temporary, and can be dispensed with so soon as the Auxiliary Lunatic Asylum for which funds have been appropriated is built.

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#### MARINE HOSPITAL, QUEBEC.

The new wing to this building has been completed, gas introduced into it, and a system of heating and ventilation adopted, the results of which are reported to be satisfactory so far; but Mr. Gauvreau, the Officer immediately in charge of the works, although rather favorably impressed with the mode adopted, recommends that it should not be applied to the old building until it has been further tested.

The works under the head of repairs and improvements, stated in the last Report to be necessary, are partly completed and partly in progress. But in addition to these it is now considered desirable that the whole of the tops of the chimneys of the building should be raised, to prevent the annoyance which is suffered from smoke, especially in the wings, caused by their being overtopped by the centre building.

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#### GUN SHEDS.

*Quebec.*—For the safe keeping of the guns, with their carriages, tumbrils, &c., belonging to the Volunteer Artillery Company of Quebec, commanded by Major Gamache, a building has been erected on property acquired by the Government, at Quebec, lately in the possession of the Heirs Sewell. Part of the upper floor of the building is fitted up as quarters for the person in charge, and the remainder as an Armory for the arms of the Volunteer Rifle Companies. The building is nearly completed, the Guns are in the part of it provided for them, and the remainder will be finished early in the spring.

*Toronto*.—A building of one story was erected on the premises known as Bathurst Street Barracks, for the reception of the four gun Field Battery, with its tumbrels, &c., &c., belonging to the Volunteer Artillery Company of this city, commanded by Major Dennis.

A separate building of one story was also erected, immediately adjoining the above, to serve as a harness room; and a third building or shed, of 100 feet in length, was constructed, intended for the Artillery horses, &c., &c., to stand under in bad weather. These buildings, together with a large space planked for drill purposes, have been securely fenced round.

*Hamilton*.—Upon a requisition for the providing of accommodation for the Volunteer Artillery Company at Hamilton, commanded by Major Booker, an Officer of the Department was sent there for the purpose of examining the site. It had been proposed to erect the building on the rear portion of the new Post Office plot; but as this was found to be very limited, and in a densely inhabited part of the city, besides not being easy of access, it was considered more desirable to acquire another site, which was accordingly done, and plans and estimates were made for the building, which should be of brick, by the regulations of the city. The building, as planned, was to have been 140 feet in length by 36 feet in width, and of two stories; the lower to be occupied by the guns, tumbrels, &c., while a portion of the upper was to have been appropriated as quarters for the person in charge, and the remainder for an Armory, to contain 350 stand of arms, accoutrements, &c., &c., belonging to the Volunteer Rifle Companies of the city.

Recent instructions have been received by this Department to prepare plans upon a somewhat different and reduced scale, preparatory to submitting any estimate to Parliament.

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### PIERS AT THE RICHELIEU RAPIDS, RIVER ST. LAWRENCE.

The lands and other property on both sides of the St. Lawrence, through several Parishes above the Richelieu Rapids, have been subject, from time immemorial, to much damage, caused by the large masses of ice floating down the river being checked and accumulated by the narrow pass at those rapids, where they form, occasionally, an ice dam, which raises the water to such a height as to flood very extensive tracts, to the great detriment of the inhabitants. The subject has from year to year attracted the attention of Parliament, and, in the Session of 1852-3 a Special Committee was appointed, which took evidence and collected a good deal of information upon the matter.

It was strongly urged by many who professed to know that part of the river, and who have watched the forming of the dams, that the erection of a few small Piers above the Rapids would have the effect of causing the ice to take early, generally across the river, above them, and that, in consequence, dams, or jams of ice would not be formed, and floods, of course, would not occur. This project appearing feasible, a small appropriation was made, last session, to cover the cost of constructing the Piers. The Engineer of the Department was subsequently directed to examine the locality; and he reported he was of opinion that the object might probably be obtained by the mode proposed, but he recommended a greater number of piers, and of a stronger description than had been contemplated by those who gave evidence before the Committee. Plans and specifications were accordingly prepared, and the work was let; but the undersigned regret that, notwithstanding every endeavour on their part to push the work so that all the Piers might be sunk before the frost, and the experiment fairly tested, the work was carried on by the contractor in so dilatory a manner that but two of the Piers, and those in an imperfect state, were sunk when the work had to be suspended. When the undersigned found that the work was not

proceeding with suitable dispatch, it was too late to employ other parties, but the contractors have not been paid any moneys on account, in accordance with the conditions of the contract.

An ice-bridge has been formed above the Rapids this winter, at a much earlier period than usual; but it is difficult to determine whether this favorable fact is owing to the Piers which have been sunk, or to the more than ordinary severity of the frost. At all events, it is very desirable that the experiment should be fully made.

### SURVEYS.

For such service generally an appropriation of £5000 was made last Session, applicable to the carrying on of any surveys that might be determined on as desirable to ascertain the practicability and cost of several works strongly represented to be deserving of the notice of Government, and with which the advancement of the country was closely interwoven.

The first of these was a survey connected with the project of enlarging the Welland Canal, a work the importance of which cannot be over estimated.

Having learned that Walter Shanly, Esq. had been engaged for some time on the survey of the section of the country between the Welland Canal above Thorold and the Port of Niagara, to ascertain the facilities for the construction of a branch Canal between these points, the results of his surveys, including a detailed Report accompanied by plans and sections, were procured and paid for by this Department, out of the sum above adverted to. The subject of this enlargement was fully entered upon in a preceding part of this Report, under the head of the Welland Canal. (For Mr. Shanly's Report see Appendix letter B.)

Another important general survey and examination has also been made, namely, that of the River Saguenay from Chicoutimi to Lake St. John. The object of this was to ascertain the nature and extent of the impediments which exist above Chicoutimi to the sending down of lumber, the practicability and cost of their removal, and how far such expenditure would be warranted by the tracts of profitable timber country which might thereby be opened to enterprise. Mr. Merrill, the officer of this Department in charge of all the slides and other works upon the Ottawa and its tributaries for several years past, and under whose directions they have been constructed, was selected to make this exploration of the Saguenay, and the undersigned are satisfied that it could not have been entrusted to any person so well qualified, from his long and practical experience in the devising and carrying out of such works.

His report (see Appendix letter E.) is very satisfactory, as tending to shew that the removal of the obstructions from Lake St. John to Chicoutimi is perfectly practicable, at a comparatively small outlay, and that there is every reason to believe that an immense tract of valuable timber land could at once be opened to all disposed to embark in lumbering operations in that quarter, so soon as these obstacles are removed.

Surveys upon a minor scale have also been made, chiefly by the Engineer of the Department, for the purpose of obtaining information upon several matters to which the attention of government was called during the last Session,—among which are:—

#### PRESQU'ISLE HARBOUR.

By the Report of Mr. Page, this Bay or Harbour is represented to be formed by a long narrow ridge of low land, chiefly sand, extending out into the lake in an easterly direction for nearly four miles. Its eastern extremity is a rocky formation,

standing a few feet over the level of the Lake, and dipping as it recedes from the shore, but so slightly as to form a dangerous beach for nearly 500 yards beyond the point on which the principal Lighthouse stands. This ridge was formerly covered with trees, which afforded a valuable shelter to the inner bay during prevailing west and south-west winds. Many of these trees have been, of late years, cut down, and the harbour and access to it have thereby been much injured.

About a mile from the main light-house, there is a shoal called Salt Point, formed of gravel said to be thrown up by the action of the lake. This point contracts the entrance fully one fourth of a mile. Near its outer end is erected a small light-house, which, with another standing on the north shore of the ridge in a south west course, forms a guide range for vessels in the channel, immediately after passing the outer end of the Middle Ground shoal.

The area of the bay inside the light-house is of about ten superficial miles, being over two miles and three quarters in depth by three miles and three quarters in width. This width is retained for fully two miles eastward from the shore, when it gradually diminishes to about one mile, which is then further contracted by "Salt Point" to about  $\frac{5}{8}$  of a mile. Along the margin of the Bay, generally, the water is shoal, but for an area of about  $2\frac{1}{2}$  superficial miles, from the centre up to within a few hundred feet of the main shore, there is a depth, say of from 9 to 13 feet, and more in some places. A shoal also lies in the entrance, known as "the Middle Ground"; and to the north of "Salt Point" is "Shoal Point Shoal," which extends out from the opposite shore in both an easterly and westerly direction. All of these, combined with the crookedness of the channel, render the entrance to the harbour intricate and difficult, which when reached however, is a good one, being in a great measure land-locked, with a good depth of water in the centre and good holding ground. But the direction of the entrance with reference to the prevailing winds, must always form a considerable drawback to its advantages. Some years ago the shoals were partially buoyed out, but no person having been put in charge of the buoys they were shortly carried away by the sea and ice.—While the buoys remained in their places, it appears from the records of the light-house keeper, that in 1851, 243 vessels entered the harbour, and in 1852, 240 vessels: but since they have disappeared, the number of vessels which enters has greatly decreased.

During the past year, four vessels were wholly lost, and two stranded with a loss of several lives, while attempting to make the entrance; and although, from the crookedness and intricacy of the channel, casualties might occur, even were the shoals properly buoyed, still there can be no doubt that the risk would be materially lessened thereby.

The following buoys are recommended by Mr. Page, to be placed:

One large red buoy, on reef east of main light house.

One large red buoy on north-east point of "Middle Ground."

One large buoy on the point of "Shoal Point Shoal."

One large buoy, as a triangle, on the point of "Calf Pasture Shoal."

Three small buoys on each side of that portion of the Channel situated between Weller's Beach and Middle Ground Shoal.

The probable cost of these, with their necessary moorings, would be about £300.

Other improvements, involving heavy expenditure, have been proposed; but the above are, in Mr. Page's judgment, as much as the character of the place warrants.

As a regular Harbour Master has lately been appointed, the placing and removing of the buoys, when provided, can henceforth be duly attended to; but it is highly desirable that he should at once be invested with sufficient authority to put

a stop to the destruction of the timber along the south-west side of the Bay, the cutting of which, still continued, will cause irreparable injury to the Harbour.

The foregoing Mr. Page recommends as necessary to afford the benefits of the Harbour, in its present imperfect state, to vessels seeking it, in course of trade or stress of weather. But he is of opinion that, from its position, extent, depth of water, and good anchorage, it is deserving and capable of being much more extensively improved, so as to render it in reality an Asylum Harbour easy of access. This he proposes to effect by dredging a direct channel, say of 300 feet in width, through the "Middle Ground Shoal," which he estimates could be done for the sum of £6,000.

With reference to the question that would naturally be asked whether such channel would continue open, Mr. Page states, that, from the information he has collected from old residents of the neighborhood, no change has been observed by them in the width of the shoal or depth of water on it, except what is owing to the fluctuations of the levels of the Lake.

The undersigned are of opinion that this important question requires much more investigation before it would be prudent to recommend the opening of the channel; but, fully impressed with the important benefits which would result to the trade on the Lakes, if the advantages of a safe asylum of easy access could be had at Presqu'Isle, it is intended, in the course of the season, to have a full and detailed survey and map of the Bay made; shewing all the shoals, soundings, &c., from which a judgment can with some degree of certainty be formed, as to the expediency of undertaking the work of dredging this channel.

#### RIVERS YAMASKA, NICOLET, ST. FRANCIS, &c.

Representations were made to Government that the navigation of the Rivers Yamaska, St. Francis, and Nicolet, all situated on the south shore of Lake St. Peter, could be considerably improved by a very small expenditure upon the removal of bars at their mouths, and surveys being pressed for, to ascertain the facts, the Engineer of the Department was directed, so soon as his other important duties would admit, to make an examination of each, which he accordingly did, and his Reports thereon are herewith annexed. (See Appendix, letter F.)

From these it will be found that, to effect any improvement of importance to the navigation of these rivers would cost—for the Yamaska, £32,750; for the St. Francis, £10,000; and for the Nicolet, £10,000. The large amount of these estimates compared with the benefits to be derived, and the great uncertainty as to the possibility of maintaining the channels when made, deter the undersigned from recommending any outlay upon these Rivers, in the present circumstances of the Province.

Instructions had also been given to the Engineer of the Department to make an exploration of the rivers AnNord, Petite Nation, Delisle, Rigaud, and Aux Raisins, it having been stated that they also could, at small expense, be made navigable.

The season having closed before there was time to make such surveys, an opportunity will be taken in the course of this year to have them made.

Several applications for the making of similar surveys of portions of the coast of Lake Erie and Lake Huron have also been received and recommended; among them one of the coast near Kingsville, in the Township of Gosfield, and another of Pigeon Bay, in Mersea, both on Lake Erie.

In the last Report of the Department, reference was made to the expediency of having a general survey made of the River Ottawa, and from it by Lake Nipissing and the chain of waters thence to Georgian Bay, in consequence of the large share of public attention which was directed to that route, being supposed to be one by which

a water-communication of sufficient dimensions could be formed, adapted to become the channel for a considerable portion of the trade between the Great West and the Atlantic. An appropriation having been made by the Legislature towards the survey, Mr. Walter Shanly was selected as an Engineer in every respect qualified for the charge and direction of it, from his long practical experience in Canal engineering. Instructions for his guidance generally were furnished to him by the undersigned, (see Appendix, Letters G. & H.) By these instructions it will be seen that his attention was directed to two important objects,—the first, and the original one for which the appropriation was made, being to ascertain the practicability at a commensurate expense, of forming a continuous water-communication from the head of the Lachine Canal to Georgian Bay, and to determine from the natural character of the river, and the obstructions to be overcome, what may be the largest scale that could be reasonably adopted. The other to enable him to report upon the facility or otherwise, of constructing a line of Railway from Pembroke, or near it, to Georgian Bay, whether by the valley of the country through which the waters above referred to flow, or in a direct line across the country, as near as the levels, &c., would admit.

Mr. Shanly lost no time in organizing and setting to work four surveying parties, for four sections of the line respectively assigned to them. The exploration has been steadily continued throughout the winter, such season answering well for part of the duty. The remoteness of some of the parties from settlements, and the great cost of forwarding the necessary supplies, have been attended unavoidably by a very heavy expenditure. The sum appropriated has already been exhausted; on which being made known, the undersigned requested Mr. Shanly to furnish them with an approximate estimate of the total cost of completing the survey as commenced, which he calculates at £42,000. They at once made a report on the subject, and instructions have been received not to incur any further expenditure beyond what is required to supply the parties who cannot be withdrawn, until the decision of the Legislature is expressed.

The undersigned were desirous of being enabled to append to this an *ad interim* Report of Mr. Shanly, showing the character of the country, and of the river, &c., so far as the progress made in the survey might enable him to do; but by a letter lately received from him it appears that he cannot undertake to furnish such before the middle of next month.\*

In view to the development of the mineral wealth and resources of the lands bordering on Lake Superior, and the enquiries now pending before a Committee of the House of Commons in reference to the north-west Territory, the undersigned would suggest whether it may not be desirable to have a report made upon the character of the navigation from the northern channel of Lake Huron, north of St. Joseph's Island, to the Sault Ste. Marie, and thence to the entrance to Lake Superior, with the view of ascertaining the practicability and cost of obtaining a Canadian channel of communication from Lake Huron to Lake Superior.

All of which is respectfully submitted.

F. LEMIEUX,

Chief Commissioner.

HAMILTON H. KILLALY,

Assistant Commissioner.

DEPARTMENT OF PUBLIC WORKS,

TORONTO, 23rd March, 1857.

\* NOTE.—An *ad interim* report of Mr. Shanly, dated the 19th instant, was received this day, and is herewith appended. (See Appendix—Letter I.)

## No. 1.

STATEMENT of the works of Canada, under charge of the Department of Public Works, which yield Revenue shewing the cost of construction thereof under that Department, to 1st January, 1857,—Expenditure of the year 1856,—Also, the cost incurred for Repairs and Management.

| WORKS.                      | Cost of construction to 1st January, 1857. |         |       | Expenditure in 1856, included in foregoing columns. |       |       | Cost of Repairs and Management in 1856. |       |       |
|-----------------------------|--------------------------------------------|---------|-------|-----------------------------------------------------|-------|-------|-----------------------------------------|-------|-------|
|                             | £                                          | s.      | d.    | £                                                   | s.    | d.    | £                                       | s.    | d.    |
| <b>CANALS.</b>              |                                            |         |       |                                                     |       |       |                                         |       |       |
| Welland .....               | 1077                                       | 11      | 2 10  | 15663                                               | 16    | 4     | 24870                                   | 19    | 3     |
| —                           |                                            |         |       |                                                     |       |       |                                         |       |       |
| <b>ST. LAWRENCE CANALS.</b> |                                            |         |       |                                                     |       |       |                                         |       |       |
| General Expenditure .....   | 17918                                      | 14      | 8     | 2096                                                | 3     | 11    | 2054                                    | 4     | 5     |
| Williamsburg .....          | 271222                                     | 13      | 9     | 4019                                                | 6     | 1     | 2972                                    | 0     | 0     |
| Cornwall .....              | 110579                                     | 11      | 3     | 4521                                                | 5     | 8     | 5362                                    | 17    | 8     |
| Beauharnois .....           | 380933                                     | 4       | 6     | 15601                                               | 19    | 11    | 6593                                    | 12    | 5     |
| Lachine .....               | 489275                                     | 12      | 1     | 7539                                                | 10    | 5     | .....                                   | ..... | ..... |
| Junction .....              | 46825                                      | 11      | 4     | 8045                                                | 14    | 6     | .....                                   | ..... | ..... |
| Chats .....                 | 56778                                      | 18      | 8     | 25625                                               | 8     | 7     | .....                                   | ..... | ..... |
| Chambly .....               | 16863                                      | 6       | 3     | .....                                               | ..... | ..... | 2227                                    | 6     | 4     |
| St. Ours .....              | 382                                        | 9       | 8 3   | .....                                               | ..... | ..... | 1338                                    | 12    | 6     |
| Burlington Bay .....        | 59370                                      | 10      | 7     | 2572                                                | 2     | 7     | 2335                                    | 4     | 2     |
| St. Ann's .....             | 25567                                      | 2       | 8     | 1906                                                | 14    | 0     | 325                                     | 18    | 9     |
| —                           |                                            |         |       |                                                     |       |       |                                         |       |       |
| <b>SLIDES, &amp;c.</b>      |                                            |         |       |                                                     |       |       |                                         |       |       |
| Ottawa .....                | 119730                                     | 6       | 1     | 2082                                                | 6     | 5     | 1993                                    | 5     | 0     |
| St. Maurice .....           | 52115                                      | 16      | 7     | 3416                                                | 14    | 8     | 1496                                    | 12    | 11    |
| Trent .....                 | 88025                                      | 19      | 0     | .....                                               | ..... | ..... | 221                                     | 1     | 2     |
| —                           |                                            |         |       |                                                     |       |       |                                         |       |       |
| <b>HARBOURS.</b>            |                                            |         |       |                                                     |       |       |                                         |       |       |
| Port Stanley .....          | 47550                                      | 1       | 10    | 12173                                               | 13    | 8     | .....                                   | ..... | ..... |
| Seugog Lock .....           | .....                                      | .....   | ..... | 9486                                                | 12    | 2     | .....                                   | ..... | ..... |
|                             | £                                          | 2898088 | 0 4   | 114751                                              | 8 11  |       | 51791                                   | 14 7  |       |

## No. 2.

STATEMENT of works of Canada, under charge of the Department of Public Works from which no revenue is derived, shewing the amount expended thereon, up to the 1st January, 1856, and the expenditure from that date to the 1st January, 1857.

