

THE
HALIFAX & QUEBEC RAILWAY,
CONSIDERED WITH A VIEW TO
ITS COST,
AS WELL AS THE
PROSPECTIVE BUSINESS OF THE ROAD.

By WM. PRYOR.

HALIFAX, N. S.
PRINTED BY JAMES BOWEN AND SON,
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INTRODUCTION.

Having taken the deepest interest in the Halifax and Quebec Railroad, from the first stage of its progress—a member of the first Committee, appointed in 1845, to obtain information and forward the enterprise; I have watched its developement with the most earnest attention. The statistics and observations in the following pages, gathered from time to time, from the most reliable sources, were first brought together for the consideration of a friend anxious to avail himself of every information, on a subject, of which he is a warm advocate. These notes having been since read to other friends, whose opinion I am bound to respect and value, they are now, at their solicitation, presented to the public;—without any other pretensions than that of a collection of notes and remarks, and simply with a view of inviting a more studied attention to the subject, than it is thought, has hitherto prevailed, and in the hope that they may lead to a more thorough investigation of facts connected with Railway operations generally; and to a more united movement for the completion of the great work under consideration.

HALIFAX AND QUEBEC RAILWAY.

The rapid progress of Railways in the United States, their improvement in construction, experience in management, and complete system of returns, afford us the best means of information we can find, in considering our contemplated great Trunk Railway.

The following data may be first noticed :—

The first train of railway cars in the United States was started the 28th Decr., 1839—13 miles opened that day on the Baltimore and Ohio railway.

The number of railways in complete operation in 1850, was 305, and their united length 10,129 miles.

The number of miles in course of construction, was last year—1850—7560 miles.

The cost of all the railroads of the United States, in complete operation in 1850, was \$302,590,116,—say \$30,000 per mile or £6000 sterling.

A considerable number of these railroads are double track ; of these, Massachusetts has 375 miles, and New York 235 miles.

The whole length of railways in the State of Massachusetts in 1850, was 1142 miles—forming 36 separate roads, and their united cost was \$51,873,895 ; total receipts, \$6,466,872 ; total expenses, \$3,142,945 ; nett income, \$3,341,595 ; nett income on cost, \$6.41 per cent ; the receipts per mile run were \$1.51 ; expenses per train per mile, 73 cents ; nett per train, per mile, 78 cents.

240 railway trains daily enter, or leave Boston, conveying more than 10,000 passengers daily.

The population of Massachusetts is stated at 800,000, or taken at 1,000,000—adding for contributors from adjoining States, which gives a nett receipt of \$3.34 for each inhabitant.

Reference has been frequently made to the Western Railroad of Massachusetts, in speaking of the Halifax and Quebec line ; and properly so—for until this last summer it was “ the only one embraced in the list of Massachusetts railroads, having a connection with other improvements by which it receives the benefit of

Western trade, forming the last of the series of railways extending from Buffalo to the Atlantic and connecting with the Erie Canal at Albany.

We will here then just note some facts connected with its cost and working, and reserve our remarks for their proper place as we proceed.

The Western Railroad of 156 miles in length, 62 miles of which is double track, cost \$9,963,709, say £2,500,000, currency. This enormous cost compared with the average cost of railways in the whole United States, or even in Massachusetts, is peculiar, and to be attributed to extraordinary difficulties that were to be overcome in its construction and equipment. The gross receipts of this road, the first year after the line was opened; and before its connections were perfected, were £919 or \$3676 per mile of road; "it had to contend with strong competition with another railroad, and with the Hudson river during the season of navigation." Yet its business went on increasing, and in 1850 reached a gross receipt of \$8778 or £2194 per mile of road. Thus, notwithstanding its disadvantages and extravagant cost, it paid (according to the annual report to Congress in 1849) the stockholders, 8 per cent dividend; besides \$282,339 interest; and reserved a surplus of \$57,721.

The total receipts of this road per train, per mile run, in 1850, were \$1,72; expenses 78 cents per train per mile; nett 99 cents per mile. The trains run 768,769 miles, and carried 21,941,398 passengers, and 25,206,318 tons of freight one mile.

Freight trains average 54 tons; passenger trains 40 each. This road has a large amount of curvatures and heavy grades; the maximum inclination being 83 feet per mile.

By this road and connections, a barrel of flour is brought from Albany to Boston, 200 miles, for 30 cents per barrel; and to the extent of about 500,000 barrels per annum, exclusive of the quantities left at the several stations between Albany and Boston, and in despite of an opposition by rival roads, and of a coasting trade, unrivalled, perhaps, in the world.

The 8 railroads of Maine, 258 miles long, cost £6,500 currency per mile.

The 16 railroads of New Hampshire, including branches, 462 miles long, cost £7676 cur. per mile.

The 36 railroads of Massachusetts, 1142 miles long, cost £12,671 cur. per mile.

The 44 railroads of New York, 1649 miles long, cost £9215 cur. per mile.

The 46 railroads of Pennsylvania, 1087 miles, cost £10,144 cur. per mile.

The 3 railroads of North Carolina, 247 miles in length, cost £4017 cur. per mile.

The 13 railroads of Georgia, 784 miles in length, cost £4,111 cur. per mile.

The 27 railroads of Ohio, 690 miles, cost £4,626 per mile.

The 18 railroads of Indiana, 256 miles in length, cost £5000 cur. per mile.

We will now proceed to speak of the Halifax and Quebec Railroad, and first as to cost.

You will observe that I have stated, that the whole of the Railroads of the United States in 1850, cost on the average £6000 stg. per mile.

Major Robinson, in his able report of the Halifax and Quebec line, states the probable cost at £7000 stg. per mile, as a safe estimate, but speaks of it in his calculations, as if it might not cost over £5000 stg. per mile.

Mr. Morton, in his very interesting report on the European and North American Railway, gives a detailed estimate of the cost of the American portion of that line—say from Bangor to Calais, 95½ miles, and states it at the average cost of \$27,922 or £5,584 stg. per mile.

The grades on this line are not more favorable than on the Halifax and Quebec line.