| WORKS.                                  | Expenditure to 1st January, 1856. |    |    | Expenditure to 1st January, 1857. |    |    |
|-----------------------------------------|-----------------------------------|----|----|-----------------------------------|----|----|
|                                         | £                                 | s. | d. | £                                 | s. | d. |
| Public Buildings, rents, repairs.....   | 30902                             | 19 | 8  | 6983                              | 10 | 3  |
| Do furniture, &c.....                   |                                   |    |    | 5911                              | 5  | 0  |
| Parliament House, Toronto.....          | 51392                             | 11 | 8  | 2892                              | 8  | 10 |
| Government House, do.....               |                                   |    |    | 9246                              | 13 | 5  |
| Custom House, do.....                   | 965                               | 9  | 11 | 174                               | 0  | 0  |
| Post Office, do.....                    | 6349                              | 16 | 1  | 182                               | 18 | 0  |
| Court House, Montreal.....              | 56195                             | 6  | 11 | 12917                             | 9  | 4  |
| Post Office, Quebec.....                | 4013                              | 1  | 7  | 16                                | 1  | 0  |
| Marine Hospital, do.....                | 10998                             | 2  | 2  | 2925                              | 1  | 3  |
| Custom House, do.....                   | 3068                              | 18 | 4  | 17907                             | 7  | 3  |
| Gaol and Court House, Quebec.....       | 7144                              | 15 | 1  | 1186                              | 5  | 10 |
| RIVER ST. LAWRENCE.                     |                                   |    |    |                                   |    |    |
| Tug Boats, Upper St. Lawrence.....      | 20530                             | 13 | 7  | 6632                              | 1  | 4  |
| Do Lower do.....                        | 26569                             | 5  | 7  | 35304                             | 10 | 0  |
| Landing Piers.....                      | 167460                            | 17 | 4  | 18444                             | 16 | 7  |
| Emigration.....                         | 1954                              | 8  | 0  | 1170                              | 17 | 0  |
| LIGHT HOUSES.                           |                                   |    |    |                                   |    |    |
| Light Houses below Quebec.....          | 38567                             | 4  | 2  | 31348                             | 9  | 9  |
| Light House apparatus below Quebec..... |                                   |    |    | 10840                             | 0  | 0  |
| Point Pélée Light House.....            |                                   |    |    | 3213                              | 12 | 9  |
| Inland Light Houses.....                | 28329                             | 18 | 5  | 1609                              | 0  | 4  |
| Light Houses, Lake Huron.....           | 5642                              | 9  | 11 | 13659                             | 14 | 8  |
| Piers and Harbours, Lake Huron.....     |                                   |    |    | 9929                              | 15 | 2  |
| Light House apparatus, Lake Huron.....  |                                   |    |    | 9036                              | 9  | 8  |
| HAMILTON.                               |                                   |    |    |                                   |    |    |
| Post Office.....                        | 10249                             | 2  | 7  | 1948                              | 14 | 11 |
| Custom House.....                       | 2015                              | 2  | 9  | 200                               | 0  | 0  |
| ROADS.                                  |                                   |    |    |                                   |    |    |
| St. Lawrence and New Brunswick.....     | 3614                              | 11 | 9  | 7903                              | 0  | 3  |
| Metis and Metapediac.....               |                                   |    |    | 860                               | 0  | 0  |
| Escoumains and Baie des Roches.....     |                                   |    |    | 500                               | 0  | 0  |
| Malbaie and Grand Baie.....             |                                   |    |    | 500                               | 0  | 0  |
| Gaspé.....                              |                                   |    |    | 14                                | 10 | 4  |
| Kempt.....                              |                                   |    |    | 195                               | 19 | 0  |
| REMOVAL TO TORONTO.....                 | 15536                             | 0  | 9  | 27687                             | 5  | 4  |
| OCEAN STEAMERS.....                     | 27809                             | 10 | 9  | 22978                             | 9  | 2  |

## No. 2.—(Continued.)

| WORKS.                                            | Expenditure<br>to 1st January,<br>1856. |    |    | Expenditure<br>to 1st January,<br>1857. |    |    |
|---------------------------------------------------|-----------------------------------------|----|----|-----------------------------------------|----|----|
|                                                   | £                                       | s. | d. | £                                       | s. | d. |
| <b>KINGSTON.</b>                                  |                                         |    |    |                                         |    |    |
| Custom House .....                                |                                         |    |    | 2269                                    | 14 | 4  |
| Post Office .....                                 |                                         |    |    | 2512                                    | 0  | 10 |
| Lunatic Asylum .....                              |                                         |    |    | 653                                     | 3  | 4  |
| <b>MISCELLANEOUS.</b>                             |                                         |    |    |                                         |    |    |
| Arbitrations .....                                | 68515                                   | 19 | 3  | 1665                                    | 11 | 1  |
| Surveys .....                                     | 5069                                    | 3  | 11 | 337                                     | 4  | 10 |
| Parliament House, Quebec .....                    |                                         |    |    | 207                                     | 7  | 9  |
| St. Maurice Bridge .....                          |                                         |    |    | 61                                      | 10 | 4  |
| School of Navigation .....                        | 6369                                    | 17 | 5  | 62                                      | 10 | 0  |
| Observatory, Quebec .....                         |                                         |    |    | 1                                       | 7  | 0  |
| Boundary Survey, Canada and New Brunswick .....   | 8240                                    | 15 | 8  | 39                                      | 17 | 0  |
| Chambly Canal, claims .....                       | 260                                     | 10 | 8  | 25                                      | 3  | 9  |
| Improvement, St. Lawrence .....                   | 6151                                    | 4  | 0  | 443                                     | 2  | 1  |
| Improvement, Durham Terrace, for work, 1855 ..... | 3111                                    | 0  | 6  | 23                                      | 19 | 6  |
| Bonner Property, Quebec .....                     | 5445                                    | 18 | 4  | 212                                     | 17 | 6  |
| Observatory, Toronto .....                        | 3033                                    | 2  | 2  | 429                                     | 16 | 5  |
| Survey St. Lawrence and Champlain Canal .....     | 6259                                    | 8  | 11 | 1014                                    | 5  | 6  |
| Female Lunatic Asylum, Toronto .....              |                                         |    |    | 2314                                    | 14 | 6  |
| Medical College, Toronto .....                    |                                         |    |    | 774                                     | 0  | 5  |
| Dredging vessels, steam pumps, &c .....           |                                         |    |    | 3019                                    | 10 | 8  |
| Schooner "Canadienne" .....                       | 3198                                    | 2  | 2  | 339                                     | 1  | 0  |
| Gun Sheds, Ottawa .....                           |                                         |    |    | 128                                     | 15 | 6  |
| Do Quebec .....                                   |                                         |    |    | 390                                     | 9  | 1  |
| Do Toronto .....                                  |                                         |    |    | 860                                     | 0  | 4  |
| Improvements, Ottawa Navigation .....             |                                         |    |    | 933                                     | 17 | 11 |
| Do St. Lawrence Rapids .....                      |                                         |    |    | 7164                                    | 3  | 1  |
| Upper Canada College .....                        |                                         |    |    | 31                                      | 10 | 4  |
| Trinity House, Quebec .....                       |                                         |    |    | 2000                                    | 0  | 0  |
| Richelieu Rapids .....                            |                                         |    |    | 26                                      | 10 | 0  |
| Ottawa Survey .....                               |                                         |    |    | 5007                                    | 8  | 7  |
| Provisions for Shipwrecked Seamen .....           |                                         |    |    | 464                                     | 0  | 0  |
| College Avenue Grounds .....                      |                                         |    |    | 624                                     | 18 | 0  |
| Normal School, Montreal .....                     |                                         |    |    | 121                                     | 14 | 11 |
| University Buildings, Toronto .....               |                                         |    |    | 173                                     | 16 | 6  |
|                                                   |                                         |    | £  | 298649                                  | 9  | 4  |



## No. 3.—(Continued)

| No.                                                 | Name of Light.    | Name of keeper.                                                   | Amount of Salary paid. | Supplies and Repairs. | Total.              |
|-----------------------------------------------------|-------------------|-------------------------------------------------------------------|------------------------|-----------------------|---------------------|
| <i>Below Quebec.</i>                                |                   |                                                                   |                        |                       |                     |
| 42                                                  | Belle Isle .....  | D. Vaughan .....                                                  | £ s. d.<br>18 15 0     | £ s. d.<br>126 2 9    | £ s. d.<br>144 17 9 |
| 43                                                  | Anticosti .....   | D. Ballantyne .....                                               | 19 2 0                 | 126 10 1              | 145 12 1            |
| 44                                                  | Forteau Bay ..... | John Harvey, asst.<br>Jno. Blampied .....                         | 29 7 8                 | 125 10 1              | 154 17 9            |
| 45                                                  | Cap Rosier .....  | A. Dussault, assist.<br>Eugène Trudeau ..<br>L. Lemieux, assist } | .. .. .                | 126 0 5               | 126 0 5             |
| Management, Travelling Expenses, Freight, &c. ....  |                   |                                                                   | 2784 7 9               | 4479 8 10             | 7263 16 7           |
| Less :—This amount, Supplies taken from Store ..... |                   |                                                                   | .. .. .                | 910 9 8               | 910 9 8             |
|                                                     |                   |                                                                   | 2784 7 9               | 5389 18 6             | 8174 6 3            |
|                                                     |                   |                                                                   | .. .. .                | 239 8 10              | 239 8 10            |
| EXPENDITURE ON ERECTION.                            |                   |                                                                   | 2784 7 9               | 5150 9 8              | 7934 17 5           |
| Light Houses below Quebec .....                     |                   |                                                                   | .. .. .                | .. .. .               | 31348 9 9           |
| Light House Apparatus below Quebec .....            |                   |                                                                   | .. .. .                | .. .. .               | 10840 0 0           |
| Point Pélee Light House .....                       |                   |                                                                   | .. .. .                | .. .. .               | 3213 12 9           |
| Inland Light Houses .....                           |                   |                                                                   | .. .. .                | .. .. .               | 1609 0 4            |
| Light Houses, Lake Huron .....                      |                   |                                                                   | .. .. .                | .. .. .               | 13659 14 8          |
| Harbours and Piers, Lake Huron .....                |                   |                                                                   | .. .. .                | .. .. .               | 9929 15 2           |
| Light House Apparatus, Lake Huron .....             |                   |                                                                   | .. .. .                | .. .. .               | 9036 9 8            |
|                                                     |                   |                                                                   | 2784 7 9               | 5150 9 8              | 87571 19 9          |

## No. 4.

STATEMENT of amounts paid on awards for damages on each work, since date of last Report,—also, amounts paid to Arbitrators or Commissioners, for services and expenses, up to 1st January, 1857.

|                                                                  | £   | s. | d. | £    | s. | d. |
|------------------------------------------------------------------|-----|----|----|------|----|----|
| Lachine Canal .....                                              | 591 | 12 | 11 |      |    |    |
| Welland Canal .....                                              | 550 | 0  | 0  |      |    |    |
|                                                                  |     |    |    | 1141 | 12 | 11 |
| Amount paid Adolphe Larue, Commissioner to settle Land Damages.. | 365 | 18 | 10 |      |    |    |
| J. T. Taschereau.....                                            | 30  | 0  | 0  |      |    |    |
| G. O. Stuart .....                                               | 30  | 0  | 0  |      |    |    |
| W. K. Brensten.....                                              | 27  | 0  | 0  |      |    |    |
| Other expenses.....                                              | 70  | 19 | 4  |      |    |    |
|                                                                  |     |    |    | 523  | 18 | 2  |
|                                                                  | £   |    |    | 1665 | 11 | 1  |

N. B.—The above amounts are included in Statement No. 1, Welland and Lachine; also, in Statement No. 2, Arbitrations.

## No. 5.

STATEMENT shewing the total amount expended by the Department of Public Works during the year 1856, as detailed in the foregoing Statements, Numbered 1, 2 and 3.

|                      | Repairs and Maintenance. | Construction. | Total. |        |        |    |        |        |    |   |
|----------------------|--------------------------|---------------|--------|--------|--------|----|--------|--------|----|---|
|                      | £                        | s.            | d.     | £      | s.     | d. | £      | s.     | d. |   |
| Statement No. 1..... | 51791                    | 14            | 7      | 114751 | 8      | 11 | 166543 | 3      | 6  |   |
| Do No. 2.....        |                          |               |        | 232563 | 11     | 10 | 232563 | 11     | 10 |   |
| Do No. 3.....        | 8174                     | 6             | 3      |        |        |    | 8174   | 6      | 3  |   |
|                      | £                        | 59966         | 0      | 10     | 347315 | 0  | 9      | 407281 | 1  | 7 |

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## APPENDIX.

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### A.

#### AVENUES OF WESTERN TRADE.

*By T. C. Clarke, Esq. Civil Engineer.*—Of the further greatness of the trade of the north west we need neither illustration nor argument to convince us. Its deep development during the last twenty years, from nothing to a value between three and four hundred millions of dollars, is of itself a fact so astonishing that we are prepared to accept, without incredulity, the most startling speculations. The growth of Chicago, the chief collecting point of this region, from a miserable village of log huts, with a handful of the usual hangers on of a military outpost, to a great City of nearly one hundred thousand inhabitants, whose daily arrivals and departures of vessels is exceeded by New York alone, is another western phenomenon, which puzzles the sober farmers of New England and the easy going planters of the old Dominion.

It was not until the opening of the Erie Canal in 1825, cheapened the precarious and expensive means of transport then existing to the lower end of Lake Erie, that the tide of emigration set in with any force to the northwest; from that period until about 1840, the exports of this region were small; the surplus products being consumed by the ever increasing crowd of new settlers.

During the last fifteen years time, and the effect of judicious public improvements, have so far developed the resources of this country, that the value of the Lake trade had increased between 1840 and 1850 from \$60 to \$300,000,000 and if it has continued to increase in the same ratio, must now have attained the value of \$450,000,000. The total number of tons arriving at tide water from the Western States, by the Erie Canal, has increased from 158,148 tons in 1840 to 1,213,690 tons in 1853. It is estimated by Mr. J. B. Jervis that this trade will double in the next six, and quadruple in the next fifteen years: so that in 1870 there will be an eastern movement of five millions of tons, the surplus products of the north west: and were all this business done through the Erie Canal, the total annual movement would exceed nine millions of tons.

That this estimate is a safe one, and rather errs in being under than over the mark no one will doubt who considers how small and insignificant a part of the vast territory tributary to the commerce of the Lakes is now occupied and under cultivation. It is safe to say that out of a region variously estimated to contain from 550 to 700,000 square miles of fertile Territory, not one twelfth part is now occupied, and that but sparsely. From a country capable of supporting 20,000,000 of people what may we not expect?

Although but few persons could appreciate the immense magnitude of the prize, yet from an early day attempts were made by different sections of the country to direct the western trade to themselves. The two natural routes to the ocean from this great inland basin are by Mississippi and by the St. Lawrence Rivers. To these we may add a third, that great and only gap in the Alleghany chain which is penetrated by the Hudson Rivers and its tributaries. This route, although at first sight not so apparent as the others, really possesses great natural advantages, and compares very favorably with them, as we may infer from the fact that the

expenditure found necessary to overcome the Rapids of the St. Lawrence and the Falls of Niagara, was considerably greater than the cost of the original Erie Canal.

The Mississippi route, although not requiring so much artificial improvement, has some very serious disadvantages: one of which is the very variable regimen of its tributaries, which half the year are in freshet, and the other half nearly dry. Whether this state of things can be obviated by art, it is difficult to say. Those who take an interest in the subject are referred to the able essays of Charles Ellet, Jr., on the improvement of the Mississippi and Ohio Navigation.

A more serious objection to the Mississippi, as an outlet of the north west, is found in the fact that the heated waters of its mouth and of the Mexican Gulf are unfavorable to the preservation of those cereal products which form the staple of western export. Mr. McAlpine in his Canal Reports for 1852 and '53, has shewn that when the enlargement of the Erie Canal is completed, the cereal products of the west can be brought to the New York Market from as far south as the confluence of the Ohio and Mississippi rivers, cheaper than to New Orleans, while the products of the hog, which is not slaughtered early enough in the fall to reach the northern water lines before they are closed by frost, will continue to find their way by the Mississippi River.

The St. Lawrence is the other rival for western trade; but if we examine what proportion finds its way by that route, we shall see that it not only does not attract any of the trade of the Western States, but is fast losing even the trade of Upper Canada.

Previous to 1850, by far the largest part of Western Canadian trade was done through Montreal and the St. Lawrence, and the trade with the United States was very insignificant, but with the cessation of protection to Canadian products in British markets, and the repeal of differential duties in favour of the St. Lawrence, a trade began to spring up between the two countries which has been greatly extended by the operation of the United States Bonding Act, which came into effect in 1850, and the Reciprocity Treaty in 1855. The effect of these two measures has been to divert the trade of Canada West from the St. Lawrence to the New York Canals and Railways.

|                                                        |              |
|--------------------------------------------------------|--------------|
| In 1854 the value of imports by the St. Lawrence was.. | \$21,171,752 |
| Exports.....                                           | 12,501,372   |

|                           |              |
|---------------------------|--------------|
| Total value of Trade..... | \$33,673,128 |
|---------------------------|--------------|

|                                                        |              |
|--------------------------------------------------------|--------------|
| In 1855 the value of imports by the St. Lawrence was.. | \$11,494,028 |
| Exports.....                                           | 6,975,500    |

|                           |              |
|---------------------------|--------------|
| Total value of Trade..... | \$18,469,528 |
|---------------------------|--------------|

During the same years the reciprocal trade with the United States was as follows:

|                                                      |              |
|------------------------------------------------------|--------------|
| In 1854 the value of imports from the U. S. was..... | \$13,553,096 |
| Exports to United States.....                        | 18,418,000   |

|                           |              |
|---------------------------|--------------|
| Total value of Trade..... | \$23,971,096 |
|---------------------------|--------------|

|                                         |              |
|-----------------------------------------|--------------|
| In 1855 imports from United States..... | \$20,825,432 |
| Exports to United States.....           | 20,002,288   |

|                           |              |
|---------------------------|--------------|
| Total value of Trade..... | \$40,827,720 |
|---------------------------|--------------|

Thus, in one year the trade of the St. Lawrence has lost a value of \$15,203,600, while the United States trade has gained a value of \$16,856,624. Such a revolution in the course of Trade is remarkable.

A part of this change is due to the Grand Trunk Railway which enables Lower Canada merchants to make their Spring importations through Portland before the opening of navigation on the Canals; but this is a trifle in comparison with what has actually been diverted through the State of New York.

We shall therefore assume it as an established fact that at present "the commerce of the West no longer seeks an outlet by the stormy and icy mouth of the St. Lawrence, nor braves the dangers of the Mississippi on its way to the sultry shores of the Gulf of Mexico, but principally follows the chain of the Great Lakes to the deeply grooved channels of the Erie Canal, and finds in the low level of the Mohawk Valley the only easy passage through the chain of the Alleghanies. We propose in the limits of this article, to take up the subject of Western Trade where it was left by Mr. McAlpine two years ago, in his masterly reports on the New York Canals, and investigate the new routes which have come into public notice since he wrote, and compare them with each other and with those already existing.

Taking Chicago as our point of departure, we have at present two lines of water communication with New York, one via Buffalo and the Erie Canal, the other via the Welland Canal and Oswego. But western enterprise is not satisfied with these existing routes, and demands new ones for three reasons.

In the first place, considering the probable increase of their trade, they believe that it will not be many years before the enlarged Erie Canal will be choked up by a plethora of traffic, as the old one has been.

Secondly. They believe in the wholesome influence of competition and do not like to see their only outlet in the possession of parties over whom they have no control. They remember the effect of the opening of the Canadian Canals in bringing down the tolls on the Erie Canal, and that the whole north west would annually have been taxed a large sum on both exports and imports, but for them. Mr. Andrews states that in the year 1851 the reduction of tolls on railway iron amounted to \$553,955 and on wheat and flour to \$512,830, or nearly \$1,067,000 less than they would have been by the rates of 1854, before the Welland and St. Lawrence Canals were opened.

Lastly. Experience has proved that the larger the vessel, the cheaper the cost of conveyance. This, of course, has a limit somewhere, and what is the exact size of draft that shall be found most economical, nothing but experience can decide. The present state of our knowledge is that propellers are a cheaper mode of conveyance than side wheel or sail craft, and that propellers of 800 tons burthen and over, would be more economical than those of 400 tons, which is the largest size that can now pass the Welland Canal Locks.

What the exact amount of the saving would be, it is difficult to tell, but one of the most intelligent Western forwarders estimates that in a trip of 1,100 miles from Chicago to Buffalo, if the gross receipts of a vessel of three hundred tons are \$1,237.50, she would net \$500; while one of 600 tons out of gross receipts of \$2,505 would net \$1,600. The saving in this case is nine-tenths of one mile per ton per mile, if we assume that 1,000,000 of tons is annually transported 1,000 miles on the Lakes in vessels of 300 to 400 tons burthen, thereby doubling the size of these vessels, the annual saving to the trade would be \$900,000. The accuracy of this estimate we have no means of proving, but we are inclined to think that the general result is understated. The size of vessels is now limited by the depth of water in the Lake harbours and on the St. Clair Elats, and by the Locks of the Welland Canal. Besides these arguments for the improvement of the existing routes, and the opening of new ones, which address themselves par-

ticularly to the inhabitants of the Eastern and Western States, the people Canada have another reason even more cogent.

We have seen that the Welland and St. Lawrence Canals confer an annual benefit upon trade of over \$1,000,000. During the last five years these same Canals have cost the Province of Canada for repairs and general expenditure \$2,610,780. The receipts during the same period have been \$1,835,536, shewing a deficiency of \$775,224, which added to \$3,700,000, which is the interest on their cost during the same period, amounts to \$4,475,224 or an annual loss of \$895,000. Even supposing that the "construction accounts could be closed" and that the annual expenditures on the Canals could stop, the interest on their present cost is \$820,000, and the net receipts, after deducting expenses of collection and superintendence, are but \$220,000.

Thus it appears that if by opening any new routes the business on the Welland and St. Lawrence Canals could be increased, the people of Canada have a very strong interest in urging forward such schemes and lending them aid.

The new projects are three in number. The first is to open a Ship Canal from the St. Lawrence to Lake Champlain; also having in view the enlargement of the present Welland Canal locks to a size sufficient to pass propellers and steamboats of from 800 to 1,000 tons burden.

The second is to build a Ship Canal of the same capacity from the Georgian Bay of Lake Huron to Lake Simcoe, and thence across the narrow neck of land that separates that sheet of water from Lake Ontario.

The third scheme contemplates opening up a propeller navigation on the same scale from Lake Huron, via French River, to Lake Nepissingue, and thence down the Ottawa to Montreal.

The St. Lawrence and Lake Champlain Canal has been under consideration for some years, and various elaborate reports have been made upon it by different engineers, both Canadian and American. After some conflicting opinions as to the question of its proper location, a line has been adopted by the Canadian Commissioners of Public Works, commencing at St. John's on the Richelieu River, at the lower end of Lake Champlain, and running thence northerly by that river and the present Chambly Canal, for some nine or ten miles, and thence westerly to the St. Lawrence River at Lake St. Louis, near the Indian Village of Caughnawaga, from which the Canal has been named. The entire distance is thirty-two and a half miles, and the entire lockage twenty-nine feet, and it is fed directly from Lake Champlain. Its locks will be large enough to pass vessels of from 800 to 1,000 tons burthen, and its cost is estimated at from \$2,000,000 to \$3,000,000.

In immediate connection with the Caughnawaga project is the enlargement of the present Welland Canal, or rather rebuilding, for the proposition is to widen and deepen the present Canal from Lake Erie to Thorold, on the edge of the Mountain, and then strike off by a new and independent route to the Town of Niagara, just above the mouth of the Niagara River. This it is thought could be done as cheaply as to attempt to enlarge the present Canal, while it would have the advantages of leaving that undisturbed, and practically doubling its capacity, and would get a better harbor than is now in use at the present terminus on Lake Ontario. The scale of the new Canal is for vessels of 800 to 1,000 tons, and the cost is estimated at \$6,000,000.

The Welland and St. Lawrence Canals have cost the Province of Canada up to the present time, including interest, \$13,668,000, and, as we have seen, they do not pay two per cent. on this outlay, although of vast benefit to trade and commerce in general. It is believed by many intelligent persons that a farther expenditure of \$3,000,000 on the Caughnawaga Canal, and \$6,000,000 on the enlargement of the Welland, would divert such an amount of trade into this Ca-

nadian route that it would eventually pay six per cent. on the whole outlay of, say \$23,000,000, for they maintain this would be a quicker and cheaper route to New York than any now existing.

As will be seen from our investigations a few pages further on, this assumption is perfectly correct, provided the State of New York can be induced to enlarge the present Champlain Canal from White Hall to Waterford, on the Hudson River, to the same scale as the proposed Canadian Canal, and make such improvements in the river as would make it navigable for vessels of the class which could go through the Canal. It is estimated by Mr. Andrews that the State of New York derives an annual revenue of \$450,000 from her Tolls upon articles of Canadian Trade passing through the Oswego and Erie Canals.

The greater part of this would be lost if the Champlain Canals were built, unless indeed, she put so heavy a toll on it as to pay the interest on its cost, and reimburse her moreover, what she lost from the Oswego and Erie Canals. But this could not be done without making the new route more expensive than the old ones; hence it seems probable that the State of New York will not enlarge the Champlain Canal until the Erie and Oswego Canals get more business than they can do, and it would be manifestly unwise for the Canadian Government to embark in so expensive an undertaking until they were sure that the State of New York would co-operate with them.

That, however, is a mere question of time. But there is another point of view from which we may consider the Caughnawaga Canal, by which it does not require the Champlain Canal as a necessary adjunct. We may look upon it as a channel for the trade between the New England States and the West. This is already very large, and becoming more so every year as those States become more manufacturing and less agricultural. It is estimated by a Committee of the Massachusetts Legislature who have just reported on the proposed Hoosac Tunnel, that the annual trade of that State alone amounts to 800,000 tons. This is too large an estimate; but it is safe to say that of the 4,000,000 of tons annually passing through the Mohawk Valley, nearly one-half is due to New England.

The Ogdensburg Railway was built by Boston capital, in the hopes that it would afford a channel for that trade. But it has never been able to compete at all with the water lines of communication. By their last report it appears that the total amount of through freight going East and West on that road last year was but 87,000 tons. The balance finds its way through the Mohawk Valley to the Hudson, a very small part goes over the Albany and Boston Railway; by far the largest part goes on to New York, and is thence shipped to the different New England ports.

It is believed by the advocates of the Caughnawaga Canal that freight could be laid down at ports on Lake Champlain, Burlington, and Whitehall, and distributed by rail over the greater part of New England, cheaper than it could be conveyed through the present Champlain Canal and by the way of New York. New York would then be obliged to complete the ship navigation in self-defence, to prevent her trade being stopped by the New-England railways.

Few persons have looked upon the map of the great lakes without noticing the nearness with which the Georgian Bay of Lake Huron, and Lake Simcoe, which empties into it, approach to Lake Ontario. By cutting through an isthmus of about 50 miles a saving of 400 would be made on the trip from Chicago to Oswego. Accordingly, a Canal across this point has long been talked of. Last year the project was revived and a convention of delegates from Oswego and Chicago met to deliberate upon it.

Upon close examination, it is found to be not quite such plain sailing as at first glance might appear. Lake Simcoe is 475 feet above Ontario, and 110 feet above Huron, making a total lockage of 585 feet, against 360 by the way of the

Welland Canal and St. Clair river. Moreover, there is a summit ridge between Lakes Simcoe and Ontario which could not be locked over on account of deficiency of water to supply the summit level, and must be cut through and fed from Lake Simcoe. This would require, according to the statements of an engineer who has made some preliminary examinations, a cutting of nearly 200 feet for a mile and a half, and an average cutting of 50 feet for six miles and a half. This would seem rather a formidable obstacle, but we believe is considered quite a trifle by the friends of the project. The length of artificial navigation is estimated at 94 miles, and, from comparison with other works, the cost is estimated at \$25,000,000. It is understood that careful surveys and estimates are being made; when they are reported we shall be able to speak with more certainty as to the practicability of this scheme.

Another project which finds great favour with the people of Lower Canada, is the improvement of the Ottawa navigation through to Lake Huron. The saving of distance would be great. From Chicago to Quebec by the Welland Canal is 1,657 miles; by the Ottawa route 1,176 miles, or 481 miles shorter. From Chicago to New York by the Ottawa and Champlain route would be 1,358 miles, or 257 miles nearer than by way of Buffalo and the Erie Canal.

As to the practicability of improving this course of navigation so as to admit craft of 800 tons and over, at any reasonable cost, it is impossible to speak with certainty, until an accurate survey is made by some reliable engineers. This the Canadian Government has announced its intention of doing at an early date. If there be any great difficulty, it will be in getting from the Ottawa to Lake Nepissingue without too expensive cutting. In other respects the route seems favorable. The Ottawa is a large river consisting of long reaches, or rather lakes, with little currents, from twenty to fifty miles long, separated from each other by short rapids and falls.

The only scientific reports we have on the Ottawa, are those of Mr. Hawkins, an engineer who examined it in 1838, and those made in connection with the Geological Surveys of the Province. From these reports it appears that the whole distance from Montreal to Lake Huron is 421 miles, about 60 of which are obstructed by falls and rapids: The total rise and fall is about 700 feet.

Of these sixty miles of obstructed navigation, twenty are already improved; but only the Lachine Canal, eight and a half miles long, is large enough to admit vessels of 800 to 1,000 tons. St. Anne's Lock is not deep enough, the Grenville Canals and the Rideau at Ottawa City, have locks only thirty-three feet wide. The government is now building a Canal on the St. Lawrence scale, three miles long, between the Chats and Chaudière Lake, twenty miles above Ottawa City. This leaves some forty-eight miles yet to be built and rebuilt. Of course, with our present knowledge, we cannot say what this will cost, but it is not probable that, even if no extraordinary difficulties are found, the Ottawa Canals could be built for less than double the cost per mile of the St. Lawrence Canals, owing to the hardness of the rock, which is granite, primitive lime stone, and hornblende mixed with quartz, and to the difficulty of transporting labour and supplies to such a wild country. We may, therefore, assume the minimum cost of this improvement, to be \$12,000,000.

There is one great advantage this route would have over all others, namely, a certainty of return freights. The Ottawa Country contains inexhaustible supplies of pine, and abundant power to convert it into sawed lumber. Owing to the cheapness of the up-freights, Chicago now draws from the east end of Lake Ontario much lumber that formerly went to the Albany market, and it is reasonable to expect that her influence would be felt far down on the Ottawa.

This improvement must be a gradual one. It would be of little use unless the Caughnawaga and Champlain Canals were first built to give it an outlet.

It is probable that unless the Surveys of the Canadian Board of Works find too great obstacles, the scheme of making a through navigation will be adopted, and will be gradually carried out by extending the Canals up the Ottawa, and thus opening the country for settlement, until they are completed through to Lake Huron.

It will be both interesting and instructive to compare the cost of conveying a ton of freight—say, ten barrels of flour—from Chicago to New York and to Quebec by the existing routes, with the probable cost of conveyance by the new ones we have been speaking of.

We shall consider the costs rather than the charges, as the one is less fluctuating than the other; the elements on which it depends being affected alike on different routes.

The cost of conveying a barrel of flour from Chicago to Buffalo in the class of propellers now generally used, is from 25 to 30 cents;  $27\frac{1}{2}$  cents per barrel would be equal to  $2\frac{1}{2}$  mills per ton per mile, and this, we think, is a fair basis of comparison. We have previously seen that the estimated saving would be nearly one mill per ton per mile, if vessels of a larger size were used. In order to be on the safe side, we shall call it but half a mill, and assume the cost of conveyance on long down voyages, on propellers of 800 tons burden and over, at two mills per ton per mile. This is the same as Mr. McAlpine's estimate.

The cost of transport on the old Erie Canal, was  $7\frac{1}{2}$  mills per ton per mile, and Mr. McAlpine estimates that the enlargement will reduce it to 4. On Ship Canals, the sizes being equal, the cost of transport depends on the amount of lockage. On Canals of low lockage, like the present St. Lawrence and proposed Caughnawaga and Champlain Canals, the cost in propellers of large size would not exceed 3 mills per ton per mile.

In Canals of great lockage, like the Welland, the present cost of transport is nearly 6 mills per ton per mile. The enlargement, by reducing the pressure of business, would certainly reduce it to 5; and this is considered a fair estimate for the cost of transport on the proposed Toronto and Ottawa Canals.

The question of tolls is a more difficult one, inasmuch as they are often varied arbitrarily, being placed very low to attract trade, and raised very high when it is thought that the trade is secured. As we are comparing different routes, we must, in our assumptions, take care that they are *comparatively* correct as regards one another.

The toll on flour on the Erie Canal has been  $6\frac{1}{2}$  mills per ton per mile. The rate established by the Canal Board, to take effect the present season, is but 3 mills per ton per mile.

The toll on a ton of wheat or flour passing the Welland Canal, is 45 cents, or 16 mills per mile; on the St. Lawrence Canals, 30 cents or 7 mills per mile; but wheat and flour, and some few other articles, going through both Canals, only pay toll in the first. This is about 6 mills per ton per mile for the whole length of Canals. After the proposed improvements are finished, a toll of 5 mills per ton per mile, would probably be found sufficient to pay a good return on the whole investment.

The Ottawa and Toronto Canals, costing double as much, should not have a less toll than 10 mills per ton per mile.

The cost of transport, including tolls, on the different Canals now constructed and proposed, will stand thus:

|                              | Mills per ton<br>per mile. |                         | Mills per ton<br>per mile. |
|------------------------------|----------------------------|-------------------------|----------------------------|
| Old Erie Canal.....          | 14                         | Caughnawaga.....        | 8                          |
| Enlarged Erie Canal.....     | 7                          | Enlarged Champlain..... | 8                          |
| Present Welland alone.....   | 22                         | Ottawa Canals.....      | 15                         |
| Welland and St. Lawrence.... | 10                         | Toronto Canals.....     | 15                         |
| St. Lawrence.....            | 8                          |                         |                            |

Taking these data, we will now calculate the cost of conveying ten barrels of flour from Chicago to New York by the present Erie Canal, via Buffalo.

|                                | Miles. | Mills. |        |
|--------------------------------|--------|--------|--------|
| Chicago to Buffalo.....        | 1,100  | 2½     | \$2.75 |
| Transshipment at Buffalo ..... |        |        | 20     |
| Buffalo to Troy.....           | 364    | 14     | 5. 9   |
| Troy to New York.....          | 151    | 4      | 60     |
|                                | <hr/>  | <hr/>  | <hr/>  |
|                                | 1,615  |        | \$8.64 |

After the enlargement of the Erie Canal is completed and the cost of conveyance is reduced to 7 miles, including tolls, the total would be \$6.10. If the state of the St. Clair flats allow the use of the largest class of propellers between Chicago and Buffalo, reducing the Lake Voyage to 2 mills, the Total will be reduced to \$5.56.

By the way of the present Welland Canal and the Oswego and Erie enlarged Canals :

|                                | Miles. | Mills. |        |
|--------------------------------|--------|--------|--------|
| Chicago to Oswego.....         | 1,250  | 2½     | \$3.15 |
| Welland Canal.....             | 28     | 22     | 62     |
| Transshipment at Oswego ... .. |        |        | 20     |
| Oswego to Troy.....            | 209    | 7      | 1.46   |
| Troy to New York.....          | 151    | 4      | 60     |
|                                | <hr/>  | <hr/>  | <hr/>  |
|                                | 1,638  |        | \$6.03 |

The effect of enlarging the Welland Canal would be to reduce the cost of the lake voyage half a mill, and as the enlargement of the Welland is in close connection with the Caughnawaga Canal, whose prosperity depends in a measure on the Champlain Canal, which is under the control of the State of New York, we shall be obliged to suppose that the Canadian Government will have to give up their present discriminating toll on the Welland in favour of the St. Lawrence Canals, and charge the same toll to Vessels going to Oswego as they would if they went down the St. Lawrence, for, if they should refuse to do this, the State of New York might retaliate by placing a heavy toll on the Champlain Canal.

The cost by the Oswego route, supposing the Welland to be enlarged, would stand :

|                              | Miles. | Mills. |        |
|------------------------------|--------|--------|--------|
| Chicago to Oswego.....       | 1,250  | 2      | \$2.50 |
| Welland Canal.....           | 28     | 10     | 28     |
| Transshipment at Oswego..... |        |        | 20     |
| Oswego to Troy .....         | 209    | 7      | 1.46   |
| Troy to New York.....        | 151    | 4      | 60     |
|                              | <hr/>  | <hr/>  | <hr/>  |
|                              | 1,638  |        | \$5.04 |

Were the proposed Canal built from Georgian Bay to Toronto, the cost by that route and by the Oswego enlarged Canals as before would be :

|                              | Miles. | Mills. |        |
|------------------------------|--------|--------|--------|
| Chicago to Oswego.....       | 750    | 2      | \$1.50 |
| Canal.....                   | 94     | 15     | 1.41   |
| Transshipment at Oswego..... |        |        | 20     |
| Oswego to New York.....      | 360    |        | 2.06   |
|                              | <hr/>  | <hr/>  | <hr/>  |
|                              | 1,204  |        | \$5.17 |

Were the proposed Caughnawaga Canal built, and the Welland Canal locks enlarged, the cost by this route would be :

|                                          | Miles. | Mills. |        |
|------------------------------------------|--------|--------|--------|
| Chicago to east end of Lake Ontario..... | 1,263  | 2      | \$2.53 |
| Welland Canal.....                       | 28     | 10     | 28     |
| East end of Ontario to Caughnawaga.....  | 143    | 2      | 29     |
| Caughnawaga and St. Lawrence Canals..... | 65½    | 8      | 52     |
| St. John's to Whitehall.....             | 120    | 2      | 24     |
|                                          | <hr/>  | <hr/>  | <hr/>  |
| Chicago to Whitehall.....                | 1,619½ |        | \$3.86 |
| Transshipment at do.....                 |        |        | 20     |
| Champlain Canal.....                     | 65     | 14     | 91     |
| Waterford to New York.....               | 155    | 4      | 62     |
|                                          | <hr/>  | <hr/>  | <hr/>  |
|                                          | 1,839½ |        | \$5.59 |

But if the Champlain Canal was enlarged to the same scale, and certain improvements made in the end of the Hudson River, so that vessels drawing ten or eleven feet water could come up to Waterford, the cost would be :

|                                      | Miles. | Mills. |        |
|--------------------------------------|--------|--------|--------|
| Chicago to Whitehall.....            | 1,619½ |        | \$3.86 |
| Champlain Canal.....                 | 65     | 8      | 52     |
| Toll on River Improvements, say..... |        |        | 10     |
| Waterford to New York.....           | 155    | 2      | 31     |
|                                      | <hr/>  | <hr/>  | <hr/>  |
|                                      | 1,839½ |        | \$4.79 |

By the proposed Ottawa route to the St. Lawrence, and thence by the Caughnawaga and enlarged Champlain Canals, it is probably that the navigation of a rapid river like the Ottawa could not be effected so cheaply as lake navigation, or that on a river of the character of the Hudson. It has been deemed a fairer comparison to assume the cost of transport on the navigable parts of the Ottawa, at 3 mills per ton per mile. We shall then have :

|                                                 | Miles. | Mills. |        |
|-------------------------------------------------|--------|--------|--------|
| Chicago to mouth of French River and Lake Huron | 575    | 2      | \$1.15 |
| Ottawa Canals.....                              | 50     | 15     | 75     |
| Ottawa navigable to Caughnawaga.....            | 361    | 3      | 1.08   |
| Caughnawaga Canal.....                          | 32½    | 8      | 26     |
| St. John's to New York as before.....           | 340    |        | 1.17   |
|                                                 | <hr/>  | <hr/>  | <hr/>  |
|                                                 | 1,358½ |        | \$4.41 |

From the above comparison of routes, it appears that the Ottawa route is the cheapest, the cost being \$4.41.

Next comes the enlarged Welland and Caughnawaga, the cost being \$4.79. But if the Champlain Canal remain unenlarged, the cost would be \$5.59, and it would be rivalled by the Oswego route, which would be \$5.04 by the Welland, and \$5.17 by the Toronto route.

It will be seen that although the Toronto route saves 434 miles over that by the Welland Canal, we have made it 13 cents per ton dearer. This is owing to the Toll, which we have estimated at 5 mills on the Welland, and 10 mills on the Toronto Canal. This seems proper, when we consider that the total cost of the Welland, after its enlargement, is estimated at \$10,500,000, and the Toronto Canal at \$25,000,000.

The prosperity of Oswego, it will be seen, depends in a great measure upon large vessels being able to reach Lake Ontario; for if the present size only can get there, she is rivalled by Buffalo, the cost standing at \$5.56 that way, against \$6.03 by way of Oswego and the present Welland Canal. Hence the interest taken by the Oswego people in the enlargement of the Welland, or the building of the proposed Toronto Canal.

Let us now briefly examine into the sums thought necessary to carry out these proposed improvements.

We have seen that the State of New York, by the expenditure of some fourteen millions of dollars on the Erie Canal, opened a route by which a ton of freight could be conveyed to New York city from Chicago for \$8.64, and by a further expenditure of twenty-two millions in enlarging her Canal, she will reduce it to \$5.56.

An expenditure of six millions more in enlarging the Welland Canal would reduce it to \$5.04. Three millions on the Caughnawaga, and eight on the Champlain and Hudson River improvements, or seventeen millions in all, would reduce it to \$4.79; while an expenditure of twenty-five millions on the Toronto route would only reach \$5.17.