The iron he estimates at \$50 per ton, probably \$20 per ton over what it would now cost here—a high duty and charges attaching in the United States.

J. Wilkinson, Esqr., who made the surveys and estimates of the line from St. John to the Bend of Petticodiac, gives the cost of that portion of the line at \$16,200, or say £3258 stg. per mile. Mr. Morton who passed over this line, says: "The whole route may be considered as in a high degree favorable for a railway."

The whole line from Portland to Halifax was passed over by Mr. Morton, who says with respect to the cost of the Nova Scotia portion of it: "From the examination I have been able to make, together with the information obtained from the reports of engineers who have surveyed the various parts of the line, I am of opinion that with judicious management, the whole work may be constructed with a single track and equipment at a cost not exceeding \$30,000 per mile, or £6000 sterling per mile."

The amount of cost here given by Mr. Morton, certainly appears very large, compared with the detailed estimate of Mr. Wilkinson for the New Brunswick portion of the line as above, particularly when we reflect upon the very favorable view Mr. Morton elsewhere gives us of the whole line, with but slight exception, through the

Province, and I am credibly informed that in New Brunswick, it has called for some explanation—from which it appeared, that Mr. Morton had made very ample allowance for emergencies in construction, with respect to funds. Building a road for immediate payment, as completed, in cash or in stock, bonds or debentures of questionable value making a vast difference in estimate. For this, Mr. Morton, an experienced and able engineer, very properly made allowance.

Mr. Howe has, I believe, repeatedly stated, that in his opinion, the Halifax and Quebec line will not cost over £5000 stg. per mile. I am not aware on what data he bases his opinion, but from all the investigation I have been able to give it, if completed under his present proposed plan, I think his estimate will not be far out of the way.

In comparing the cost of American Railways with a view to an estimate of the Halifax and Quebec line, we must ever bear in mind the circumstances under which the most of these Railways were built, and their several locations. A very able paper on the Railways of Massachusetts by E. G. H. Derby, Esq. gives us a striking insight into these matters. He says, "While the investment as a whole, has produced such results, individual lines have of course varied in success and occasional errors been committed. The success of routes judiciously chosen and well managed, with great local resources, have of course started others of inferior capacity. *Iron and labor have fluctuated from 50 to 100 per cent.* Where their progress has been rapid, they have, sometimes, diverted, direct from other lines, more than the local growth has replaced; and so strong a demand has been made on capital, *as to raise the rate of interest and swell the cost, by sacrifices upon the debt.* The famine of 1847 brought in gold for breadstuffs, and the wealth accumulated sought investment: Dividends were large—railway stocks popular, and new railway enterprises were begun; and it has been estimated by judicious men that Massachusetts embarked in 1846 and 1847, in new enterprises to the amount of sixty millions. It soon became apparent she had overtasked her strength; for two years money rose to 15 per cent.—stocks became depressed,—the banks protected the trader,—the capitalist suffered; but energy, frugality and perseverance have as usual, triumphed." When under such circumstances we consider the value of the land through which many of these railways run,—their expensive termini,—the cost of the rails with duty, probably \$20 to \$25 per ton more than for the Halifax and Quebec line, equal alone to about £700 per mile, and a large proportion of double track, we can then alone estimate correctly the difference of cost.

The best comparison we can probably make, is with the completed portion of the Montreal Line to Portland. The grades and curvatures are much about the same as the Halifax and Quebec Line, and on part of the road completed to St. Hyacinth, has been erected an expensive and difficult work, the Richilieu river bridge, which cost £22,000. The estimated cost of the whole road to the American line was £6,088 Cy. per mile, and the actual cost of the 30 miles completed and in operation was £6,192, including an additional locomotive engine, and a double track over the bridge, so that we see this—the most expensive portion of the road—actually cost, as above, only £4,954 Sterling per mile.

We may therefore, I think, from all I have adduced, safely put down the cost of the Halifax and Quebec line at £6000 stg. per mile, for a calculation, with strong grounds for believing that the average cost of the whole 635 miles will not exceed £5000 per mile, Mr. Howe's estimate. Nearly 200 miles of the road, we may safely conclude, will not cost over £3000 per mile.

The next consideration and perhaps the most important of all, is the cost of transport, both of passengers and freight; for on this fact depends its success—entirely so as regards its through and external traffic, and partly so as to its way traffic.

If we cannot convey passengers to and from Canada and New Brunswick, with as great speed, convenience and cost, as they can proceed by other routes, we certainly shall not secure them.

If we cannot transport freight from Canada for transshipment at Halifax, cost, speed, and all other advantages considered, on equal terms, to other ports on the North Atlantic, we shall not secure it. Again, if we cannot convey the products of the country through which the road passes, at a cost to permit them being sold in the markets to which they are suited, and to meet competition, at a profit to the producer, they will not be produced and sent, or if we cannot bring by the road the supplies of provisions required in the Lower Provinces from Canada, and send the Canada supplies, in part at least, from Halifax—to more advantage than by other routes—time, convenience and condition considered, then the road will not command the traffic. In the several debates in our Legislature on the subject, the opposers of the Railway, took this stand. They endeavoured to shew that this Railroad could not compete with the water conveyance around our coast,—that freight could not be conveyed to pay even the working expenses. They appealed to the good sense of the House, simply to compare the rates of freight then actually charged on several railroads of the United States, with the cost the same rate would give on the Quebec line, and agree with them in the

absurdity, to suppose the railroad would pay the running expenses alone. The friends of the road, unfortunately, were not then prepared to meet these arguments and figures very satisfactorily. The information, experience, and vast improvement attained in these matters, perfecting and developing unthought of results the last year or two, were not then at hand—or time did not permit to investigate them, in a strictly business view. Its vast advantages, in a national, political and social point of view, was eloquently argued, and its commercial benefits generally exhibited, but the actual pounds, shillings and pence part remained in the mist created by its opposers' figures.

Fortunately for us, the rapid progress made in the establishment of railways in Europe and America, improvements in construction, experience and economy in working; and above all, the well ascertained facts connected with cost of movement of passengers and freight on short and long lines; these last few years, indeed from month to month, affords us a much clearer insight into these matters, than we formerly possessed.