By the Ottawa route, we have seen the cost is \$4.41. The carrying out of this improvement will depend entirely on the cost, or, in other words, how much it is desirable to spend on a new route to reduce the price per ton between Chicago and New York, 38 cents below the Welland Canal route price.

The excessive cost of the Toronto Canal must be a barrier to its execution while cheaper routes can be found.

It is evident that the way in which the greatest saving of the cost of transportation can be effected with the least outlay of capital, is in enlarging the Welland Canal, constructing the Caughnawaga, and enlarging the Champlain Canals.

It only remains to speak of the competition between New York and Montreal or Quebec, as ports of export. We will first examine the cost of conveying a ton of freight to Quebec by the several routes heretofore mentioned:

First, by the present Welland Canal route.

|                                              | Miles. | Mills. |        |
|----------------------------------------------|--------|--------|--------|
| Chicago to east end of Lake Erie.....        | 1,100  | 2½     | \$2.75 |
| Welland Canal and St. Lawrence.....          | 71     | 10     | 71     |
| Port Dalhousie to Montreal, free Navigation. | 306    | 2½     | 76     |
| Montreal to Quebec.....                      | 180    | 2½     | 55     |
|                                              | <hr/>  | <hr/>  | <hr/>  |
|                                              | 1,657  |        | \$4.77 |

Second, by the enlarged Welland.

|                                       |       |       |        |
|---------------------------------------|-------|-------|--------|
| Chicago to east end of Lake Erie..... | 1,100 | 2     | \$2.20 |
| Welland Canal.....                    | 28    | 10    | 28     |
| Port Dalhousie to Montreal.....       | 366   | 2     | 61     |
| St. Lawrence Canals.....              | 43    | 8     | 34     |
| Montreal to Quebec.....               | 180   | 2     | 36     |
|                                       | <hr/> | <hr/> | <hr/>  |
|                                       | 1,657 |       | \$3.79 |

Third, by the Ottawa.

|                                |       |       |        |
|--------------------------------|-------|-------|--------|
| Chicago to French River.....   | 575   | 2     | \$1.15 |
| Ottawa and Lachine Canals..... | 60    | 15    | 90     |
| Ottawa, navigable.....         | 361   | 3     | 1.08   |
| Montreal to Quebec.....        | 180   | 2     | 36     |
|                                | <hr/> | <hr/> | <hr/>  |
|                                | 1,176 |       | \$3.49 |

It will be seen that it is 79 cents cheaper from Chicago to Quebec than to New York by the present route, and if all the proposed improvements were carried out, it would still be 92 cents cheaper per ton. The question arises, why does so much of the Western trade go to New York?

In the first place, lake vessels going to Buffalo or Oswego are sure of return freights; while, if they went to Quebec, a majority of them would come back light. While the imports of the West are done through New York, her exports must take the same route.

In the next place, the largest part of the surplus products of the West are not exported from this country. The Eastern States are the great consumers, and becoming more so every year, as agriculture yields to manufactures—more mouths to feed and less hands to raise food. It is computed that out of equal to three million barrels of breadstuffs arriving at New York annually, only one million is exported. The rest is consumed on this side of the Atlantic. No one needs to be told that New York is nearer the home market than Quebec.

But besides that larger part of Western product which is used for home consumption seeking New York, the other part which is destined for foreign markets will seek it also. In the note will be found a table extracted from an able little pamphlet recently published at Montreal, entitled "Letters on Canadian Trade and Navigation," by Hon. John Young, M. P. This shows the cost of conveying a barrel of flour from Montreal to Liverpool, and from New York to Liverpool, from 1846 to 1855, from which it appears that the freights from New York to Liverpool have ruled at \$5 per ton, and from Quebec at \$9 per ton.

Let us now examine the cost of conveying a ton of wheat or flour from Chicago to Liverpool, by New York and by the St. Lawrence, the port charges and insurance being assumed as equal, although they are both in favor of New York.

First, by the Erie Canal.

|                            |             |         |
|----------------------------|-------------|---------|
| Chicago to New York.....   | Miles—1,615 | \$5.56  |
| New York to Liverpool..... | 3,150       | 5.00    |
|                            | <hr/>       | <hr/>   |
|                            | 4,765       | \$10.56 |

Second, by the present Welland Canal and St. Lawrence.

|                          |             |         |
|--------------------------|-------------|---------|
| Chicago to Quebec.....   | Miles—1,657 | \$4.77  |
| Quebec to Liverpool..... | 2,910       | 9.00    |
|                          | <hr/>       | <hr/>   |
|                          | 4,567       | \$13.77 |

A difference in favour of the New York route of \$3.21. Even taking the most favorable case that could occur for the Quebec route, the construction of the Ottawa Canals alone, we have the cost to Liverpool, by that route, \$12.49, or or \$1.93 dearer than the New York route. Although the St. Lawrence route is so much the shorter, it is evident that while ocean freights rule so much higher that way, it cannot compete with New York.

The cause of this is, that so much more is imported by New York than by Quebec, Ships and steamers having full loads out are prepared to return freight from New York very low; while, on the other hand, the majority of vessels coming to the St. Lawrence arrive in ballast, and depend upon the home voyage for their profits. This is what makes freights between Quebec and Liverpool rule so high.

That this state of things will last for ever, no one should be bold enough to assert. A time may arrive when a direct trade will spring up between Chicago and Liverpool or London. Quebec, by receiving a steady supply of inward freights, may see the outward freights lowered to something near those from New

York. But it is clear that Chicago cannot import through New York and export through the St. Lawrence. When she has accumulated capital enough to import direct, then she may export direct.

That this is improbable, no one who has witnessed what the West has done in the last ten years will venture to assert; and, on the other hand, it is equally clear that New York need fear neither this nor any other rivalry. Her position as the emporium of the Western Continent is fixed beyond a shadow of doubt.

T. C. CLARKE, C. E.,  
Port Hope.

Table shewing the freight of a barrel of flour from May 1st, to December 1st, from Montreal and New York to Liverpool, in the years quoted, in Sterling Currency :

| NEW YORK TO LIVERPOOL. |                   | MONTREAL TO LIVERPOOL. |                    |
|------------------------|-------------------|------------------------|--------------------|
|                        | s. d.             |                        | s. d.              |
| Average in 1846.....   | 2 8               | Average in 1846.....   | 5 2                |
| 1847.....              | 3 9               | 1847.....              | 5 4                |
| 1848.....              | 1 8               | 1848.....              | 4 2                |
| 1849.....              | 1 7 $\frac{1}{2}$ | 1849.....              | 3 6                |
| 1850.....              | 1 3 $\frac{1}{2}$ | 1850.....              | 3 0 $\frac{1}{2}$  |
| 1851.....              | 1 1 $\frac{1}{2}$ | 1851.....              | 2 11 $\frac{3}{4}$ |
| 1852.....              | 1 4 $\frac{1}{4}$ | 1852.....              | 2 11 $\frac{1}{4}$ |
| 1853.....              | 2 6               | 1853.....              | 4 3 $\frac{1}{2}$  |
| 1854.....              | 2 6               | 1854.....              | 3 2                |

## B.

TORONTO, 11th October, 1854.

SIR,—The Survey for a Branch Canal to connect the Welland Canal with the mouth of the Niagara River, which was entrusted to me by the Town Council of Niagara, in May last, is now completed, and I have the honor to report as follows, on the merits of that projected undertaking :

The main questions suggesting themselves for consideration in treating of the long mooted project of the "Lateral Cut," are threefold :

1stly. The abstract necessity of increasing the facilities of navigation between Lakes Erie and Ontario.

2ndly. The scale on which such improvements should be designed.

3rdly. The merits of the Niagara River as a Harbor and entrance for the Canal; and the feasibility of the route of the proposed "Cut," thence to its point of junction with the present one, on the summit of the so-called "Mountain," at the Village of Thorold.

The immense ratio in which the trade of the Western States has yearly continued to increase since the first opening of the Welland Canal has rendered it ap-

parent that the existing artificial outlets from the Lakes to the Ocean will soon prove insufficient to pass the ever-increasing tide of produce which annually sets from West to East. Acting upon this conviction, the State of New York has recently appropriated immense sums, amounting to nine millions of dollars, towards enlarging her already costly Erie Canal. Numerous railways, tending sea-ward, have also been called into existence, to share the surplus trade that does not, or cannot, find its way by water from the Upper Lakes to the great commercial marts on the Atlantic sea-board.

The Welland Canal, by far the most important artificial passage for those articles of commerce which constitute the Western trade, has already undergone two stages of existence. Commenced in 1824, it was first used as a channel of inter-communication between the higher Lakes and Ontario in 1829; capable, though presenting a somewhat rude and primitive style of construction, of locking through vessels of about 100 by 18 feet, with a light draft of water. In 1842 it began, under the auspices of the Provincial Government, to emerge from its infantile state of wooden locks, with, at most, seven feet of water on the sills, until, five years later, it assumed the higher order of existence in which it is now seen—adapted for vessels of 150 by 26 feet, drawing from 9 to 10 feet of water, and measuring 400 tons burden: the substantial and permanent manner in which all its structures have been executed, bearing evidence to the fact that the projectors of the then called "enlargement," considered that they were amply providing for the commercial requirements of the next half century to come, at least. If those calculations have proved erroneous, it is at all events satisfactory to reflect that the advance of civilization and commerce has outstripped the most sanguine expectations of the few far-seeing men with whom the Welland Canal was from the first a favorite "Hobby," and to whose patriotic exertions in its behalf Canada stands largely indebted for the development of her resources. It is, perhaps, equally well also, that the expenditure hitherto incurred should have erred on the side of "too little," instead of being, as might have been the case, indiscreetly in advance of the wants of the trade and the means of the country; and it is further gratifying to know that, owing to the progress which is so rapidly developing itself, internally and without, the Province is now in a condition to plan and commence a system of artificial navigation suited to the capacity of her unrivalled inland waters for all time to come, and the perfecting of which system is alone wanting to render the St. Lawrence undisputed mistress of the commerce of the Great West.

In such a system of navigation the Welland Canal must ever be the main link, and that it, in its present state, is fast becoming inadequate to the growing demands that are made upon it is hardly to be questioned. The crowded state of the reaches between locks, and the jostling of vessels to get through during the latter weeks of last season's navigation, and the consequent outcry amongst the owners and captains of vessels, are facts "common in men's mouths," scarcely calling for evidence to substantiate; though, if evidence were necessary, it is amply furnished in the Petition submitted in January of the present year to the Commissioners of Public Works, bearing the recent signatures of upwards of one hundred and forty merchants, forwarders, ship-owners, and others: who estimate the damage accruing from detention in the Canal, last season only, at no less a sum than \$259,510. The same petition had previously been laid before both branches of the Legislature, as far back as in May, 1850; having at that time no fewer than eight hundred and fifty-two signers, representing a capital of ten millions of dollars then embarked in the Lake trade. It may then be looked upon as conceded that that trade, since largely increased, as well as the interests of Canada generally, demand an enlargement of the capacity of the Welland Canal.

That the artificial navigation and river improvements hitherto undertaken, and carried out in Canada, both by the Imperial and Provincial Governments, are want-

ing in *system*. is scarcely to be questioned. On the Ottawa and Rideau route, for instance, we find no fewer than three different sizes of locks; and on the St. Lawrence, (in which I include the Welland Canal), we have also three sizes; all dissimilar to those of the Ottawa. Under such conditions, the lesser dimensions must, to a great extent, rule the size of vessels navigating those waters, rendering the locks of later construction and increased capacity in many instances useless: or, at all events, of little higher use than their old-fashioned forerunners.

The largest locks on the St. Lawrence navigation are to be found on the Cornwall Canal—200 by 55 feet. The other “enlarged” ones are of similar length but all ten feet less in width. Those of the Welland, above St. Catharines, as already stated, are 150 by 26 feet: the depth of water being in all cases nine feet.

This medley has proved a great and crying evil to the commercial interests of Canada; preventing the most capacious of our Canals from yielding as large returns as their cost would warrant, and debarring the St. Lawrence from much of the trade that, under other conditions, would follow that channel to the Ocean as naturally as the waters of the Great Lakes.

Taking Fond-du-Lac, on Lake Superior, as the head, and tide-water, anywhere in the Gulf of St. Lawrence, as the foot of our inland navigation, the question next suggesting itself, then, is the scale of lockage and canalising suited to the natural capacity of the Lakes in conjunction with the River; in other words, what may be the extreme size of craft that, shipping her cargo some fifteen hundred or two thousand miles inland, might, without breaking bulk in the interim, transfer it to sea-going vessels at Quebec or Halifax?

Much as we have already effected in the improvements of our navigable waters, and it must be admitted that the St. Lawrence Canals were boldly conceived and executed looking at the then condition of the Province, I do not think we can point to any one of our works as a standard of size on which to model those that may be in contemplation. Generations of steamers, progressively increasing in size, are built and pass away without ever having floated beyond the limits of their native lakes. Were our Canals large enough, the largest of these might make the voyage above sketched,—from Lake Superior to the sea,—and make it, too, with profit to their owners; for I take it to be a received axiom with the shippers on these waters, that the cost of carrying merchandise is in inverse ratio to the size of vessel employed:—the larger the vessel the cheaper the transport. The elements of a vast and, hitherto, almost untried trade exist in the mineral regions of Lake Superior; a species of trade, too, that would seek water-carriage in preference to any other where long voyages could be accomplished without involving trans-shipment. I allude to the transport of ore and metal in bulk, furnishing one substantial reason why the Welland Canal should be of size sufficient to pass the largest vessels afloat upon the Upper Lakes. The same reason will apply to the carrying trade of the West, generally; the merchandise sent out, consisting principally of grain, flour, and such like bulky commodities, inconvenient of trans-shipment. Any one observant in such matters who may lately have visited Chicago, cannot fail to have been struck with the immense extent of wharfage now in course of construction along the Lake front of the City; evidencing the importance of her shipping interests, and going far towards establishing the belief that the Lakes ever must command the balance of such trade over railways: Chicago possessing, more than any other city of the West, perhaps, the advantages of railway exit sea-wards. In support of such opinion, I would simply adduce the fact of its costing seven cents to carry a bushel of wheat from Chicago to Detroit (281 miles) by rail, whilst alike sum will pay for the carriage of the same measure of grain from Chicago to Buffalo, (nearly 900 miles), by water. In enunciating these views, I do not wish to be understood as placing our water communication in antagonism with the rail. Each has its mission to fulfil, with ample scope for successful operations. Without the

Lakes the "West" would be long in arriving at the point of civilization she has already attained; her rapid growth demands and ensures the construction of railways to an extent and with a success unknown in any other part of the world.

Entertaining such views, then, I believe we must turn to some other quarter for a standard on which to model our future plans of navigation, instead of adopting one from our own motley assemblage of locks. The Americans, ever awake to the commercial interests of their country, have, in the Canal they are now constructing to give access to Lake Superior, set us an example by which we would do well to profit in devising future improvements for the several links in the long chain of navigation to which it belongs in common with the project to which this report more particularly refers. The width of their Canal, on bottom, is 100 feet; their locks are 350 feet in length by 75 feet wide; the depth of water 12 feet. These gigantic proportions will receive the largest of those splendid steamers that have long been afloat on Lakes Eric, Huron and Michigan. Vessels of like burden will, doubtless, also belong to Lake Superior, when placed in navigable communication with her sister seas below,—an event which will add at once 335 miles to our chain of interior navigation; and the time will surely come when such steamers, laden in the ports of the vast fresh-water sea now about to be enfranchised to the mercantile world, can descend into Lake Ontario, bearing the mineral treasures of the north and the agricultural riches of the west on their first stage towards the markets of the old world. I propose, therefore, to plan the "Niagara Lateral Cut" on a scale commensurate with that of the Sault St. Marie Canal.

From the suggestions above put forth, it may be gathered that the project under discussion is looked upon as destined to occupy a higher position than that of a mere subsidiary branch of the Welland Canal, the reconstruction of which on the plan proposed would be tantamount to making an entirely new work. I conceive that the so-called "Lateral Cut" should be the first step towards the construction of a great Ship Canal, connecting Ontario with the Lakes above; and, looking forward to the unlimited commerce that will yet be carried on in these waters, that the mouth of the Niagara River—a natural harbour, of vast space, ample depth of water, great security, open the year round, and demanding no outlay for construction or maintenance—is, as an entrance for such Canal, entitled to the preference over any artificial haven we might possibly construct.

In the severe north-easterly gales which sweep the Lake for days, and sometimes for weeks together, every Spring and Autumn, as well as in the north-westerly and south-easterly blows, which, though of short duration, are violent while they last, the mouth of the river stands unequalled as a harbour of refuge. I have heard it objected to it that in the prevailing winds, which are south-westerly, vessels have some difficulty in beating-in, wind and current being both adverse; but this objection applying, of course, to sailing craft only, could be easily neutralised, where it would be so well worth while to do so, by the application of a steam-tug. The rapidly increasing importance of the trade would probably render such an auxiliary desirable in any case; and outside the mouth there is a broad roadstead, where the whole fleet of the Lakes might securely ride at anchor on the bar, if that, in Lake signification, can properly be termed a bar which has from two and a half to three fathom soundings on it at low water. For vessels outward-bound the prevalent wind is highly favorable, enabling them to drop easily out of the river—not a trifling advantage when it is remembered how largely the balance of trade is in that direction.

As above observed, sailing vessels only could be adversely affected by the sole natural objection that has, as far as I can learn, ever been urged against the Niagara River as a harbour; it can have no force in reference to propellers—and there can be very little doubt but that, especially with such a Canal as is here proposed, the

latter class of vessels is destined to wield the preponderance in the carrying trade of the Lakes.

The only other exception, I believe, that has ever been taken to the river harbour, viewed more particularly as an entrance to the Welland Canal, was of a military nature, owing to its proximity to the American frontier, and the consequent liability of vessels frequenting it to hostile embargo in event of war. The time has ceased to be, however, when that, which was strongly urged, and with reason, in 1824, could be quoted as a valid argument against turning to the purposes for which nature has so admirably fitted it, the finest harbour on Lake Ontario.

The place I have selected as the point of departure for the new Canal from the waters of the Niagara River, is in a little bay just before the dock-yard, and close on the north side of old Fort George. Thence to its junction with the Welland, above lock 25, at the village of Thorold, the distance by the surveyed route is  $12\frac{1}{2}$  miles; the ground, generally, being favorable, in a more than common degree, for the construction of the work. In point of directness it is almost a straight line; the first 10 miles being absolutely so, and the remaining  $2\frac{1}{2}$  miles winding easily up the "mountain" with four gentle curves. The sole objectionable feature in this location, and one which, with locks of the dimensions here proposed, will apply equally, I imagine, to any other possible route from Thorold to the Lake, not excepting that of the existing Canal, is that some of the locks will have to be built "in combination"—a system of lockage to be shunned, where practicable so to do. The elevation of Welland Canal water, at the point of junction, is 317 feet above the ordinary surface of the Lake: which ascent is to be surmounted by 25 locks, varying in lift between 9 and 14 feet.

The general arrangement of lockage will be nearly as follows:—Immediately at Niagara, ascending out of the river, four locks combined; aggregate lift 55 feet. Between these and the Queenston and Grimsby road ( $8\frac{1}{2}$  miles) there will be seven; least length of reach between any two of them, 700 feet; average length of reaches being upwards of a mile. At the crossing of the Queenston and Grimsby road, on Mr. Secord's farm, lot No. 2, Grantham, there are to be two locks (11 and 12) in combination. The next four, as far as foot of No. 17, will be separated by levels of 4000 feet to 800 feet in length. Of the remaining nine, one (No. 19) stands isolated, with a level of 500 feet below, and one of 1000 feet in length above it; the other eight will be in three distinct flights, of two, three, and three locks respectively. I give this arrangement merely as exhibitory of the general design, suited to the section of the ground, but subject, of course, to modifications and improvements in carrying out the details of construction.

The cutting on the first ten miles is very favorable, varying from 5 to 12 feet in depth, and all in earth. The two last miles present a somewhat rough section, and will be partly in rock; and the junction must be effected by a cutting of some 25 feet in depth, 1500 feet in length, and composed of hard, compact earth, overlying limestone rock, through both of which materials it will be necessary to excavate. This cutting will form the only difficult or *extra* costly one upon the route: corresponding in character to that known as the "little deep cut" on the Welland Canal, of which, in fact, it will be an extension.

The water courses to be crossed are ten in number: the principal ones being those known as the "Two Mile," "Four Mile," "Eight Mile," and "Ten Mile" Creeks; all of which will be served by culverts of moderate dimensions. The section of the ground admits in all cases of the drainage of the country being passed underneath the Canal; and the circumstance of its not being, in any instance, the recipient of the flood-water of the circumjacent district, may be looked upon as not the least of the advantages which this route may claim over that to Port Dalhousie.

I have next to deal with the cost of the undertaking. The figures referring to a scheme of so great magnitude, must necessarily sum up largely, and the construc-

tion of the "Lateral Cut," on the scale proposed, to wit, general width of Canal on bottom 100 feet, ditto at water surface 158 feet; locks 350 feet in length, by 75 feet wide, with an available depth of water of from 11 to 12 feet—will involve an expenditure of not far short of one million pounds currency: a detailed estimate of which is appended in tabular form. I doubt much whether the present Welland Canal could be enlarged to similar dimensions, between Thorold and Port Dalhousie, for an equal sum, to say nothing of the inevitable embarrassment certain to accrue to navigation during the progress of the works, and the consequently ensuing claims for "damage"—an item which it would be idle to attempt to estimate—and I am very sure that, apart entirely from the advantages contended for in favor of the river entrance, no new route can be found that will at all bear comparison, in any engineering point of view, with the one herein laid down.

So capacious a Canal as that contemplated by this large estimate of outlay could, of course, only be made available, in its highest sphere of utility, by having the upper portion of the Welland Canal enlarged to corresponding dimensions, or, by devising some other plan to make the communication, whatever the scale adopted, complete from lake to lake.

In that portion of the work to which my above estimate has reference would probably be involved one half the entire cost of completing the project through to Port Colborne; one lift lock only, at Allanburgh, to attain Lake Erie level, being called for above Thorold. The Welland Canal, as now seen, has cost, from first to last, about £1,400,000. The cost of carrying out this new project from Niagara to Port Colborne would be likely to border on £2,000,000. I believe, however, that the greater part of the enlargement of the long level between Allanburgh and Lake Erie might be judiciously, perhaps indefinitely, deferred, and an equally convenient and far less costly plan resorted to for affording to large, first-class paddle steamers and propellers the desired facilities of transit between the lakes. This is to be effected by recurring, in a measure, to the original design for the old Welland Canal—in turning to its proper account the free-water navigation afforded by the upper Niagara and Chippawa, or Welland Rivers. From Black Rock, below Buffalo, on the American side, and from Fort Erie, on ours, these points being practically the foot of navigation for merchant craft at present; there is sufficient depth of water for vessels drawing  $10\frac{1}{2}$  feet, down to the mouth of the Chippawa. Excepting a short obstruction at the mouth, and one inconsiderable bar within, the Chippawa Creek has from 12 to 15 feet soundings from Port Robinson, 10 miles above the mouth, to its confluence with the Niagara River; there being in that distance no appreciable fall. Here then we have a natural navigation, requiring but little outlay to render it available to the full capacity of the proposed Ship-Canal, all the way down from Lake Erie to within six miles of the head of the "lateral cut." To make these six miles navigable for the class of vessels we have in view, would call for the widening and deepening of the present Canal to the named dimensions, and the construction of one lock at Allanburgh and one at Port Robinson; the latter to lift from the surface of the Chippawa to the Erie level of the Canal, the difference being about nine feet. The expense attending this portion of the work of enlargement would probably be covered by £325,000: thus securing to us a complete steamer navigation, between Lakes, for a gross outlay of £1,325,000; leaving in undisturbed possession of schooner craft the Canal as it now is—tantamount, probably, to doubling its capacity for the passage of that denomination of vessel. There is trade sufficient "looming in the future" to keep both channels occupied to the full extent of their respective capacities.

I believe, Sir, I have now adverted to the most important questions bearing on the matter you have submitted to me, and will conclude by taking leave to observe that the project, great as it may appear, is surely well worthy the consideration of the Legislature, as it is plainly within its grasp to achieve it, when it is borne in

mind how far the results sought to be attained would surpass in magnitude the undertaking itself; for even allowing the corresponding improvements of the river navigation to be deferred for years, the new Welland Canal would open a great, uninterrupted steamer navigation between all the Lakes, and penetrating upwards of 1100 miles into the heart of a vast continent. If we do not undertake this most important and necessary work on our side, the Americans assuredly will on theirs, and what they undertake they will achieve. The natural advantages of situation, local facilities for construction, &c., are all with us; surely then we will not resign without a struggle, that supremacy of the great Lakes which the enviable possession of the noble river St. Lawrence, and the hitherto exclusive control of the connecting link between it and the inland seas above, have long conferred upon us. The success so far attending the experimental operations for removing obstructions in the rapids between Prescott and Montreal, under the scientific and skillful direction of Messrs Mailefert and Haasloff, would seem to promise the speedy attainment of one decisive step towards preparing the great river of which Canadians are so justly proud, to "fulfil its destiny,"—and the examinations now going forward to test the feasibility of making a Ship Canal to connect the waters of the St. Lawrence with those of Lake Champlain will solve another important problem,—as to whether there may not one day be a great southern communication open to our vessels, reaching tide-water, via the Hudson River, at New York. Of this I am, at all events, convinced: that where the vast operations of nature ask for comparatively so little artificial aid towards bringing her hundreds of miles of navigable water into useful connection, the doctrine which is latterly finding so many adherents in the mercantile and scientific worlds is not strictly sound,—namely,—that the day of Canals has gone by, and that henceforward Railways shall reign in their stead.

I have the honour to be,

Sir,

Your obedient servant,

W. SHANLY.

John Simpson, Esq., Mayor,  
Niagara, C.W.

## NIAGARA LATERAL CUT.

### ESTIMATE OF COST.

| Quantities.   | Denomination of Work.                | Price.  |    |    | Amount.  |    |    |
|---------------|--------------------------------------|---------|----|----|----------|----|----|
|               |                                      | £       | s. | d. | £        | s. | d. |
| 8,000,000 yds | Earth Excavation .....               | 0       | 1  | 2  | 175,000  | 0  | 0  |
| 90,000 "      | Rock .....                           | 0       | 5  | 0  | 22,500   | 0  | 0  |
| 25            | Locks .....                          | 22,500  | 0  | 0  | 562,500  | 0  | 0  |
| 10            | Culverts .....                       | 2,500   | 0  | 0  | 25,000   | 0  | 0  |
| 17            | Waste Weirs .....                    | 1,500   | 0  | 0  | 25,500   | 0  | 0  |
| 10            | Bridges .....                        | 1,500   | 0  | 0  | 15,000   | 0  | 0  |
| 21            | Miles stone facing to Banks .....    | 2,000   | 0  | 0  | 42,000   | 0  | 0  |
|               | Entrance Piers & upper Wharves ..... |         |    |    | 20,000   | 0  | 0  |
|               | Coffer-da us. &c. ....               |         |    |    | 5,000    | 0  | 0  |
|               | Lands and damages .....              |         |    |    | 50,000   | 0  | 0  |
|               | Engineering and Contingencies .....  |         |    |    | 47,125   | 0  | 0  |
|               |                                      | Total = |    |    | £980,625 | 0  | 0  |

C.

OTTAWA SURVEY.

SIR,—I have the honor to report on the Ordnance Navigation of the Lower Ottawa, viz: the "Carillon," the "Chute aux Blondeaux," and the "Grenville" Canals.

The lengths, capacity and relative position of these works are as follow :

1st. The Carillon Canal. commencing at the head of the Lake of the Two Mountains, about 22 miles above St. Ann, has a length of cutting of  $2\frac{2}{100}$  miles  
 Height of Lockage, upwards, at head ..... 13 feet.  
 Do Do downwards, at foot ..... 23 do.  
 And is supplied by a feeder from the waters of the North River...  $\frac{62}{100}$  m. long

There are three Locks; the one at the head, known as No. 3, lifts 13 feet, that being the height of feeder surface above the ordinary level of the Ottawa at the head of the Rapid.

The other two (Nos. 1 and 2) are combined, and situated at the foot of the canal; their lifts are 13 and 10 feet respectively, making an elevation of 23 feet above the Lake of the Two Mountains.

Deducting from which the lift of the head Lock (No. 3) ..... 13 feet.  
 Leaves for the total fall in the Carillon Rapids but ..... 10 "

The dimensions of the Locks are;

Net length from point to point of sills ..... 128 feet.  
 Net width between quoins ..... 32 " 6 in.  
 Least water on sills calculated for ..... 5 " 6 in.

In cross section the dimensions of the cuttings are very variable, being from 18 to 40 feet wide on bottom, with irregular slopes; the surface widths vary from 50 to 90 feet; the extreme depth of cuttings is 22 feet; the average all over about 10 feet: the whole in rock. The canal is designed for a minimum depth of water of  $5\frac{1}{2}$  feet, but not more than five feet can safely be counted upon for purposes of navigation.

The fluctuations of the Ottawa water above and below the Carillon Rapids is very considerable; the highest stage on record, dating the 15th May, 1845, registered on lower mitre sill of Lock No. 1 ..... 17' 6"  
 And the lowest is recorded on the 23rd September, 1846, when it registered on same gauge ..... 5' 6"

Above the Carillon Canal there is a reach of still river navigation for  $3\frac{2}{100}$  miles, reported to have a great depth of water throughout, but I have deferred taking the soundings until the ice shall afford facilities for doing so with accuracy.

At the head of this still "reach" we come to the second link in this chain of navigation, known as the

*Chute aux Blondeaux Canal,*

which has a length of but  $\frac{16}{100}$  of a mile, with one Lock (No. 4) of 3 feet 10 inches lift, and of equal capacity with those below it.

The average width of the the Chute aux Blondeaux cutting (all in rock) is about 37 feet, with almost perpendicular sides.

The mean depth of excavation is 28 feet, and of water available for navigation 6 feet. From the head of the Chute aux Blondeaux we have deep river navigation for one mile, bringing us to the foot of the

*Grenville Canal,*

The length of which is ..... 5<sup>78</sup>/<sub>100</sub> miles.  
 The Lockage..... 46 feet.

That being the fall of the Long Sault Rapids, which is overcome by seven Locks, presenting a singular medley in point of dimensions.

The four lower ones, Nos. 5 to 8 inclusive, were, I presume, intended to be in length from sill to sill..... 129 ft. 6 in.  
 And in width between quoins ..... 32 ft. 6 in.

But from imperfections of construction the actual lengths vary between..... 131 ft. 8 in. & 129 ft. 1 in.  
 And the width between..... 32 ft. 3 in. & 32 ft. 6 in.

The Locks are combined in pairs, Nos. 5 and 6 are situated at the foot of the canal and lift 8½ and 8 feet respectively ; Nos. 6 and 7, some 1,500 feet higher up, have each a lift of 8 feet.

The remaining three locks are isolated from one another and at long intervals apart.

Nos. 9 and 10 have lifts, the one of 6 feet the other of 7½ feet, while No. 11, situated at the head of the cutting, acts as a guard lock.

In their main dimensions they differ entirely from those already enumerated and to a certain extent even from one another.

Their measurements are as follows :

|                 |                    |   |                    |
|-----------------|--------------------|---|--------------------|
| Lock No. 9..... | 106 ft. 8 in. long | ✕ | 19 ft. 5 in. wide. |
| “ “ 10 .....    | 107 ft. 3 in.      | “ | ✕ 19 ft. 4 in. “   |
| “ “ 11 .....    | 108 ft. 6 in.      | “ | ✕ 19 ft. 3½ in. “  |

From these figures it will be seen that the capacity of all these works is practically controlled by Lock No. 11, and consequently the size of vessels capable of navigating the Lower Ottawa, limited to about 100 feet in length by 19 feet in width. The depth of water on the sills of these small Locks is the same as in the larger ones below, viz :

At low water..... 5 ft. 6 in.

The sectional area of the Grenville Canal is not uniform, the width of bottom at 5 feet below surface is generally about 15 feet, though it is sometimes as much as 20 and occasionally even 30 feet wide.

|                                             |          |
|---------------------------------------------|----------|
| Its greatest width at water surface is..... | 64 feet. |
| Least width on same line.....               | 23 “     |
| And the general surface width about.....    | 44 “     |
| Extreme depth of cutting is .....           | 25 “     |
| The mean depth about.....                   | 11 “     |

The excavations are wholly in rock, and the bottom line is so irregular that not much over 5 feet can be counted on as the maximum draft of vessels that could be floated through the cutting.

The following abstract will place the leading features of the whole of this portion of the Ottawa navigation in a more condensed form for reference than as above detailed :

Total distance from foot of Carillon to head of Grenville Canal..  $12\frac{68}{100}$  miles.  
Of which the portion canalled is :

|                                 |                         |                         |
|---------------------------------|-------------------------|-------------------------|
| 1st. The Carillon section ..... | $2\frac{9}{100}$ miles. |                         |
| 2nd. Chute aux Blondeaux .....  | $\frac{16}{100}$ "      |                         |
| 3rd. Grenville section.....     | $5\frac{78}{100}$ "     |                         |
| Total length of cuttings.....   | —                       | $8\frac{3}{100}$ miles. |

The total lockage is..... 85 ft. 10 in.  
Distributed as follows :

|                                                                  |      |
|------------------------------------------------------------------|------|
| 1st. On the Carrillon section, three locks, Nos. 1, 2 and 3..... | 36 0 |
| 2nd. Chute aux Blondeaux, one lock, No. 4.....                   | 3 10 |
| 3rd. Grenville section, seven locks, Nos. 5 to 11.....           | 46 0 |

Of these eleven locks the first eight have an effective capacity of..  $128 \times 32$  feet.  
The other 3 can be reckoned at .....  $106 \times 19$  "

Twenty-six feet of the lockage may be put down as lost, owing to the water surface of the Carillon section, the supply for which, as already observed, is drawn from the North River, being at an elevation of 13 feet above the general level of the Ottawa at the upper entrance of the Canal. This mode of construction involves the necessity of two lockages more than the natural fall of the river (which is but 10 feet) would exact, and will have to be done away with, and the canal fed from the main river, whenever an enlarged system of navigation may come to be adopted for the Ottawa. To treat of the best manner of carrying out such an improvement will belong more properly to my future report on the general result of the "Ottawa Survey," and need not therefore be more particularly noticed here.

I have now to advert to the existing condition of the works, and with regard to their most vital parts—the locks—I beg leave to report, that they are all in bad order, some of them indeed in an almost ruinous condition. Nos. 1 and 2 at the foot of the Carillon Canal, especially, are in a dilapidated state: the walls of the latter are so leaky that when the lock is filled the water percolates through them and has worked passages behind and through those of number one, till the mortar is nearly all washed out and the walls become so rickety as to overhang perceptibly—and are, in fact, not safe.

To render these two locks permanently secure it would be necessary to have them pulled down and wholly rebuilt from the foundations (using of course the same stone) but in view of the mooted enlargement of the scale of Ottawa navigation, temporary repairs only are, I presume, to be calculated for in reference to existing works; even for such partial repairs, however, as would render the two lower locks of the Carillon section properly available during the least period, say five years, that they are likely to be still required, the walls of No. 1 should be pulled down to low water level and reconstructed: whilst the lower recess and quoin walls of No. 2 (adjoining No. 1) should be wholly taken down and relaid thoroughly in cement mortar so as to cut off all leakage between the two locks.

The upper recess of No. 2 and both those of No. 3 will require to be dealt with to a certain extent after the same manner, and I estimate that the three locks of the Carillon section will require, to put them in servicable condition, an expenditure of £3,000.

At the point where the waters of the North River are diverted into the feeder two dams have been constructed, one on each side of an island, which there divides the stream into two branches. These dams are in a miserably inefficient state of repair, consisting of little more than heaps of loose stone thrown in

indiscriminately, and which are to a great extent washed away by the ice and freshets every spring, thus calling for constant renewal. From this cause the navigation of the Canal is much impeded during the months of August and September through want of an adequate supply of water.

Proper dams of a sufficiently permanent character can be constructed for about £300.

The upper entrance of this canal is obstructed by a bar, consisting of the remains of an old earthen dam. The extent of this obstruction is not great, but I have left its actual dimensions to be ascertained from ice soundings. It can very easily be dredged out, and at a small cost, probably not to exceed £60, if a dredge can be conveniently procured.

There is a somewhat similar shoal at the foot of the Chute aux Blondeaux Lock, created by the falling in of a protection wall and some embankment. The stones and earth from which now lie heaped in the centre of the channel. The full extent of this obstruction also remains to be ascertained, but I do not think that it exceeds 400 cubic yards, and may probably be removed for £50.

No. 4 Lock, which has less than four feet lift, can probably be made to serve some years longer without any great extent of repairs, but this as well as those on the Grenville section, Nos 5 to 11 inclusive, will require patching from time to time, consisting chiefly of the partial taking down and relaying in cement (to obviate leakage) of portions of the gate recess and hollow quoin walls.

From the mere external appearance of the lock walls it is not easy to calculate to what extent the relaying of the masonry may be necessary, but I estimate that an average sum of £400 per lock would be sufficient to maintain each in an efficient state for service for some years to come. This gives a gross sum of £3200 for the repairs of the eight locks above the Carillon Rapids. The expenditure of which may be spread over the next two years.

Across the lower entrance of the Grenville cutting there extends a bar of rocks which impedes the navigation at the lowest stages of the water, its surface being eighteen inches above the level of the mitre sill (the steamers on this route rarely draw more than four-and-a-half feet though the canals are designed for five-and-a-half.) Immediately outside this bar, which is about twenty feet in width, there is very deep water, and two or three shots judiciously lodged should have the effect of wholly removing it: the cost of which operation, there being, as I understand, the requisite appliances for under water blasting now in use at St. Ann, need not exceed £75.

The upper entrance is also barred; but to all appearances only by an accumulation of loose boulders and gravel washed down from time to time from the banks. I design to have thorough soundings taken here as at the points below when the ice has formed, and am of opinion now that by means of the dredge or the rake this shoal can be removed for less than £80.

It is not unlikely that the rake may prove fully sufficient for, and if so would certainly be the cheapest mode of getting rid of all these bars except the rock one already alluded to.

The lock gates do not call for any immediate repairs, being in sufficiently sound condition to withstand the ordinary wear and tear of next season's work at all events, and in the foregoing items, an abstract of which is given below, is I think embraced all the expenditure at present necessary to be estimated for. The cuttings being, as I have said wholly in rock, the section of the canals remains nearly as originally excavated, no deposit large enough to affect their utility having taken place.

## ABSTRACT.

*Estimated Cost of Repairs, &c.*

|                                                    |        |   |   |
|----------------------------------------------------|--------|---|---|
| Partial taking down and relaying eleven locks..... | £6,200 | 0 | 0 |
| Reconstruction of dams on North River.....         | 300    | 0 | 0 |
| Removal of shoals and bars.....                    | 265    | 0 | 0 |
| Total.....                                         | £6,765 | 0 | 0 |

The ordnance property between Carillon and Grenville embraces a strip of land along such section of canal varying in width from 50 to 200 feet and upwards: the boundaries of which are well defined by stone land marks.

Not having had duplicates yet made of the plans and sections of these works as lately surveyed under my instructions of 22nd July, I beg leave to retain the originals in my possession for the present, unless immediately required by the Department.

The whole being respectfully submitted.

I remain,  
Sir,  
Your ob't. serv't.,

W. SHANLY.

T. A. BEGLY, Esq.,  
Secretary Public Works,  
Toronto.

## D.

TORONTO, 2nd March, 1857.

SIR,—I have the honor to submit for the information of the Commissioners, the following report on the River St. Maurice works, and the various subjects therewith connected.

In the first place, in order that a just appreciation may be formed of the advantages which are resulting from the expenditure which has taken place, apart from its effects in developing the timber trade, I would respectfully invite the attention of the Commissioners to the extraordinary rapidity with which colonization is progressing in the section of country more immediately affected by these works. From the settlements back of Berthier, to those in the rear of St. Anne de la Perade, a great movement is being made towards the St. Maurice territory. Lots are occupied almost as soon as they are surveyed; and it is worthy of remark that the settlers are generally of the opinion that the farther back they proceed, the better they find the quality of the land. The principal new settlements are those extending back from St. Barnabé and Shawenegan, to the west of the St. Maurice, and from Lac Coscette and the Rivière des Envies, to the east. This movement on the part of the settlers has its origin in the demand for agricultural produce which the lumber trade is creating in the interior, and that, again, it is needless to say, is due to the works which have rendered the St. Maurice River available to the enterprise of the lumbermen.

The annexed map shows the position of the principal new settlements, and of the various places referred to in this report.