I well remember on the receipt of Major Robinson's report, how anxiously the friends of the railway around me turned to his statements and calculations on the cost of movement of freight; trusting to find a good foundation to base an argument in its favor, in a commercial point of view, on which they well knew, so much depended.

Strange to say, in this all important particular, it appeared to prove too much: the statement, that a barrel of flour could be conveyed from Quebec to Halifax, 635 miles, at a cost of 1s. 1d. stg. per barrel, and that this sum doubled, say 2s. 2d., would pay the expenses and interest, appeared so utterly at variance with the actual cost of freight, then charged on the various lines of the United States, that they could not in any way account for it, and in the debates on the subject, before referred to, it tended, in no small degree, to throw discredit on the whole affair. It is to be much regretted that Major Robinson did not go more at length into this—to the commercial community—all important part of his report. If he had also stated, that, as is the case in the United States, the running expenses, per train, per mile, are near twice the *motive power* 40 cents, say 73 cents, and that the receipts per train per mile, are double that amount, say \$1.51 to pay their large dividends, interest and reserve; and shewn the difference in operating on long and short lines, and between trains conveying 45—50 tons, and trains conveying 100 tons, it would have been very satisfactory, and saved its friends much doubt and difficulty.

On reference to the data I have given in the first part of this paper, it will be noticed that the running expenses of the 36 rail-

roads of Massachusetts were, on an average, 73 cents per train per mile. The miles run by these freight trains alone, 1,337,866 ; tons of freight carried one mile, 72,573,280—consequently each train carried 54 tons on average.

Major Robinson says, that on the Halifax and Quebec road, a single train can easily convey 100 tons the whole way, with the aid of an additional engine over a few miles of the road. The very favorable grades and curvatures, on this line, gives it this great advantage over the average lines in Massachusetts. Thus, we see, it will cost no more, or if any, but trifling, to convey 100 tons on the Halifax and Quebec line, than to convey 50 tons on the Massachusetts ; reducing the running expenses at their average rate, 73 cents, to 36½ or 40 cents per train per mile. This, however, is on the average of freight and passenger trains taken together.

Another very important point to consider in the comparison, is, that this 73 cents per train per mile in Massachusetts is the average running expense of trains on roads of average length of 31 miles only. One road alone of the 36 being over 100 miles, and 4 over 50 miles, for it will readily be seen that a corporate body with their necessary establishment of President, Directors, Treasurer, Clerks, Superintendents, office expenses, law expenses, other salaries, taxes, wages and incidental expenses, forming together about *one third* of the running cost ; could, with perhaps trifling addition, manage a road of 100 miles, as well as one of 30 miles, and so in proportion diminishing the expenses for 635 miles.

In the annual report of the State Engineer and Surveyor of the State of New York—Mr. Seymour—made in accordance to law, and submitted to the American Senate, he says : “ The cost per mile of running trains, is no indication of the cost of transport, *for the cost depends upon the amount of movement each mile run, both of passengers and freight.*” Referring to the working of the Utica and Schenectady road, he says : “ Let the above statement be compared with like results given in the report of the Oswego and Syracuse Company, which is also complete, but which road has much less traffic ; it is here shown, that it cost the latter road 43 cents less per mile to run trains, than it has cost the Utica and Schenectady Company. Both roads are no doubt, managed with equal skill and sufficient economy, at any rate, the above results shew nothing ; the present reports, however, shew us in addition to the above, the amount of work done in passengers and tons freight, or the actual movement each mile run, and the cost of passenger and freight transport separately. From

these data, we find, that the average number of passengers each mile run has been on the Utica and Schenectady line, $97\frac{1}{2}$ passengers, at a cost per passenger of $\frac{78}{100}$ of a cent—say three quarters of a cent, and on the Oswego and Syracuse road 33 passengers, at a cost of one cent and three quarters of a cent each mile; so that it has cost much less to transport passengers on the former than on the latter road. This result is owing mainly to the larger loads drawn on the Utica and Schenectady road. An important fact, he continues, is also established, which up to this time has been doubted by most men conversant with railroad transport, which is, that passengers can be transported at an expense of less than one cent per mile. This result is obtained as a rule when the average loads are 90 passengers each run. That this is the best result which can be obtained from railroads, cannot be supposed; further experience and skill will be applied to the task of cheapening transport."

These results referred to by Mr. Seymour, have, in a very great measure, been exhibited in 1851.

The Ogdensburg and Boston Railroad, 403 miles in length, operated by five or six different corporations, each having a separate organisation and management, and other heavy expenses to contend with; are now bringing a barrel of flour from Ogdensburg to Boston, for 50 cents, or 2s. 6d. cy. per barrel. By that route, it is shown, that a barrel of flour landed at Halifax, from any port at the head of Lake Ontario, costs 95 cents per barrel, or 4s. 9d. cur., including all charges, (see appendix). If, therefore, we deduct the Lake freight to Ogdensburg, 15 cents, and the estimated freight $12\frac{1}{2}$ cents from Boston to Halifax, we find the amount of charges on a barrel of flour, passing through on this route, and put on shipboard at Boston, to be 68 cents per barrel; to which we shall refer presently.

The Reading Railroad, Mr. Morton informs us, and which is confirmed by other statements, transports coal 95 miles, at a cost to the Company of 62 cents, or 3s. 2d. cy. per ton, the whole distance. This railroad was built at the enormous cost of \$16,325,332—very nearly the estimated cost of the Halifax and Quebec line of 635 miles. It runs in close proximity to a canal, with which it has to compete, and to be used for the transport of coal alone, the trains returning empty. By the returns lately made, I observe this railroad conveyed between the 1st of Jan'y and 30th July—six months—the large quantity of 976,941 tons of coal.

The results in England, in low cost of transport on long lines of railroad, well managed, are, every day, still more astonishing.