In regard to the timber trade, it is gradually increasing, notwithstanding the severe pressure which has been felt in that branch of business for some years past. A return of prosperity would at once have the effect of greatly extending the trade of the St. Maurice, and, as a consequence, of giving a fresh impulse to colonisation, the requirements of the lumberman always affording the best possible inducement for the settler to follow him. The revenue arising from timber dues, ground rents, &c., will, I am informed by the Crown Land Agent, amount for the present season to about £10,000.

To form a due conception of the progress which has been made, it is but necessary to consider the territory as it now is, in comparison with what it was when the works were first fairly commenced, about four years ago. At that period settlement was at a stand still, and the vast region drained by the St. Maurice and its territories an unexplored wilderness, which returned no revenue to the Government.

The unprecedented rapidity with which the works already accomplished have occasioned the resources of the territory to be developed, affords the most convincing argument as to the expediency of continuing to meet the requirements of the trade, and facilitate colonization, by such further improvements as may from time to time become necessary.

I proceed to enumerate those which I conceive to be the most indispensable at present; and, also, to report briefly on the work that has been performed during the last season—that is, since the date of my last annual report.

#### *La Tuque.*

The large dam on the east side has been completely filled with stone, and an additional pier built for its support. This renders the work, so far as it has been carried out, perfectly secure. It is necessary, however, that side piers should be built on either side of the basin, immediately below the falls, inasmuch as timber, after passing the dam, accumulates, and remains in the eddies, where the surge hurls it continually with great violence on the rocks, to its serious detriment. Side piers would effectually prevent it from sustaining any damage. It would also be necessary to excavate a point of rock and build a facing of crib work a little higher up, on the west side. The amount of excavation would be about 1,000 cubic yards, and the entire length of the side piers and facing of crib work, about 1,200 feet. The prices I have set down for the wood-work, although they may appear low, are ample, inasmuch as the timber can be had quite near the work.

The completion of the works at La Tuque has become essentially necessary, as several of the lumbermen are preparing to carry on extensive operations beyond that place.

#### *Managance Rapids.*

For the removal of the obstructions to the navigation at this place, a contract was given out last summer to the St. Maurice Lumber Company. They succeeded in accomplishing a considerable portion of the work, but the water having suddenly risen, they were obliged to suspend operations, and cannot resume them until next summer. The contract involves an outlay of £300, but an additional sum of £250 will be necessary to remove the impediments thoroughly, and buoy the channel so that steamers can pass at extreme low water.

#### *Grande Mère.*

At this place the works are in good order; new scows were provided last spring, and during the present winter the wing dam has been partly faced with plank.

*Shawenegan.*

A large pier was sunk in 35 feet water, above the falls, and it was of essential advantage in facilitating the work of extending the booms, and securing them in their position. The piers in the lower bay and at the Hêtre boom were raised, as proposed, to a sufficient height, and furnished with boom posts, chains, &c. The other piers proposed to be built at this place are now under contract, and the work is progressing. An additional sum of £250 will be required to complete the work now in hand, and about £187 10s. to purchase additional chains. It would also be of advantage to build a good house for the accommodation of the Slide Master and men attending the booms, for which purpose I have set down £200 in the estimate.

*Grais Falls.*

The booms here are in good order. The contract for the crib-slides provides for all the work at present contemplated.

*Mouth of the St. Maurice.*

An additional pier was built above the bridge in the east channel, and boom posts put in the other piers, as recommended in my last annual Report. On the prospect of the trade being increased, however, it would be necessary to build two additional piers in the east channel, and I have accordingly included them in the estimate.

*St. Maurice Roads.*

Since the lumber trade was commenced on the St. Maurice, those engaged in it had no greater difficulty to contend with than the forwarding of their supplies from Three Rivers to the navigable water at the Grandes Piles. The road made last summer by the Crown Land Department, between the latter place and Shawenegan, has done much to obviate this difficulty, but the old road from Three Rivers to Shawenegan, especially that part of it between the St. Maurice Forges and the St. Etienne Church, is still in such a state as to render it very expensive and difficult to send supplies over it. No greater boon could be conferred on the trade than to put it in thorough repair, so that loaded vehicles could pass over it with facility at all seasons; and not only would the lumbermen be benefitted, but, as this road is the main high-way leading up the St. Maurice, its improvement would have a most important and beneficial influence in promoting and advancing the settlement of the country. For the first fifteen miles of the road, that is for the part between Three Rivers and the St. Etienne Church, I have set down £100 per mile, and £75 per mile for the last eight miles on the portion between St. Etienne Church and the junction of the new "Piles Road" in Shawenegan, the whole distance being about 23 miles.

*New Works.*

Next in importance to the road, and the proposed additions and extensions to the works already in operation, is the improvement of the Iroquois Falls on the Vermillion. This River, as will be seen on reference to the map, joins the main St. Maurice from the westward, about eighteen miles above La Tuque. It drains a great extent of country abounding in valuable timber, but the Falls referred to form an absolutely impassable barrier to the safe descent of either logs or squared timber. In my last annual Report I proposed an outlay of £5,000—as much as should be necessary of that sum to be applied in the first instance towards sliding the Falls, and the balance to removing the obstructions between them and the St. Maurice, leaving any further improvement that might be necessary to the enter-

prise of individuals. If this were done, a wide extent of territory would be thrown open, and the sale of the valuable limits thus rendered accessible, would, I am confident, in the course of two or three years, amply repay the outlay.

*Dams at the Grandes Piles.*

Under the head of new works I may mention that it has been suggested by some of those principally interested in the trade of the River, that great advantages would result from building a dam across the St. Maurice at the Grandes Piles, whereby it is argued that a sufficiency of water would be obtained to float logs over all parts of the shoals above that place at the season of the lowest water; that the steamboat navigation would be facilitated at the Miquinnac flats and Managance rapids; and that water-power would be gained for the supply of mills and manufactories, which, it is believed, will soon be required to meet the wants of the growing settlements in that direction. On this subject I am not prepared to offer a decided opinion, having made no survey of the locality. Unquestionably it would be of great advantage to the steamboat navigation to have a greater depth of water on the Miquinnac flats and at the Managance rapids; but the building of the dam would be a work involving a considerable outlay, and I think it may, without detriment to any particular interest, be left over for the present.

Last year the working of the booms and slides was attended with complete success, the cost of maintenance being at the same time considerably less than during the previous season. This was in part owing to the lowness of the water, but chiefly to the additions which were made in the works. The improvements now proposed would have the effect of still further lessening the cost of maintenance.

I beg respectfully to submit the annexed estimate to the consideration of the Commissioners, and

I have the honor to be,

Sir,

Your most obedient servant,

(Signed),

S. J. DAWSON.

*Estimate of the probable cost of the works referred to in the foregoing Report.*

|                                                                                                                                                                                           |      |        |      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|--------|------|
| La Tuque—Side piers and crib facing, 1,200 feet in length, with an average height of 12 feet, and breadth of 10 feet, will require 14,400 feet new timbers facing the stream, at 7½d..... | £450 | 0      | 0    |
| 35,000 feet round and flatted timber for bottoms, ties and sides of crib-work next shore, squared timber not being necessary, at 4d.....                                                  | 583  | 6      | 0    |
| 3,400 cubic yards stone filling, the stone being close to the works, at 2s. 6d.....                                                                                                       | 425  | 0      | 0    |
| 4,480 lbs. iron for rag bolts at 5d.....                                                                                                                                                  | 93   | 6      | 8    |
| 1,000 cubic yards rock excavation, at 7s. 6d.....                                                                                                                                         | 375  | 0      | 0    |
|                                                                                                                                                                                           |      | £1,926 | 12 8 |
| Managance Rapids—To remove impediments and buoy the channel so that steamers can pass at the lowest water, an additional sum is required.....                                             |      | 250    | 0 0  |

|                                                                                                                                                                |      |    |   |             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----|---|-------------|
| Shawenegan—To complete work now in hand.....                                                                                                                   | 250  | 0  | 0 |             |
| To purchase 200 fathoms chain of about $\frac{3}{4}$ inch, say 100<br>cubic yards at 3 <sup>7</sup> s. 6d .....                                                | 187  | 10 | 0 |             |
| To build a house for accommodation of Slide Master and<br>men attending booms .....                                                                            | 200  | 0  | 0 |             |
|                                                                                                                                                                |      |    |   | 637 10 0    |
| St. Maurice Roads—15 miles from Three Rivers to St.<br>Etienne Church, will cost, at £100 per mile.....                                                        | 1500 | 0  | 0 |             |
| Eight miles from St. Etienne Church to the junction of<br>the new Piles Road, at £75 per mile, will cost....                                                   | 600  | 0  | 0 |             |
|                                                                                                                                                                |      |    |   | 2100 0 0    |
| Mouth of the St. Maurice—2 piers, 30 × 20 feet to be<br>sunk in 12 feet water, will require 6,000 feet face<br>timbers at 9l.....                              | 225  | 0  | 0 |             |
| 7,000 feet flatted bottoms and ties at 6d.....                                                                                                                 | 175  | 0  | 0 |             |
| 750 cubic yards stone filling, at 5s.....                                                                                                                      | 187  | 10 | 0 |             |
| 2,240 lbs. iron rag bolts, at 5s.....                                                                                                                          | 46   | 13 | 4 |             |
|                                                                                                                                                                |      |    |   | 634 13      |
|                                                                                                                                                                |      |    |   | £5548 6 0   |
| Additional for superintendence and contingencies, 10s..                                                                                                        |      |    |   | 551 16 7    |
|                                                                                                                                                                |      |    |   | £6103 2 7   |
| Vermillion River—To slide the Iroquois Falls and re-<br>move the impediments between them and the main<br>St. Maurice, will require, as per Report, a sum of.. |      |    |   | 5000 0 0    |
| Total.....                                                                                                                                                     |      |    |   | £11,103 2 7 |

(Signed,)

S. J. DAWSON,  
Superintendent River St. Maurice Works.

## E.

OTTAWA, 11th December, 1856.

Sir,—Agreeably to instructions received by me, from the Honorable the Commissioners of Public Works, (when they were in Ottawa on the 6th day of October last,) to proceed to the Saguenay as far up as Lake St. Jean, and examine the River for the purpose of ascertaining what improvements would be required to enable parties to take down lumber from that Lake to the tide water, also the cost of the improvements, and at what time of the year the works should be constructed, and lastly, whether there is a sufficient quantity of lumber on the tributaries emptying into Lake St. Jean, to warrant the Government in expending money in improving the river.

In accordance with those instructions, I left this City on the 9th day of October, and, on arriving at Quebec, found that the steamboats had discontinued their trips to the Saguenay, but on the evening of the 13th succeeded in getting a passage on the steamer "Passport," bound for a point on the St. Lawrence, about 50 miles below the mouth of the Saguenay. I and my assistant landed next morning at Tadousac, where we were obliged to wait 4 days for a fair wind to sail up the Saguenay as far as Chicoutimi. We arrived at that place on the morning of the

18th, and, as the season was so far advanced, after procuring our outfit, men, canoes and provisions &c., we left Chicoutimi on Sunday morning the 19th for Lac St. Jean.—I thought it advisable to proceed to that place with as little delay as possible, and to make my examinations on the return trip. I was thus enabled to see all the obstructions before making any surveys, and to determine the class of improvements that would be most suitable for the River.

Arrived at Lac St. Jean by way of the Little Discharge on the evening of the 21st, I found after careful examination that both the discharges and Lac St. Jean ordinarily rise from low to high water about 18 or 20 feet, and in some places, where the river is narrow, much more.

The volume of water in the Little Discharge is about the same as in the River Gaincau, but the main discharge, I am satisfied, is 20 times larger. The improvements on the Saguenay River must be for single sticks of timber, and the only way in which lumber can be taken out of Lac St. Jean is by the Little Discharge; the obstructions are comparatively trifling, and will be easily overcome by improvements which are sure to work satisfactorily, as, fortunately, there are four channels forming the outlet from Lac St. Jean into the Saguenay Little Discharge. These I would propose to dam up, with the exception of one, and that one about one half; by this means the water can be regulated to suit the works recommended to be constructed on this branch of the River below. The damming up of those channels at the Lake can do no harm, for the water that is not required in the Little, would pass down the main discharge, while improvements further down the river would suffer no injury from floods, and at the same time would be easily managed. The accompanying sketch will shew the nature and extent of the required improvements, which, when constructed, will establish an unbroken chain from Lac St. Jean to Chicoutimi or the tide water, at which latter station a strong retaining boom should be placed.

Each of the four channels above referred to is about  $\frac{1}{4}$  of a mile in length, that is from the lake to the place where they all unite: in that distance there is a fall of about 20 feet. No improvements will be required except damming up the channels at the head, as before described, which will have the effect of regulating the water in the Little Discharge.

All these channels have solid rock bottoms and bold shores. From the foot of the rapids for a distance of 3 miles, the river is broad and deep; at the lower end of this reach there is a rapid called L'Islet which falls in the distance of  $\frac{1}{4}$  of a mile about 12 feet. Here there is an Island near the middle of the stream: one of the channels thus formed is safe, the other should be dammed up. The lower end of the rapid will be improved by the construction of a dam farther down the river (about two miles). The river in that distance is a fine sheet of water, broad and very deep, and if a boom 1000 feet long were placed as shewn on the sketch, 500,000 saw logs could be retained with perfect safety. From the last mentioned dam for a distance of  $1\frac{1}{2}$  miles the river falls about 90 feet, forming what is called Gagnon Rapid, one of the worst I have ever seen. At some places it is nearly half a mile wide, and full of large boulders and masses of rock that have fallen from the high shores. This, (Gagnon Rapid) I consider is the grand obstruction in the river from Lac St. Jean to the tide water, and the only improvement practicable is sliding. The required slide would have to be 6,750 feet long, 4 feet wide and 3 feet deep—the average height in the whole distance would be ten feet. For a foundation I would recommend bents, as requiring the smallest quantity of timber, and not being liable to settle. (*See cross section of slide on sketch.*)

The following is an estimate of the quantities and cost of materials required to improve the river, based on careful measurements and calculations:

The whole length of the 4 dams closing up the channels at the lake, of the one at L'Islet, and of those immediately above Gagnon Rapid and the head of the

|                                                                                                                                                                                                                                         |       |    |   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----|---|
| slide, will be about 1,250 feet, and their average height 18 feet. The quantity of timber for all the dams, say, sided timber 12 inches thick measured in the work, will be 57,888 feet, the cost of which at 9d. per foot will be..... | £2170 | 16 | 0 |
| Covering plank 4 inches thick B. M. 124,800 at 65s.....                                                                                                                                                                                 | 405   | 12 | 0 |
| Iron for dams in pounds, 16,536 at 6d.....                                                                                                                                                                                              | 413   | 8  | 0 |

Total cost of all the dams.....£2989 16 0

The quantities of materials and cost of the slide 6,750 feet long, 4 feet wide and 3 feet deep, will be as follows—viz.:

|                                                                                                          |      |    |   |
|----------------------------------------------------------------------------------------------------------|------|----|---|
| 675 pieces, cross sills 12 feet long, 12 x 12, B. M. 97,200 feet, at 65s..                               | £315 | 18 | 0 |
| 1350 " " braces for lower posts, 8 feet long, 6 x 6 ditto                                                |      |    |   |
| 32,400 feet, at 65s.....                                                                                 | 105  | 6  | 0 |
| 675 pieces for caps, 10 feet long, 10 x 10 ditto, 56,250 feet, at 65s..                                  | 182  | 16 | 3 |
| Cubic feet of timber in stringers, 13,500 at 9d.....                                                     | 506  | 5  | 0 |
| 1,125 Key Blocks 12 feet long, 10 x 10, 112,500 feet, at 65s.....                                        | 365  | 12 | 6 |
| 2,250 posts for side of slide, 5 feet long, 10 by 10, 75,000 feet, at 65s.                               | 243  | 15 | 0 |
| 2,250 short braces, 2½ feet long, 4 x 4, 7,500 at 65s.....                                               | 24   | 7  | 6 |
| Plank for slide, 412,250 feet.....                                                                       | 1339 | 16 | 3 |
| Spikes and Rock Bolts for ditto, in pounds, 6,600 at 6d .....                                            | 165  | 0  | 0 |
| Cubic yards excavation at head of slide, 942 at 7s. 6d.....                                              | 353  | 5  | 0 |
| Cost of clearing strip 100 feet wide, 6,750 feet long for site for slide, and to guard against fire..... | 150  | 0  | 0 |
| Cost of Bulk head, stop logs, crabs, &c.....                                                             | 100  | 0  | 0 |
| " side boom and piers at head of slide.....                                                              | 93   | 10 | 2 |

Total cost of slide..... £3945 11 8

Good sound white pine timber, suitable for the above works, can be found in the immediate neighborhood of their respective sites.

Estimate for a retaining boom at the head of the long slide, 1000 feet long:— This boom to be made of white pine timber, sided 15 inches thick, and to shew a face at the small end of not less than 15 inches, and to be in lengths of not less than 40 feet each. To be skein-chained with ¾ inch cables, and receive caps and pickets at each point. Caps to be 12 feet long and 6 inches thick. Pickets to be of white oak, 5 inches in diameter, turned in a lathe. All the materials before described to be put together and coupled at the rate of 5s. per lineal foot.—£250.

I have always found that booms made on the principle above specified were the strongest and most durable.

From the foregoing figures it will be seen that the total cost of improvements recommended by me for the Little Discharge is:

|                       |       |    |   |
|-----------------------|-------|----|---|
| For Dams.....         | £2989 | 16 | 0 |
| " Long Slide, &c..... | 3945  | 11 | 8 |
| " Boom.....           | 250   | 0  | 0 |
| In all.....           | £7185 | 7  | 8 |

These improvements are all that would be required, and when consummated, timber can be run from Lac St. Jean to the tide waters at any season of the year, provided the ice forms no obstruction.

As I was further instructed to get all reliable information respecting the quantity of timber around Lac St. Jean and its tributaries, I called on M. Duberger, the resident Crown Timber Agent at Chicoutimi, who kindly furnished me with a report on that subject, and also gave me a sketch compiled from French field notes

of explorations and measurements in that section of country, by the R. R. Father Jesuits, both of which I have the honor to forward herewith to the Department, I also obtained information from other sources, corroborative of all that is stated in the documents transmitted. Such being the case, I am of opinion that the Government would be justified in making the outlay recommended. Moreover, a large revenue would be derived when these works are completed, for, supposing that only 200,000 saw logs would be cut annually, the Government duty, at 5d. per log would amount to..... £4166 13 4

Slidage on same quantity, at 2d. per log..... 1666 13 4

And if, 1,500,000 feet of white pine were annually cut (and this is a small quantity for so large a territory) the duty on the same at  $\frac{1}{2}$ d. per foot would be..... 3125 0 0

Slidage and Boomage on do., at 4d. per stick, 70 ft. being the average 357 2 10

---

£9315 9 6

Unless the river is improved by public or private enterprise, the country can derive no benefit from the vast timber lands situated around Lac St. Jean.

I have been informed that the country near the Lake is favorable for farming operations, and if lumbermen were actively engaged in the neighborhood, settlers could dispose of their surplus produce at high and remunerative prices.

Although I was not called upon by the Honorable the Commissioners to report on any other improvements than those I have already mentioned, still it appears to me that there will, in all probability, be a great many applications for limits on the rivers emptying themselves into Lake St. John, and that it will be indispensable to have a retaining boom at the head of the tide water at Chicoutimi.

Mr. W. Price has a boom  $2\frac{1}{4}$  miles long, in a very good position, but it is too slight to be of much service in holding a large quantity of timber. That gentleman has a large number of anchors and chains, which support his old boom, and if he gave them for the new one, the expense would be very much lessened. I therefore estimate the cost of a strong boom,  $2\frac{1}{4}$  miles long, without the anchors and guy chains at £2500.

If the Honorable the Commissioners should decide that the Saguenay works be proceeded with, I would recommend their being done by contract, and that the contractor or contractors be allowed one year to complete those in the Little Discharge. Articles of agreement should be executed as early as April next, which will enable parties to procure materials for the summer's work; this can be attended to when the water is falling, as the dams at the head of the Discharge cannot be built till low water. If the retaining boom at Chicoutimi is to be made (and I do not think that lumbering operations can be carried on successfully without it) the contractor should be allowed six months longer than the time in which the other works will have to be completed, as lumber suitable for the boom will have to be procured near Lac St. Jean, and passed through the new slide. By this arrangement the boom would be in its proper place, and ready to receive timber; in the spring following.