Mr. W. S. Lindsay, an eminent London Shipowner and Broker, in a letter to the *Times* of 23d July, on the subject of the Navigation Laws, states, that he has it from undoubted authority, that coal can be conveyed, at a profit, at *1s. stg. per ton per hundred miles*; and in a subsequent letter to the *Times*, he says, "since I addressed you on the 23d inst., I find that there are contracts, at present, in force, for the conveyance of coal, inclusive of waggons, and all other charges, at the rate of $\frac{1}{4}$ l. per ton per mile, or 2s. 1d. per ton per 100 miles; that these contracts were made some time since, and have proved a source of *very profitable employment to the railway proprietors*. I have also had the very important statement, made to you in my last, confirmed by various gentlemen of undoubted character and intelligence;—namely, that when the arrangements are completed for conducting an extensive trade, the great trunk lines of railway, will be enabled to carry coal, at a profit, for 1s. per ton per 100 miles."

Who can estimate the results from the traffic in coal alone, for the Halifax and Quebec line, passing, as it will, over a coal field of hundreds of miles in extent?

Our consideration is naturally next directed to the means of traffic for the railway; what articles are to be supposed to furnish it with freight, and what number of passengers may reasonably be expected to pass over the road. This we may divide into home or way traffic, and external or exporting traffic.—First as to home movement.

Mr. Morton, in his report on the St. Lawrence and Atlantic railroad, laid before the Canada Legislature in 1849, says, "It is ascertained on undoubted authority, that the State of Maine, now draws, annually, from the cities of Boston, New York, and other places—500,000 barrels of Flour, 1,000,000 bushels of Indian Corn, and 75,000 barrels of Pork;" and in his report of the European and North American railway, he states the population of the State of Maine at 583,000. We cannot, perhaps, estimate our wants, as respects this description of provisions, in a shorter or more correct mode, than comparing them with those of the State of Maine. Climate, soil and productions, are much the same, the inhabitants of both are occupied in lumbering, the fisheries, and shipbuilding, accustomed to the same description and the same quantity of provisions.

We may safely estimate Nova Scotia, when the road is completed, to contain 325,000 inhabitants; that part of New Brunswick to be supplied by the line, 200,000; Canada from Quebec to the Bay de Chaleur, 100,000,—together 625,000, not including Prince Edward's Island 60,000, receiving considerable traffic from the railroad via Shediac.

Thus, we should need about the same amount of provisions passing over the line, for our home wants, as stated by Mr. Morton, Maine draws from other quarters for her supplies, and this is fully exemplified, if we turn to our present way traffic, and put it together.

Halifax, alone, has imported, annually, of Flour, Meal, Rye, Wheat and Bread, equal to 180,000 to 200,000 barrels. Lower ports from Bay de Chaleur to Canso, require about 120,000; New Brunswick from the Bend to and with St. John, (leaving the westward of that port to be supplied from the United States) 100,000 barrels, and adding for increased population, as noticed, engaged in the work of the road—lumbering and shipbuilding, when the road is built, 80,000 barrels, we have the quantity of Breadstuffs, as stated, required for Maine. Of other provisions, moving over the line, as through or way freight, such as Pork, Beef, Butter, Corn, Pease, Oatmeal, Barley, &c., we shall require proportionate supplies. The other articles of freight on the line, will be West India produce, Tea, Fish, Oil, other merchandize. Lumber, Staves, Shingles, Hoops, Laths, Barrels, Boxes, and Fish Casks. Coal, Gypsum, Hay, Potatoes, Oats, Cattle, Sheep, Lambs, and Hogs, Building Stone, Lime, &c.

The perfect adaptation of a railroad for the transport of the above description of produce, is so well exemplified in the detailed working of the Little Miami railroad, Ohio, that I am induced, here, to exhibit it.

This road extends from Cincinnati to Springfield, a distance of 84 miles; it cost \$25,847 per mile, or say £5000 stg.; its running expenses were 63½ cents per train per mile. The following is taken, from among the articles transported, year ending Decr., 1850:—Apples, Clover Seed, Eggs—10,169 barrels; Pork, Beef, Lard,—21,796 barrels; Wheat and Buckwheat Flour—67,547 barrels; Salt and Fish—7,387 barrels; empty barrels—19,527; Merchandize—19,527 tons. Pork and bulk meat—2,738 tons; Butter—1,566,000 lbs.; Hay—206,000 tons; Lumber—1,200,000 M.; Hoop poles and Staves—361,000; Shingles—1,550,000; Malt—1502 sacks; Lime—154,600 bushels; Live Hogs—24,449; Iron and Nails—3,009 tons; Iron castings—1,530,000 lbs.; Coal and Coke—57,011 bushels; Barley and Oats—94,988 bushels; Potatoes and Turnips—8,872 bushels. The following comparative statement of the last four years business of this road, exhibits an encouraging prospect of what *increase of way traffic and travel*, may be looked for, on even, an inland railway:—

	1847.	1848.	1849.	1850.
Passengers, \$	90,843.90	\$144,132.01	\$154,817.63	\$304,589.87
Freight,	130,295.62	128,440.97	158,081.19	192,607.37
Mail,		7,512.50	8,500.00	8,500.00
Total,	\$221,139.52	\$280,085.78	\$321,398.82	\$405,697.24

We have next to speak of passengers.—The number of passengers *to each inhabitant* of Massachusetts, on her railways, has been found to be $8\frac{1}{4}$; New Hampshire, $4\frac{1}{2}$; Vermont, $1\frac{1}{2}$; Connecticut, 5; Rhode Island, $1\frac{1}{2}$; the average $4\frac{1}{4}$ nearly.

The number of tons of freight *to each inhabitant* of the above States, averages $1\frac{1}{16}$.

The average receipts *per head* of the population of these States, were, for passengers \$2.25; and for freight \$2.06; or for both, *per capita of population*, \$4.31.

One mode adopted by scientific men, to estimate the travel and traffic on any new line of railway, is to take the average of several working roads, as above, and apply it to the contemplated line.

This, of course, is to be modified, by a proper comparison between the actual state of the one country, its improvements, the habits and employments of the people, and that of the other.

If, therefore, instead of taking \$4.31 per capita, for passengers and freight, for the Halifax and Quebec line—the average of the five States as above—we assume the receipts, as only *one half of that amount*, say \$2.15, as the basis of a calculation, we shall, I think, be thought to be on the safe side.

The *whole population* of the several States mentioned, and not the estimated contributing population, is taken, in the calculations here referred to. Assuming then, the population of

Nova Scotia as	-	-	-	-	-	250,000
New Brunswick,	-	-	-	-	-	210,000
Part of Canada including Quebec,	-	-	-	-	-	150,000
P. E. Island,	-	-	-	-	-	65,000
Increase for the whole by the time the road is built,						100,000
						775,000

We have 775,000, a small population indeed, to an area of 46,400 square miles in Nova Scotia and New Brunswick alone, when we consider the State of Massachusetts contains one fourth more, with an area of 7,500 square miles only.

Taking, therefore, for a calculation, as we have said above, only one half of the receipts of the United States roads referred to, \$2.15 per head, we have—

775,000 at \$2.15 per capita, for freight and passengers,	} £416,522 0 0
Mails, \$300 per mile per annum, the usual allowance in the United States,	} 47,625 0 0
Sale of Lands, 135,000 acres per annum, exhausting 3,000,000 acres in 22 years, at 10s. per acre, (Lands on lines of railway in United States sell from \$5 to \$10 per acre.)	} 67,500 0 0
	£531,647 0 0
Running expenses, 40 per cent (the run- ning expenses on the Ogdensburg and Boston line—the only long line in United States, 403 miles—at present in full operation, was last year, 38 per cent,	} 212,658 4 0
Nett revenue,	£318,989 16 0
Interest on cost, 635 miles at £6000 stg. per mile, £3,810,000 stg. at 3½ per cent. £133,350 stg. or	} 166,687 0 0
Would leave a Reserve of . . .	£152,302 16 0

We are now, of course, supposing the line to be built, and in working order.

In this calculation, we do not take into consideration the immense importance of the lumber and coal traffic of the Halifax and Quebec line of road ; which neither of the roads referred to, enjoy at all, or if so, but to trifling extent ; neither have we viewed it with regard to its through traffic, connected with the Great West.

It must never be lost sight of, in the consideration of this great enterprise, that the great and paramount object in its construction, is to shorten the distance between England and her extensive and valuable North American possessions, — between Europe and America ; and, ultimately, to bring Europe, America and Asia into the closest possible connection. To estimate, therefore, the revenue of this great trunk line of railway, merely, from its local resources, must appear futile and absurd.

“The astonishing increase of trade (Mr. Morton states, in his report laid before the Canadian Legislature in 1849,) in the Western Lakes, within a few years, is such as to render it difficult to assign any proper limits to its future advances.

In 1835, the State of Ohio was the only exporting State on the Lakes, and during that year, there arrived at Buffalo 86,000 barrels of Flour, and 98,000 bushels of Wheat.

In 1847, there arrived 1,887,000 barrels of Flour, 6,489,100 bushels of Wheat, 80,000 barrels of Pork, 3,379,087 bushels of Corn, Oats, and Rye, and 101,584 kegs of butter; exclusive of the large amount of Lake trade which went through the Welland Canal.

In 1845, there were on the Lakes above Niagara Falls, 60 steam vessels having an aggregate tonnage of 23,000 tons, and 320 brigs and schooners of 53,000 tons.

The shipping of all the Lakes in 1846, amounted to 136,836 tons, and was valued at \$6,000,000. The amount of merehandize transported that year, was 3,861,088 tons, while that of 1841, was 2,071,802 tons; showing that the trade had nearly doubled in 5 years.

In all the immense territory which surrounds the great lakes, and which now produce this surprizing amount of commerce, there was, in 1816, but one organized State, and the total population *did not exceed 500,000 souls.*

At the present time, there is a cluster of six large States about these waters, containing a population of between four and five million of inhabitants.

Embracing the States and territories, whose trade will float over these lakes *to an Eastern market*, we have an area of nearly 300,000 square miles, or an extent of territory, *three times* as large as the kingdom of Prussia, and nearly *twice* as large as France."

"Examine the position and advantages of this favoured region, which is almost encircled by those great inland seas, possessing an exuberant soil, a genial climate, and all the elements of national greatness. Survey these magnificent lakes, with their five thousand miles of coast, their numerous harbors, the flourishing towns and cities, which already stud their shore, and the thousands of miles of natural and artificial channels of communication, collecting the rich products of the soil from every point of the compass, and pouring its treasures into these great natural reservoirs,—trace that noble river, the St. Lawrence, which forms the outlet to the ocean for these illimitable waters, *and which seem designed by nature as the great highway of nations*; consider the rapid progress of this country within a few years past, in population, in improvements, in commerce, and wealth,—and picture its state a few years hence, when these fertile plains will teem with an active and enterprizing population, when railways will spread a

net work of iron lines over the whole length and breadth of the land, when the vast agricultural and mineral resources of the country shall be developed, and the western lakes be covered with innumerable fleets, bearing these exhaustless products,—do all this, I say, and then estimate, if you can properly, the extent and value of the commerce of the *mighty West*."

With the importance of the exhaustless trade of the West, brought thus strikingly in view, we cannot wonder that the several United States, having a prominent Atlantic port, should strive their every nerve, to reach this extensive and fertile country, by railroad or canal; satisfied, that if they once accomplish their object, their future prosperity is secured. Thus, Portland, Boston, New York, Philadelphia, and Baltimore, are eagerly endeavouring to open, and to perfect their communication with the West, and it remains to be proved, when all is done to open up this trade, if every avenue of conveyance will not have its fullest capabilities tested to the utmost. That this will be the case,—that they all will have more than they can do, is, at all events, the present opinion of many scientific, intelligent, and business men.

Let us now examine what grounds we have, for securing a share of the trade of the Great West for the Halifax and Quebec line:

The St. Lawrence River, with its ship canals, and the great lakes, open an inland navigation, which for its extent, capacity, and economy of transportation, is not surpassed by any in the world.

The total distance through the St. Lawrence and the lakes to Chicago, from Quebec, is 1510 miles, and in this distance there are but 66 miles of canal navigation.