The accompanying sketch shews the Little Discharge from Lac St. Jean, the sites of the proposed works, the elevation of dams, cross sections of dam and slides, and the principle on which the booms are to be put together; and I trust that it will afford to the Honorable the Commissioners the information desired.

I have not sent specifications for the construction of the side dams and booms, but shall do so if required, as I have copies of my notes and drawings.

In submitting the above,

I have the honour to be, Sir,

Your most obedient servant,

(Signed)

HORACE MERRILL,

Superintendent of Ottawa Works.

**F.**

MONTREAL, 10th October, 1856.

Agreeably to a reference made in July last, relative to improving the Rivers Yamaska, St. Francis and Nicolet, situated on the south side of Lake St. Peter, I cursorily examined, in the early part of September, these streams, from their junction with Lake St. Peter upwards, to such points or places in the interior where the channels become more or less barred by obstructions, of so formidable a nature that to remove or otherwise overcome them appeared to exceed the limits contemplated in my instructions, and, if I mistake not, in an equal degree, at least exceed the extent of trade likely to be benefitted.

The accompanying sketches, projected from observations made in passing, shew the correct soundings taken at the time along the different channels pointed out by experienced pilots, and give a tolerably fair representation of the relative distances, position and outline of the respective rivers, so far as examined, which it is believed will afford, in the absence of more elaborate surveys, a tolerably correct idea of the capacity of each, its suitableness or otherwise for improvement, and furnish the chief data on which to base an approximate estimate of the expenses of such improvements as may be considered judicious to render them in some measure navigable to a class of vessels adapted to the trade, so far as the natural difficulties encountered will admit.

But before entering into detail, it is considered proper in order to avoid repetition, to bring under the Commissioners' notice a few leading facts applicable to each case, if not to most of the Rivers that discharge into Lake St. Peter.

It being well known that the ship channel between Quebec and Montreal passes nearly through the centre of, and parallel with the Lake, that between it and the shore on either side there is a broad margin of shoal water, which on the south side at some places is fully three miles in width, and that these flats consist generally of soft clay, occasionally covered with fine sand, especially at the outlets of rivers where sand and other debris seem to have been deposited from one quarter to half a mile outwards from the shore, such deposits being found to a greater or less extent in every case—the place most free from it being the western outlet of the River Yamaska, a branch several miles in length, running nearly at right angles to the main body of that river, and parallel with the St. Lawrence.

It is not intended to discuss here whether these bars result from the current of the Rivers meeting the still water in the Lake, or are formed through the means of ice carried down in large masses that get grounded at the mouths of the rivers before the Lake ice breaks up, thereby preventing the detritus from passing off.

It is sufficient, for the present purpose, to be aware that these effects are produced by a cause or causes not likely to be removed by merely deepening the channel, as the experience of every one who has given attention to such subjects fully bears out the fact that where bars similarly placed have been removed by dredging, they in general have again accumulated, unless efficient means have been adopted, to prevent the possibility of their formation, and it is no less true that in many cases the best devised plans for the protection of artificial channels have proved insufficient to effect the object, particularly at mouths of Rivers subject to frequent variation of level, that in their course carry with them much alluvial soil, whilst the direct, and in some cases indirect action of ice that collects at the outlet, exerts an influence in the formation of such bars which no ordinary precaution can obviate.

These facts are stated with a view of pointing out some of the unavoidable

difficulties to be overcome, and the uncertainties connected with the satisfactory accomplishment of the class of improvements suggested in the reference made.

Having made these general remarks, it is proposed to draw attention briefly to each of the three Rivers alluded to, in the order following, viz :

### YAMASKA RIVER.

This river has its source in Missisquoi, passes through and drains a considerable extent of the Counties of Rouville, St. Hyacinthe, and Richelieu on the west; and Shefford, Bagot, and Yamaska, on the east; during high water in the spring it is navigated by barges and other craft for a distance of about 24 miles above its outlet, but towards mid-summer, in ordinary seasons, vessels of very light draught only can pass, and even these with difficulty, the channel in general being narrow, and at many places intricate. The current, and of course the descent, is slight, till opposite the village of St. Aimé, where there is a rapid and a shoal of boulders for nearly a mile in length. At this point, about 15 miles above its western outlet, my examination commenced. The river below occupies a space of from 500 to 700 feet in width, and at some places more. The banks from St. Aimé downwards for fully a mile below Yamaska village, are generally high, but occasionally there are flats and Islands that have the appearance of being more or less covered during high water. Both sides are studded with clean, neat, and occasionally a good class of buildings, presenting the appearance of a continuous village for fully  $8\frac{1}{2}$  miles in length on each side. The villages of Yamaska and St. Aimé are laid out on flats of table land, considerably elevated and situated on the north side of the river. To judge from the surrounding country and general appearance of these villages, they are in equally as prosperous a state as most of the inland villages in the Province.

On referring to the sketch, and following the soundings from St. Aimé downwards to Yamaska village, it will be seen that

|                   |           |                    |               |                |                   |                  |       |
|-------------------|-----------|--------------------|---------------|----------------|-------------------|------------------|-------|
| For $\frac{5}{6}$ | of a mile | the depth of water | averages from | $2\frac{1}{2}$ | to                | 4                | feet. |
| " $\frac{2}{5}$   | "         | "                  | "             | "              | 2- $2\frac{1}{2}$ | " 3              | "     |
| " 1               | "         | "                  | "             | "              | 3- $3\frac{1}{2}$ | " 4              | "     |
| " $\frac{11}{6}$  | "         | "                  | "             | "              | 3                 | " $4\frac{1}{2}$ | "     |
| " $\frac{2}{5}$   | "         | "                  | "             | "              | $3\frac{1}{2}$    | " 5              | "     |
| " $\frac{2}{5}$   | "         | "                  | "             | "              | $4\frac{1}{2}$    | " 5              | "     |
| " $\frac{1}{3}$   | "         | "                  | "             | "              | 4                 | " 6              | "     |
| " $\frac{9}{10}$  | "         | "                  | "             | "              | $4\frac{1}{2}$    | " 7              | "     |
| " $\frac{7}{10}$  | "         | "                  | "             | "              | 5                 | " 6              | "     |
| " $\frac{9}{10}$  | "         | "                  | "             | "              | 5                 | " $7\frac{1}{2}$ | "     |
| " $\frac{1}{10}$  | "         | "                  | "             | "              | 6                 | " 8              | "     |

And from Yamaska downwards to the junction of the east and west outlets:

|                 |                    |             |     |    |                |       |
|-----------------|--------------------|-------------|-----|----|----------------|-------|
| For 1 mile      | the depth of water | varies from | 6-7 | to | 8              | feet. |
| " $\frac{3}{5}$ | "                  | "           | "   | "  | $2\frac{1}{2}$ | " 5   |
| " $\frac{1}{5}$ | "                  | "           | "   | "  | 5              | " 7   |
| " $\frac{3}{5}$ | "                  | "           | "   | "  | 7              | " 9   |
| " $\frac{1}{3}$ | "                  | "           | "   | "  | $4\frac{1}{2}$ | " 10  |
| " $\frac{1}{2}$ | "                  | "           | "   | "  | 10             | "     |

From the junction along the western channel there is throughout a depth of 10 feet water, and from the Junction along the eastern channel the depth of water

varies from  $3\frac{1}{2}$  to 5 and 8 feet for three quarters of a mile, then to 9 and 10 feet, till about one mile and a half out, where for a short distance from  $7\frac{1}{2}$  to 8 feet water only was found.

It must, however, be borne in mind that the water was said upon good authority) to be frequently 15 inches lower than at the time soundings were made, and that at the village of Yamaska the variation between extreme high and low water is fully ten feet; but from 5 to 6 feet of the extreme rise is caused by the ice jamb that annually occurs, the balance being due to an increase in the volume of water from the melting of snow and the general drainage of the country. From the foregoing, it will be evident no vessel fit to navigate Lake St. Peter can ascend higher than within a mile and a half of Yamaska when the water falls 15 inches below the soundings shewn on the sketch.

When in that vicinity I observed quite a number of barges aground at different places; in some cases this arose from the intricacy and narrowness of the channel, in others from shoals directly across the River. When this occurs, the cargoes, chiefly cordwood, are thrown out, and the owners consider themselves lucky if the vessel can then be dragged over or out into sufficient depth to allow her to float.

On considering the subject of improving the navigation of this River from its outlet upwards to the extent examined, the following questions naturally present themselves: What is the draught of water that can reasonably be obtained, what are the means that should be adopted to effect that object?

If improvements of any kind are to be made, there cannot be a doubt but 7 feet, or 6 at least, is the least serviceable depth that can be assumed as suitable for barges engaged in the Lake trade. To obtain either of these below low water line, the process of dredging at first suggests itself as the simplest if not most expeditious mode. But when the facts are kept in view, that the present channel at many places is narrow, the shoals long, and part if not the greatest bulk of the materials forming the River bed of a difficult nature, to remove them it seems questionable whether the object could be accomplished to greatest advantage by sinking the bottom, or by maintaining the water at a like height as the spring level—that is to say—the level due to melting of snow, or to drainage.

By dredging, the channel would of course be available only to the extent or distance deepened, while raising the water would back it over the rapids at St. Aime, and allow vessels of a like draught to ascend at all seasons as high as during the spring months; the latter would render necessary the construction of a lock and dam, either at the Island opposite Yamaska Village or in the vicinity of an Island about a mile below.

I am, however, of opinion, apart from the question of the channel remaining open, that the nature and quantity of dredging to be done would be found a barrier sufficient to prevent it being carried higher than Yamaska village, or at furthest a short distance above, while, if the improvements are undertaken, there seems to be no reason whatever why it should stop at either of these places, the upper section of the country bordering on the River furnishing the greater part of the trade, which consist principally of sawed lumber, cordwood and such produce as the inhabitants have to spare for market over home consumption.

J. Gill, Esq., M.P.P., on application supplied the following information, vi: That there are from 75 to 100 boats and barges of different size employed during the season, and that from 25,000 to 40,000 cords of wood, considerable quantities of sawed lumber, grain, and a number of horses, cattle, sheep, &c., are shipped annually.

Having been quite unable to procure any other valuable information than the above, as regards trade, I scarcely feel justified in attempting to discuss the subject in a remunerating point of view or otherwise, and will therefore draw attention only to the works that would open up the greatest extent of the River, consequently benefit the greatest number—with that object in view the erection of a dam and

lock situated below Yamaska Village, at the place before alluded to, is believed to be the best, cheapest, if not the only place nature and circumstances will admit of adopting to render that portion of the River navigable, at its low stages, for vessels of a moderate draught of water.

The dam, and of course the lock, should be raised sufficiently high to retain the water at say  $4\frac{1}{2}$  feet over its present height, which would afford a depth in the channel above, sufficient to obviate the necessity of dredging; while the boldness of the shores would prevent the water spreading over a greater surface than that covered by ordinary high water, which is confined to a few flats, and the low parts of some of the Islands.

The lock might be of a size equal to those on the Chambly Canal, which would be ample for the class of vessels now in use, and the dam consists of crib work arranged somewhat on the principles adopted at St. Ours.

|                                                                    |             |
|--------------------------------------------------------------------|-------------|
| Cost of Locks, excavation of approaches to and from it, the sum of | £12,500     |
| Dam, &c. &c.....                                                   | 10,000      |
| Superintendence, land, damages and contingencies.....              | 7,500       |
|                                                                    | <hr/>       |
|                                                                    | £30,000     |
| Dredging belo Dam outwards to junction of two channels.....        | 2,000       |
| Taking off points, &c, in west channel.....                        | 750         |
|                                                                    | <hr/>       |
|                                                                    | £32,750     |
|                                                                    | <hr/> <hr/> |

If the east channel opening into Lake St. Peter, adapted chiefly to the downward trade, is to be improved, it will cost £2,000, with no certainty of its remaining open.

#### ST. FRANCIS RIVER.

This river rises in the Township of Wolfe and passes through Sherbrooke, Drummond and Yamaska, draining a large extent of country in the Townships. During high water, vessels of light draught frequently ascend a considerable distance into the interior, and rafts of lumber of various kinds descend. While in that neighbourhood, my attention was drawn to a large vessel, said to have been built at Drummondville, about thirty miles up the river; I was further informed that this was no uncommon occurrence.

J. Gill, Esq., M.P.P., furnished the following information, namely: There are employed on the river from 75 to 100 boats and barges of various sizes, drawing from three to eight feet water when loaded. Four saw mills and six grist mills, in all thirteen run of stones (where situated not mentioned). From 25,000 to 40,000 cords of wood are shipped annually, besides sawed lumber and such quantities of grain, number of cattle, sheep and horses, as the inhabitants have at disposal.

The river near its outlet into Lake St. Peter varies from 500 to 800 feet in width. A short distance upwards a large Island divides it in two parts of nearly equal dimensions, but the deepest, and of course the channel used, although the longest, is on the north side of the Island. Thence it passes between a number of small Islands till nearly opposite the village of St. Francis, where the space and view from one side to the other is uninterrupted. The deep channel is narrow and tortuous throughout. The banks generally are bold and of considerable height. The Village of St. Francis and Indian Village are situated, the former on the south, and the latter on the north side of the river, on a flat of high land at a distance of about two and three quarter miles in a direct line from Lake St. Peter, but by following

the course of the river, the distance is fully three and a quarter miles. About a mile and a half above these villages the river increases in width, forming a shoal rapid, beyond which no vessel can pass at low stages of the water. Immediately below this point the examinations were commenced and proceeded with towards the outlet.

On turning to the sketch it will be seen that from the rapids to opposite the village alluded to, the depth of water is as follows, namely,

|                                        |   |    |                 |       |
|----------------------------------------|---|----|-----------------|-------|
| For $\frac{7}{20}$ of a mile from..... | 6 | to | 8               | feet. |
| “ $\frac{13}{20}$ “ “ .....            | 3 | “  | 6 $\frac{1}{2}$ | “     |
| “ $\frac{1}{2}$ “ “ .....              | 7 | “  | 9               | “     |

Thence onward along the north and deepest channel,

|                                         |                 |    |    |       |
|-----------------------------------------|-----------------|----|----|-------|
| For $1\frac{5}{12}$ of a mile from..... | 4               | to | 7  | feet. |
| “ $\frac{1}{2}$ “ “ .....               | 7               | “  | 9  | “     |
| “ $\frac{3}{4}$ “ “ .....               | 8 $\frac{1}{2}$ | “  | 10 | “     |
| “ $\frac{1}{3}$ “ “ .....               | 10              | “  | 0  | “     |

Thence over the bar at the entrance to 10 feet water in the Lake,

|                                       |                 |    |                 |       |
|---------------------------------------|-----------------|----|-----------------|-------|
| For $\frac{1}{3}$ of a mile from..... | 4               | to | 7 $\frac{1}{2}$ | feet. |
| “ $\frac{1}{3}$ “ “ .....             | 4               | “  | 5 $\frac{1}{2}$ | “     |
| “ $\frac{1}{4}$ “ “ .....             | 2 $\frac{1}{2}$ | “  | 4               | “     |
| “ $\frac{1}{6}$ “ “ .....             | 3               | “  | 6 $\frac{1}{2}$ | “     |
| “ $\frac{1}{1}$ “ “ .....             | 8               | “  | 10              | “     |

At the time the soundings were taken the water was said to be fully one foot higher than it frequently is during the Fall months. Assuming this to be correct, one foot must be deducted from the respective depths above stated, as also from those shewn on the sketch, in order to shew the actual state of the river and entrance at extreme low water.

In addition it should also be stated that the bed of the river consists of a hard class of material, such as renders dredging operations tedious, whilst the narrowness of the channel requires a greater quantity to be removed from the sides and the centre in order to afford a water way of say 60 feet in width.

At the entrance into Lake St. Peter the water is shoaler on both sides than the line represented—so much so, that the top of a sand-bank a short distance to the westward is sometimes visible at low water. This bar, although fully a mile in width, between eight feet water inside to a like depth outside, is of a nature that can easily be removed; but judging from its position in respect to both the River and the Lake, there is every reason to apprehend it would again still more quickly accumulate, without some means were adopted for its prevention; what these means should be, apart from the question of what the extent of trade will warrant, might possibly be determined, but when both are received in connection, the matter assumes quite a different shape, and seems to decide the question, that if the entrance is dredged the inhabitants must rely on the same causes for keeping it clear as were combined in the first instance in forming the bar.

To excavate the channel to the depth of 9 feet under low water line, and to the width of 80 feet, (these being considered the least dimensions that should be assumed for a Lake entrance,) would require about 90,000 cubic yards to be re-

|                                                                                                                                                                                            |             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| moved, at a cost of 1s. 1d. per yard including dredge, steam-boat and other machinery.....                                                                                                 | £4875       |
| From entrance to Village of St. Francis for a channel of 60 feet wide and 7 feet deep at low water, allowing 15,000 yards for widening, will make in all 60,000 cubic yards at 1s. 4d..... | 40000       |
|                                                                                                                                                                                            | <hr/>       |
| Add for contingencies.....                                                                                                                                                                 | 1125        |
|                                                                                                                                                                                            | <hr/>       |
| Total.....                                                                                                                                                                                 | £10000      |
|                                                                                                                                                                                            | <hr/> <hr/> |

It will be observed the above estimate makes no provision for protecting the entrance.

RIVER NICOLET.

This river is fully as great in width as, although much shoaler than, any of the others. It was carefully sounded and examined from the bridge opposite the Village of Nicolet downwards, to 10 feet water in Lake St. Peter, in presence of several gentlemen connected with the Township Council who were kind enough to accompany me, as well as to procure the services of a Pilot well acquainted with the channel. From them I learned that during high water in May and the early part of June, small classed steamers frequently ply on the river, carrying freight to and from the Village. These gentlemen also informed me that the water was then as low as they had ever observed it; a circumstance that can only be accounted for by their attention hitherto not being turned to the subject, it being a well known fact that at the time Lake St. Peter was fully a foot higher than it frequently is at that season of the year.

The export trade, so far as could be learned, seemed to consist chiefly in cord-wood and sawed lumber, (quantities not ascertained,) and the import of such articles as are required for local consumption.

On turning to the sketch it will be seen that the average depth of water from the bridge downwards to a point marked A may be represented as follows :

|                                        |          |             |
|----------------------------------------|----------|-------------|
| For $\frac{1}{10}$ of a mile from..... | 2½ to 3  | feet depth. |
| “ $\frac{2}{20}$ “ “ .....             | 2 “ 3    | “           |
| “ $\frac{3}{10}$ “ “ .....             | 1 “ 1½   | “           |
| “ $\frac{1}{5}$ “ “ .....              | 5, 6 “ 7 | “           |
| “ $\frac{3}{20}$ “ “ .....             | 4 “ 5½   | “           |

These shoals at several places consist of boulders imbedded in clay, from point A outwards to 10 feet water in the Lake the bar consists of clay covered with sand, on which the depth of water varies as follows :

|                                        |              |       |
|----------------------------------------|--------------|-------|
| For $\frac{3}{10}$ of a mile from..... | 1 to 1½ to 2 | feet. |
| “ $\frac{1}{10}$ “ “ .....             | 2½ “ 3       | “     |
| “ $\frac{1}{12}$ “ “ .....             | 3 “ 3½       | “     |
| “ 1 “ “ .....                          | 3½ “ 4½      | “     |
| “ $\frac{1}{12}$ “ “ .....             | 5 to 6½      | “ 8½  |
| “ $\frac{1}{40}$ “ “ .....             | 8½ “ 10      | “     |

The gentlemen before alluded to appeared desirous to have the following circumstances brought under the Commissioner's notice, namely—if considered impracticable to deepen the channel all the way up to the Village, they would be satisfied if the entrance and that portion only was deepened up to point A, which it will be observed is situated on a "pool" of from three to four feet water, formed between the outer bar and a shoal inside.

In reference to this proposition it may be said, that however much greater the proportionate expense of removing a like quantity inside, compared with that outside, may be, the uncertainty of an outside channel, if made, continuing serviceable, is at least tenfold greater.

The soundings in every case follow the line of the deepest water: at some places on the bar at the entrance the canoe from which they were made touched bottom, and a little to the westward a sand bank stood from a foot to 18 inches over the surface of the water.