A Committee of the New York Legislature, on the subject of equalizing tolls on the Erie and Oswego Canals, state, "That there is no route so cheap to England from Ohio for flour as by the way of the St. Lawrence River," that "the St. Lawrence Canal, which passes the rapids of the St. Lawrence River, is not needed for the *down trade*, but only for the *up trade*, unless the vessels carrying it, are to go from ports on the lakes to foreign countries; and will, when completed, have no effect on our commerce downward to Montreal; already, steam vessels with cargoes, have descended the rapids of the St. Lawrence. The St. Lawrence Canal facilitates the *up commerce alone*, and is not so expeditious and cheap as the channel of the River downwards; should flour from the United States be admitted through Canada to England, duty free, every barrel sent from the United States would go

through the St. Lawrence, and would never seek our Canals at all."

These remarks have an important bearing upon the question before us. We find, that this facility of conveyance, *down stream*, enables the merchant of Canada, to bring a barrel of flour from Cleveland, at the head of Lake Erie, to Montreal, for 2s. per barrel; and continue it in same bottom, without stoppage or breaking bulk, and in view of increased upward freight to Quebec for 2s. 3d. per barrel; and, probably, by proper arrangement, at the same rate, 2s. per barrel. The *up freight* being so important a consideration.

If, therefore, we can transport a barrel of flour from Quebec, 635 miles, at same rate as they can now bring it from Ogdensburg to Boston, 403 miles, say 50 cents, or 2s. 6d. per barrel, which I have no doubt we can, *from increased facilities, on a continuous line, and one management*. We can land a barrel of flour at the same, or less cost, at Halifax, by the Quebec railroad from Cleveland, as at Boston or New York by the Erie Canal.

We are now considering, be it remembered, our traffic in western produce, for export at Halifax. The trade for local supplies or domestic wants, cannot—I presume, it will be readily conceded,—be brought by any conveyance, so cheap as by the Quebec railroad.

The most formidable opposition we have to look to, is from the Boston and Ogdensburg, and St. Lawrence and Atlantic roads. The latter, say from Montreal to Portland. By the former, we have seen that a barrel of flour is conveyed from Lake Ontario—at Ogdensburg, to Boston, 400 miles, for 50 cents, or 2s. 6d. per barrel. The freight from Toronto, Hamilton, or St. Catherines, at the head of that Lake, to Ogdensburg, is 15 cents per barrel; whereas, to Quebec from the same ports, it is 25 cents; so, that with the same charge per railroad, it would cost 10 cents or 6d. per barrel more at Halifax than at Boston; from which, however, we must deduct 10 cents per barrel, charges, that attach in United States ports, passing in bond—that would not apply at Halifax and Quebec. This takes off the difference of river freight, besides which, we have the difference of sea voyage to Europe, of 400 or 500 miles in our favor, and something also gained in insurance.

From Montreal to Portland, Mr. Morton thinks, a barrel of flour, can be brought at eight to ten cents less cost, than by the line we have just referred to; if so, this would make a difference against the Halifax and Quebec line of 6d. per barrel; against which we have, in transport to Europe, 400 miles distance, in our

favor, and less insurance; but whether even a trifling difference in its favor would divert the whole and vastly increasing trade of the West to find an outlet at Portland, instead of Halifax, with all the advantages it can offer, in sameness of flag, facility of export, and nearness to Europe, remains to be seen. There can be little doubt, but both lines would find ample employment, when once in complete working order.

It also remains to be proved, whether a barrel of flour cannot be conveyed from Quebec to Halifax at a less cost than 2s. 6d. per barrel. The wonderful results attained in England *on long and continuous lines*, to which we have referred in speaking of their coal transport, may well lead us to pause and consider this before we refuse to believe it possible, and it must be borne in mind that coal, deals and other articles, will always give this line a full freight, and keep it in constant and regular employment. This, in any calculation on the Quebec line, must ever be, an important consideration.

From a report before me, dated 16th August, 1851, of the Ogdensburg line, it appears, from the last six months operations, that the line will pay 6 per cent dividend—\$86,460 interest on bonds, and leave a reserve of \$102,833.00. This leads me to the conclusion, that a barrel of flour can be brought on the Halifax and Quebec line, if we look *to the expenses and interest only being paid*, at the same cost, as on that line, although 235 miles longer. I am also, from particular enquiry, informed, that on the Ogdensburg line, no extra charge will be made for winter working.

The up trade for Canada East and West, will consist of West India produce, Fish, Oil, Coal, Plaster or Gypsum, and European merchandize, meeting the Lake and River craft at the Canada terminus and supplying freight to their several destinations.

The Deal and Lumber trade to be anticipated from the Halifax and Quebec line, to which I have referred, as forming a large and valuable export from our harbor, demands our especial notice. When the railroad was first spoken of, it was very generally thought quite absurd that articles like deals, boards, scantling, &c., could be brought to market by this conveyance, at a cost to meet competition abroad. This question is now, however, satisfactorily set at rest; and with the means of supply along the road, the position and facilities of our harbor considered, it is difficult, indeed, to estimate the extent of this traffic.

The opinion of Mr. Morton on this point, is most valuable, for we doubt, whether more reliable authority could be found either in America or Europe.

Speaking of the prospective business of the European and North American railway, he says: "With a superior line of railway

through the heart of this district, touching the lakes and streams of the interior, at numerous points, it is believed it will effect an *almost entire revolution in the lumbering business.*"

"Having on a previous occasion," he adds, "examined, *with much care and attention*, the subject of transportation of lumber, to market by railway, I can with *much confidence* advance the opinion that with proper arrangements, all the better qualities of lumber amounting to 60 or 70 millions of feet annually, as well as the greater portion of the short lumber, will take this conveyance; the latter, although less in quantity, will probably produce as much revenue as the former.

"Mills being erected on and near the line of railway, for which there is an almost endless amount of water power, the timber of more remote districts will readily be conveyed to them; and when manufactured into lumber, transported safely to market by this expeditious communication.

"Inferior qualities of lumber, which scarcely find sale, and are of little or no use at the points where produced, or is so remote from cheap conveyance as to effectually prevent its removal, may be forwarded to market by railway conveyance, at such rates as will ensure a ready sale for large quantities at reasonable profits.

"This is not a matter of conjecture, but is practically demonstrated by the experience of numerous railways in the United States. Lumber has been transported on one line, 200 miles, and *this, in competition* with canal navigation. Ship timber, masts, spars, curled maple and birch for ornamental work, fence posts, railway sleepers, and even fire wood, are transported *long distances* on railways to market, and command a ready sale at high prices, which, without this means of communication would be left to decay in the forests, or be burned as a useless incumbrance of the soil.

"The introduction of cheap conveyance into this district, will be followed by the manufacture of an endless variety of articles from the growth of the forest, which in turn will be succeeded by agricultural products as the country is improved.

"With a railway properly equipped, 200,000 to 250,000 feet may be taken to market in each train, and as much daily as can be loaded and unloaded in that time. By this means the supply can be regulated by the demand, and the lumber retained at the mills, where the expense of piling room is less than in the city, until required for shipping."

With this evidence of a large and profitable business in Deals and other lumber for the railway, we may well take courage. To those acquainted with this trade, the importance of obtaining the

article well manufactured, clean and in fine shipping order, and with despatch, can, alone be properly estimated.

It is an ascertained and acknowledged fact, that any ship owner, or agent having a ship arrive in Halifax harbor to load, finds it more profitable to dispatch her with deals at once direct from this port, at an extra cost of \$3 per M. superficial feet, rather than ballast, and proceed to a Gulf port to load. The delay, expense, difficulty with crew, &c., making it more desirable to pay a freight of \$3 or \$3½ per M., put alongside, than to change ports to load. Another great advantage, in obtaining such cargo per train, will be, in quality. Deals and boards, shipped bright and dry from the saw, instead of being rafted floated in a muddy stream, landed, and piled at the shipping place, and again floated and rafted to the ship, all which is the usual course, would be worth several dollars more per M. in any European market, than they are in the present mode of shipment. A great proportion of the labor and time, and consequently of the cost on board would also be saved. The great difference in price, that usually obtains in England, between the Baltic white wood deal, and the Nova Scotia spruce and pine, consists in the manufacture and order in which it is landed; the one being bright, clear, and regular,—the other water soaked, discolored and rough. I have examined the article in the shipping ports of the Baltic and in the ports of delivery in England, by which I come to this conclusion, and it is well understood at this day, both in Canada and New Brunswick, where the cull, or selection, is very strict.

When it is considered, that the line of railway will supply for many years to come, as much lumber, as it can conveniently transport, the advantages of this source of traffic must be acknowledged, especially, when we reflect that the present trade can now only be conducted for five or six months in the year, either from Canada or Nova Scotia, and but to limited extent from New Brunswick.

Mr. Morton informs us, that "the mills in the vicinity of Bangor, in the Penobscot River, have an aggregate of 15 gangs and 154 single saws, equal to about 200 single saws; and that this machinery is capable of manufacturing 176 millions of feet of lumber. The amount manufactured does not every year reach the full capacity of the machinery, the quantity being regulated by the number of logs which come down the river.

"The logs have often to be hauled a great distance, and are run with much difficulty, labor, and expense, through small and circuitous streams, and in passing rapids and falls receive more or less injury. The total amount surveyed, in the year 1850, was nearly 203 millions of feet."

This gives us a clear and correct idea of what traffic may be anticipated from a trunk railway running through, or in the immediate vicinity of large forests of valuable timber. The usual difficulty, delay, and expense, of lumbering, as it is termed, we see, consists in getting the logs to the mill—here, the mill, is, as it were, taken to the logs; thus realizing, in part, the revolution in the trade, elsewhere spoken of by Mr. Morton; for mills may be erected in, and near the line, moved by steam or water, as most convenient and profitable. Here, on the line, may also be established, as at the Penobscot, mills and machinery, for shingles, laths, hoops, staves, pickets, oars, handspikes, barrels, fish casks, sugar box and hoghead shooks, &c.

I dwell on this source of employment for the railway, impressed as I am, with its great and increasing importance, and only regret my inability to do it justice. I look upon it, as one of the most legitimate means of traffic—of productive and reproductive wealth that we possess, whether we view it, as a valuable export, in connection with ship building, house building, the thousand uses to which it can be applied, or by means of the great trunk railway, as a sure, and certain provision and encouragement, to colonisation, on a large scale.

I would wish to impress upon the mind of the reader, who may have a lurking horror at the idea of running a railway through a wilderness, that it is a fact, satisfactorily established by our neighbours, that the comparative value of land, and its productions, is simply a question of cost of transport. An acre of forest, one hundred miles distant, is, at present worthless, simply because, first its wood and then its cultivated produce cannot be conveyed to market. But let a well appointed railway run through, or in the vicinity of this land, to a good shipping port; and immediately, every tree, from being of no value, is worth from \$1 to \$2½ each, simply, because the owner can send it to market at a cost of \$1 or less, converted into any required form, where it readily commands the enhanced cost. So with respect to the comparative value of the land itself, and of every article of growth.

The emigrant, arrived at his woodland location, of 50 or 100 acres, along the line, will soon be led to feel his independence, and to quiet his mind about the rapid clearance of his land,—the suitability or otherwise of the climate to the growth of wheat, or to dread the rust, the blight and the weevil, when he ascertains for a certainty,—that two or three of his fine trees will buy him a barrel of the best Virginia flour, and the sure produce of a few bushels of seed potatoes, grubbed in about their stumps, will furnish his table with tea, sugar, and coffee for months.

As a means of extending our commerce, ship building, and providing employment for shipping, the lumber business cannot be over estimated. This is a well established result, *wherever the forest is reached by quick and cheap transport*. We have only, in illustration, to refer to the rank, the State of Maine occupies, among her sister States. And where, I would ask, in the whole Atlantic, North or South, is there a port so suitable for an extensive traffic in every variety of lumber, as the Atlantic terminus of the Halifax and Quebec Railway.

I have referred to the Coal trade, as a source of large and profitable traffic for the railway.