To form a channel from the Lake inwards to point A, of 80 feet in width and 8 feet under low water, (assumed one foot lower than the soundings,) 100,000 cubic yards of the bar must be moved, at 1s. 4d. per cubic yard..... £5416 13 4  
Constructing a wharf, say..... 1000 0 0

|                    |            |
|--------------------|------------|
|                    | £6416 13 4 |
| Contingencies..... | 583 6 8    |
|                    | £7000 0 0  |

Otherwise, to deepen the channel up to the Village,

|                                                                                                        |            |
|--------------------------------------------------------------------------------------------------------|------------|
| Outer bar as above.....                                                                                | £5416 13 4 |
| Channel from A to bridge of 50 feet width and 6 feet<br>under low water, 55,000 cubic yards at 1s. 6d. | 4120 0 0   |
|                                                                                                        | £9536 13 4 |
| Add for contingencies.....                                                                             | 1263 6 8   |
|                                                                                                        | £10800 0 0 |

In the foregoing I have endeavoured to supply all the information bearing on the subject of improving these rivers that could be collected during my visit to the respective places, and have drawn attention to some natural causes which contribute in whole or in part to form the bars at the entrances that are not likely to be removed by merely deepening the channel.

Trusting, therefore, that sufficient has been said to enable the Commissioners to decide on the best course circumstances will admit of adopting,

I have the honor to be, Sir,

Your obedient servant,

JOHN PAGE,  
Engr. P. Works.

## G.

PUBLIC WORKS, TORONTO, 22nd July, 1856.

SIR,—In the last general Report of this Department upon the Public Works of the Province, which was laid before the Legislature during the late session, the project then generally mooted, of rendering the River Ottawa navigable throughout, was referred to, and a survey of that River and of the adjoining country was recommended. To cover the cost of such survey, a sum was placed on the estimates, and was appropriated for by Parliament.

The immediate commencement of this survey is now decided on, and I am directed to acquaint you that His Excellency the Governor General, having full reliance on your zeal, energy, and professional acquirements, has been pleased to sanction an arrangement by which will be entrusted to you the principal charge and direction of it.

A Copy of the Order in Council on the subject is inclosed herewith.

In the Report above referred to, the matter is thus introduced :

“The importance of opening a through line of communication from Montreal, by the line of the Ottawa, Lake Temiscouaning, and French River, to Lake Huron, has, of late, attracted a large share of public attention. The Board of Trade of the City of Montreal, the Corporation of the City of Ottawa, and the Municipalities of several of the Counties which would be traversed by this route, have taken the matter up, and several Petitions connected with it have been presented to the Executive.”

“The expediency of improving the navigation of the Ottawa by making it continuous, so as to avoid the numerous trans-shipments that necessarily take place at present, has been, for some years, admitted, and an appropriation of £50,000 was made towards the commencement of the works, which are of such a value, and so situated that, on the completion of each, separately, immediate benefit will be derived therefrom. On the completion of the Chats Canal, the delay and expense of trans-shipment and portage between Lake Chaudière and Chats Lake will be got rid of, and a continuous navigation opened from Aylmer to the Chats. In like manner, when the improvements at the City of Ottawa, (of which a survey and estimate have been made,) are effected, an uninterrupted navigation will be opened from Montreal. Had the Canals at Carillon and Grenville, known as the “Ordnance Canals,” been the property and under the control of the Province, it is probable that the improvements would have been commenced with them; and, doubtless, on their becoming Provincial property, their enlargement and improvement will be provided for.”

“All such improvements to the navigation have been undertaken with the view of their being carried out to such extent as the Ottawa is capable of, at a reasonable outlay, and as the conveying of supplies of the lumber trade, and the opening and settlement of the country would appear to demand. The dimensions of the locks were proposed to be the same as those of the St. Lawrence navigation, but with a less draft of water, namely six feet six inches on the sills, which, it was considered would be found ample for the water communication contemplated and could not well be increased, owing to the depth of the river itself in places, except at a greatly increased expense.”

“This communication, however, as the subject is now taken up, is contemplated, for much more extended objects; and principally for the opening of a new

"route, which, it is represented, would become that for the conveyance of a large proportion of the produce of the far west to the seaboard, and would also be the channel for the transport of the manufactured lumber to the great markets of Chicago, &c."

"No actual surveys or reliable examinations have as yet been made with a view to the construction of such a communication, nor has any information of practical importance been obtained with reference to it; but the subject is of such importance, as to induce the undersigned to recommend that a general survey and exploration of the line should be authorised and provided for; and at no time could such be carried on more effectively and economically by this Department than at the present. The period of such survey should embrace the winter as well as the summer, as it would be important to observe the state and character of the rivers and waters at every season. This survey should not be made with a view to the creation of a water communication alone, but should be so conducted as to afford full and ample opportunity of reporting upon the greater facilities or otherwise which may be found to exist for the adoption of a Railway communication through that territory, either in whole or in part, instead of the suggested navigation."

The above extract, taken in connection with the Order in Council, and with the report from this Department upon which that order is based, (of which a copy is transmitted herewith,) embraces so fully the principal points to be attended to in the conducting of the survey, that but little more is required to be added for your guidance.

You will perceive that the first object of the survey is to ascertain the real capabilities of the river,—the obstacles to navigation met with on it, and how they can best be overcome; which, wherever it is practicable, it is considered much the most desirable in every point of view to effect by lateral cuts, rather than by dams in a river such as the Ottawa. The all-important point as to the sources and capacity of the necessary supplies of the summit level will, of course, command your attention, as will also the selection of a suitable terminating Harbour on Lake Huron. The character of the tributaries to the Ottawa, as to what extent they are navigable, it will be well should be examined into, and embraced in your report.

The great length and magnitude of such a water communication as the one under consideration, and the necessarily very large outlay which must be involved, renders it desirable that, during the course of your operations, you should keep in view the importance of determining upon the requisite works, so that, as each might be completed, direct and immediate benefit would be had therefrom, pending the execution of others; and that, thus, the works might progress as the finances of the Province would permit, and the wants of that section of the county might appear to require. Looking to this object it may be well that, at such parts of the river as present very serious obstacles, the removal of which would require a great expenditure, you should have the facilities for the making of a Railway portage ascertained; by which means, as alluded to in the Order in Council, the country would be opened up, and great facilities for the transmission of the lumbering supplies, Agricultural produce, &c., &c., be obtained, at a comparatively moderate outlay. It will, of course, at once occur to you that these observations refer only to the contemplated improvements so far as the settlement of the country is concerned: but, looking upon these as to be embarked in, to form a channel for the produce of the western countries to the seaboard, which many advocate, it is clear that, whether such communication be finally by rail or by water, it should be, in either case, continuous and without breaks.

The scale of a water communication to suit such a trade should necessarily be much greater than what would be required for the local wants of settlement, &c.,

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and, how far the line indicated is capable of being made so, is one of the most important points to be decided by your survey.

In connection with the information which you will be enabled to give as to the capabilities of the river for improved navigation, or of the adjacent country for the construction of a railway, it will be highly desirable that you embrace, also, in your examination and report, a topographical and geological description of the country traversed; describing particularly the quality of the soil, nature of the timber,—which latter should be referred to in each quarter of a mile,—opportunities for the establishment of water power, &c.

As the country lying between the Chats and Georgian Bay is little settled, known and explored, compared with that from the Chats to St. Aimè, it is obvious that it should first command your attention, and that, therefore, your parties should be arranged for the exploration and survey through it, in the first instance. At the same time, in consequence of the dilapidated state of some of the works on the Ordnance canals, (now Provincial.) below the city of Ottawa, an examination of and report upon them, and a specification and estimate of what will be necessary to put them into an efficient state, are required; particularly, as the great question of the extent to which the river can be made navigable must be determined by an examination of it throughout.

Should you require, during the course of the survey, any documents or further information at the command of this department, they shall be promptly furnished to you.

In conclusion, I am directed to state that, as the responsibility of this important survey is placed on you, the Commissioners entrust to you solely the selection of your own assistants; and they hope that you will further the immediate commencement of it as much as you possibly can.

I have the honor to be, Sir,

Your obedient servant,

(Signed,)

T. A. BEGLY,  
Secretary.

Walter Shanly, Esquire., C. E.

Toronto.

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**H.**

PUBLIC WORKS,  
TORONTO, 19th September, 1856.

SIR,—In your preliminary interview with the commissioners of this Department, prior to your being furnished with the instructions for your guidance in the outset of the "Ottawa Survey," you were made acquainted with their views as to the necessity of an exploratory survey being shortly made between the Chats Lake and Georgian Bay, by the valley of the Bonnechere, or by such other inland and direct route as might be found more practicable, in order that a line of Railway communication by such a course might be contrasted, as to respective cost and advantage, with one by the valley of the Ottawa. The survey of the River Ottawa, and of the waters between it and Lake Huron, with the object of ascertaining their capability of being converted into a good continuous water communication, being the primary object referred to in the Report of the Commissioners of Public Works, and the one for which the appropriation was made, it was deemed expedient, in the first place, so to frame your instructions; embracing, however, along with the examination of the water route, all the necessary operations required to enable you to report on the facilities or otherwise of forming a Railway communication in or near the Valley of these waters, such communication to be auxiliary to the navigation of all these portions of the River Ottawa and its tributaries which are, in their natural state, available for the transport of lumbering supplies, &c.

As the Commissioners find, by your Report, that this survey is now in full operation, they are desirous that, while on your general exploration, you should take steps to organize and set at work as soon as possible, a party or parties for the exploration of the inland lines, as above adverted to; such survey to be so conducted as to enable you to report fully upon the character and resources of the country, the quality of the climate and soil, extent and characteristics of the timber tracts, nature and capacity of the rivers and streams intersecting it, embracing also, all such topographical and geological observations as may be of interest and deserving of record.

The Commissioners will be glad to hear from you, from time to time, with reference to the important service with which you are entrusted.

I have the honor to be, Sir,

Your obedient servant,

(Signed)

T. A. BEGLY,  
Secretary.

Walter Shanly, Esq., C. E.,  
Toronto.

## I.

TORONTO, 19th March, 1857.

SIR,—I have the honor to report, for the information of the Commissioners, the progress of the survey of the River Ottawa, the charge of which they committed to me on the 22nd July last.

On receiving my instructions I lost no time in taking measures to collect the most reliable information within my reach relative to the long chain of waters it was proposed to survey, with a view to improvement of navigation, extending from the mouth of the French River, on the Georgian Bay, to Montreal,—an estimated distance of 430 miles.

My attention having been directed to the sum appropriated towards defraying the expenses of the survey, the limited amount of which was in very narrow proportion to the breadth of my instructions, I deemed it proper to regulate my proceedings so as to make the first appropriation apply on such sections of the river as were known to prevent the principal obstructions to a continuous navigation.

The old canoe route of the “voyageurs” of the north west follows the Ottawa for about 180 miles above Bytown, to the mouth of the Matawan River: ascending which stream, nearly due west, to its head waters on Trout Lake, (about 40 miles) it there crosses the height of land separating the waters flowing to the Ottawa from those tributary to the Saint Lawrence. The width of the dividing ridge may be taken at three miles, and it is washed on the west side by Lake Nipissingue; crossing which we descend its outlet, the French River, to the Georgian Bay. The distance from the mouth of the Matawan, where we leave the Ottawa, to that of French River, is about 125 miles.

This old canoe route is that which will be adopted for any larger scheme of navigation that the growing wants of the country may require to be perfected by the Valley of the Ottawa.

Pursuing my inquiries, I learned that of that portion of the Ottawa River above referred to, viz; the 186 miles from Bytown to the Matawan, about 85 miles are navigated, in three distinct sections, by steamers of from 5 to 5½ feet draught of water; the highest point to which they ascend being “Les deux Joachims” Rapids, 135 miles above the City of Ottawa (Bytown.)

The three navigable reaches are:

- 1st. Lac des Chênes: commencing nine miles above Bytown, and extending to the foot of the Chats Rapids.....25 mls.
- 2nd. Lac des Chats: from head of the Chats Rapids to Portage du Fort .23 “
- 3rd. The Deep River: extending from near the head of Les Allumettes Island to the foot of Les deux Joachims Rapids, about .....37 “

I also ascertained that the Department had already had a survey made for a canal, nine miles in length, to connect the Lower Ottawa, below the City of Ottawa, with Lac des Chênes above, and, further, that one of three miles in length, to surmount the Chats Rapids, and unite the two Lakes, Les Chênes and Les Chats, was actually in course of construction.

The completion of these two works would have the effect of rendering the Upper Ottawa continuously navigable from Bytown to Portage du Fort, 60 miles; but thence to the upper extremity of Les Allumettes Island, a stretch of more than 40 miles, I found the river wholly unavailable for purposes of navigation, interrupted by frequent rapids, and divided by islands into two distinct and tortuous channels.

I fixed upon this intricate section of the river for the commencement of the survey; considering that, however, the question of a *through* navigation to Lake Huron may eventually be solved, the improvement of the Ottawa proper, for purposes of internal commerce must soon demand a complete connection of the disjointed navigation now existing between Bytown and the head of the fine stretch of deep water known as the Deep River, steps for perfecting which as far up as Portage du Fort had, as has been said above, already been commenced.

By the middle of August a party of Surveyors was in the field, and operations commenced in the vicinity of Pembroke; the work of surveying has been continued all winter; is still going forward, and will require at least another year to complete: no equal portion of the proposed chain of navigation above Bytown, presenting so many or so great obstacles to improvement or, consequently, requiring such careful and accurate surveying as this part between Portage du Fort and the Deep River.

From the head of the Deep River, upwards, the Ottawa is of direct and comparatively unembarrassed character, the descent of its waters being chiefly concentrated in four short rapids varying in fall from 10 to 40 feet.

It appeared to me, then, that the instrumental examination of this section of our route, from the Joachims to the Matawan Rapids, fifty miles in length, might be judiciously deferred for the present, and I, accordingly, next turned my attention to that very important link where the question of connecting the Ottawa waters with those of Lake Huron has to be tried, viz; between the mouth of the Matawan River and Lake Nipissingue.

The Matawan has an ascending direction nearly due west: its length is forty miles, and its head waters, in Trout Lake, are within three quarters of a mile of those of La Rivière de Vase, a tributary of Lake Nipissingue.

Upon this section I placed two parties of Surveyors, and arranged for a winter campaign by sending up supplies of provisions, &c., sufficient to last them until the re-opening of navigation, which in that region cannot be counted on much earlier than the 10th of May.

Notwithstanding the severity of the winter, the thermometer frequently indicating minus 39°, I am enabled to report that the work on the Matawan has steadily progressed, and is conducted with a view to obtaining a full, complete and accurate chart of the river and its lakes, together with a topographical survey of the ridge that divides its waters from those of Lake Nipissingue, so as to ascertain how and where a connection between them can be best effected.

The foregoing constitutes all the steps I had contemplated taking towards the carrying out of my instructions until means for further operations could be obtained: but upon the suspension of the works of the Chats Canal I suggested to the Department the employing of the engineering staff that had been there engaged, to complete the survey of the river from the foot of that canal to the head of the contemplated one, which is to surmount the Chaudiere Rapids from Bytown. That survey, taking in the whole of Lac des Chênes, is going forward: and, with the facilities afforded by the ice, I look to having the principal channels accurately sounded, between the points referred to, before it has ceased to be safe to work upon.

With the above addition to my first plan of operations, the whole extent of the route now under survey is as follows :

|                                                                       |           |
|-----------------------------------------------------------------------|-----------|
| 1st. From the head of the Chaudière Rapids to foot of the Chats ..... | 25 miles. |
| 2nd. From Portage du Fort to the foot of the Deep River .....         | 40 "      |
| 3rd. From the mouth of the Matawan to that of River de Vase.....      | 45 "      |
| Total.....                                                            |           |
| 110 miles.                                                            |           |

I estimate the whole length of the route covered by my instructions at 430 miles, so that there remain 320 miles, towards the surveying of which no steps have as yet been taken. In that distance, however, is embraced a large proportion of still deep water, which will involve much less outlay for surveys, mile for mile, than those sections now in hands.

While upon this subject I may observe, that so far as I am yet able to form an opinion on the project of a ship canal by the Ottawa route to the Western Lakes, no part of the river calls for more careful examination, or is more likely to present more continuous obstacles to a deep navigation than that part commonly termed the Lower Ottawa, extending from Bytown to its confluence with the St. Lawrence; the length of which, calling Montreal the point of junction, is commonly rated at 120 miles; of that section of the route, beyond some examinations made with a view to ascertaining the existing condition of the Ordnance Canals, no surveys have yet been undertaken.

Of the result of the surveys going forward in the three sections detailed above, I am not now prepared to speak, this report being only intended to keep the Commissioners advised of the steps that have been adopted for carrying out their views. Since the setting in of winter the attention of the engineers has been principally directed to sounding the several parts of the rivers on which they are engaged, and, while the ice continues safe, that important branch of the work will be urged forward with all convenient despatch; for, on the facts to be brought to light by it will mainly depend the solution of the question as to the scale of navigation to which the Ottawa and other waters in the chain are adapted by nature or can be improved by art. The Commissioners will perceive, also, that that question, as well as the still more momentous one of cost, will have to be dealt with as a whole, and cannot possibly be so treated while any of the obstructed portions of the route remain unexamined. All the soundings that can be taken by the aid of the ice this season, will be had by the middle of April at furthest, and by the end of that month I trust to be able to report with some degree of confidence on the capacity of the whole of the Rivers and Lakes which are to form the links in the chain of navigation above the City of Ottawa; I can then, also, touch upon the all-important questions of the union of Ottawa waters with those of Huron, and of the source whence the supply of lockage water is to be drawn.

Referring to that portion of my instructions which directs a railway exploration to be carried along the valley of the Ottawa, in order that the facilities afforded for that means of communication may be compared with the navigable advantages of the river, I have to report that a line has been surveyed from Pembroke to Les Rapides des Joachims, a distance of 40 miles; that the configuration of the country is not favorable to railway construction; and that I have deemed it advisable not to incur useless expenditure by continuing the survey further up than the Rapids aforesaid, at the head of the "Deep River" navigation.

I made Pembroke the starting point of the railway survey, considering it need-

less to commence lower down the river, the Brockville and Ottawa Railway Company having already had their line surveyed up to that point.

For the necessary information relative to the cost of the surveys, past and to come, I beg leave to refer you to my letter of the 21st ultimo, specially treating of that important subject.

Before concluding this report, I beg leave to say, that I have myself explored all that portion of the proposed line of communication lying between the mouth of the French River, in the North-east angle of Lake Huron, and Portage du Fort, at the foot of Calumet series of falls, on the Ottawa: and have made a general examination of all the main obstructions to the navigable connection of that long chain of waters.

As to the result of my observations on that section of the route where the flow of the waters is to the west, not hereinbefore specially described, I will briefly state, that that mouth of the French River by which I entered it, under the guidance of an Indian of Lake Nipissingue, is not obstructed by islands and is capable of being made accessible for large vessels: that the French River itself is singularly facile of adaptation to the purposes of a deep navigation: that Lake Nipissingue, a noble expanse of water, possesses, at least on that side of it (the southerly) with which we have to do, ample depth and fine harbourage: and, finally, that the ridge separating its waters from those of the Ottawa cannot be looked upon as a formidable barrier to their union when it is known that a cutting of three fourths of a mile in length by twelve feet in depth would cause the upper waters of the Matawan, now tributary to the Ottawa, and more than 200 feet deep, to flow to Lake Huron by way of the French River.

I voyaged the whole of the above mentioned portion of the route, some 260 miles, by canoe, and found it to embrace a vast proportion of deep, still water, stamped, to a great extent, with Lake rather than River characteristics; and I reached the end of my journey strongly impressed with the conviction that nature has there marked out a pathway in the desert that the Genius of Commerce will, at no far off day, render subservient to its ends; the navigable connection of the great Lakes with "La Grande Rivière du Nord," I look upon as inevitable; scale of navigation to which the route, as a whole, is capable of being adapted, remains to be determined by survey.

In my next report I will be prepared to take up the subject of lockage, shewing the amount to be encountered on this route as compared with that of the Lakes and of the St. Lawrence; a comparative exhibit of distances will then also be shewn

I cannot close this report without bearing testimony to the singular accuracy of the surveys made by Sir William Logan, Provincial Geologist, and his assistant, Mr. Murray, on the Matawan, Lake Nipissingue, and the French River; I use the term singular, in view of the limited means at their disposal.

The levels of the Matawan River, taken, I believe, by the former gentleman, have proved strictly correct, and the surveys of Lake Nipissingue and the French River, wholly the work of Mr. Murray, I understand, are highly reliable, and will be a means of effecting much saving of time and expense in carrying out the *engineering* examinations that the Commissioners have entrusted to me.

The whole is respectfully submitted, and I remain, Sir,

Your obedient servant,

W. SHANLY.

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