If as I have shown, a ton of coal can be transported on the Reading Railroad of Pennsylvania, built expressly for this traffic, at enormous expense, and having no other traffic or travel, at a cost to the Company of 62½ cents per ton for 97 miles. If as I have exhibited, a ton of coal is now transported in England on expensive lines of railway, at a satisfactory profit to the Company, at a freight of 2s. 1d. sterling per ton, per 100 miles; and if as Mr. Lindsay says, and has repeated, that in an extensive trade on the great trunk railways in England he has satisfied himself, that a ton of coal can be conveyed 100 miles for 1s. stg. per ton, at a profit; we have only to satisfy ourselves, that coal is actually, as stated, to be found in abundance in the vicinity of our trunk line, to be assured, that we can export coal from Halifax or St. John harbors, as cheap as from any part of the world—if not cheaper; and if so,—to what extent?

The same data may be applied to gypsum, lime, bricks, building stone, &c. If gypsum can be brought from 50 to 150 miles to the ship, at a cost of even 2s. and 4s. per ton, instead of 6d. and 1s. 6d., as above, a very large trade will spring up in this article,—for at this rate, it will pay the ship nearly, if not quite equal to coal. The price of gypsum in the Southern United States, this last year having been as high as \$4 per ton, and it is at present worth \$3½ per ton in Virginia. The freight of gypsum per ship to Quebec is \$2½ to \$2¾ per ton, and to Montreal \$3 per ton; and at these rates it can only be sent, when no other business offers.

I cannot refrain from quoting here, the remarks of an intelligent and scientific American writer, in passing over the projected line of railway in Nova Scotia. He says—"The mineral resources of the Province are almost unlimited, and there, probably, is not *an equal extent of territory on this Continent*, that excels it in the variety and superior character of its minerals. It is estimated that its coal fields alone cover an extent of country equal to 2000

square miles, and iron ore, gypsum, lime stone, granite, slate, and saline springs are found in great profusion in the Province.

Reviewing the foregoing data, we are enabled to come near the—

PROSPECTIVE BUSINESS OF THE ROAD.

Assuming the line to be in full working order, and referring to the notes following, as lettered, in explanation.

A.—350,000 barrels of Flour, Meal, and Rye, for home consumption, half at 1s. 3d. per barrel, half at 2s. 6d. per barrel,	Currency.	£32,812
B.—400,000 barrels ditto for export, at Halifax and St. John, at 2s. 6d. per barrel,		50,000
C.—100,000 barrels Pork, Beef, Oatmeal, Corn, Butter, Pease, &c., half at 1s. 3d. per barrel, half at 2s. 6d. per barrel,		9,375
D.—Other through and way freight, West India produce, Fish, Oil, Cattle, Hay, other country produce and general merchandize, equal to $\frac{1}{4}$ ton to each inhabitant. 775,000 inhabitants, 193,750 tons carried on average 50 miles, at 2 cents per ton,		48,437
E.—100 million feet Lumber, brought on average 100 miles, at 10s. per M.		50,000
F.—250,000 tons Coal, at 4s. cur. per ton, 100 miles,		50,000
G.—Passengers, one to each inhabitant, 775,000 carried 40 miles, at $2\frac{1}{2}$ cents per mile,		193,750
H.—Steamer passengers, 30 each way per week, to Quebec, 70s. each,		10,920
I.—Steamer passengers, 50 each way per week, to United States and New Brunswick, 127 miles, at \$3.20,		4,160
K.—Mails, \$300 per mile per annum,		47,625
L.—Sale of Lands, say 135,000 acres per annum, exhausting 3,000,000 acres in 22 years, at 10s. per acre,		67,500
		£564,579
M.—Running expenses, 40 per cent,		226,831
	Nett Income,	£337,748
Interest on £3,810,000 stg., cost of 635 miles, at £6000 stg. per mile, at $3\frac{1}{2}$ per cent.		166,687

Would leave a Reserve of £171,061

NOTES.

- A.—The import of Flour and Breadstuffs for consumption, I have shown, amounts to about 500,000 barrels. I make here allowance for part to go by other conveyance.
- B.—The estimate for the Portland line, for export is 400,000 barrels, for St. John and Halifax I put down the same quantity.
- C.—Mr. Morton estimates 140,000 barrels of these provisions, for the Montreal and Portland line, for consumption of Maine. New Brunswick and Nova Scotia will likely take 20 per cent more than my estimate.
- D.—Massachusetts carries $2\frac{1}{4}$ tons freight to each inhabitant; the whole of my estimate of transport A. B. C. and D. *added together*, amounts to but a trifle over 3-8ths of one ton to each inhabitant, or a little over 1-9th of Massachusetts.
- E.—Mr. Morton, who is to be esteemed the very best authority on this point, estimates 70 million feet, as *the addition* the North American and European line would bring to Bangor, running through the Maine portion, say 95 miles; this would increase the export of Bangor to 280,000,000 feet of lumber, besides 80,000,000 of laths, clapboards, and shingles; the estimate I have taken is but little over 1-3rd of this quantity,—but why may it not equal Bangor, considering our length of line?
- F.—The present export of the Pictou and Sydney Mines is about 180,000 tons, or 120,000 chaldrons.

The Reading railroad of Pennsylvania, transported in six months of this year, 976,941 tons Coal, with a canal alongside of it conveying 300,000 tons more.

Mr. Morton observes, "the cost of transportation on railway, depends upon the regularity of the traffic and *the loads that may be carried*. If trains can be uniformly loaded to the capacity of the engine, the cost may be reduced to a very low rate, on roads having favorable gradients." He adds, "with the immense deposits of coal along the line of the proposed road, there appears no reason why merchandize trains going in the direction of Halifax, should not be always fully loaded."

The quantity I have put down, I look upon as trifling, compared to the results that may be anticipated, after a year or two's working.

- G.—I have shown that Massachusetts on 1142 miles of railway, carries $8\frac{1}{4}$ passengers to each inhabitant; New Hampshire, on 512 miles, $4\frac{1}{2}$; Connecticut, on 443 miles, 5; New York, on 1359 miles, 2 passengers to each inhabitant, and average distance for each 60 miles.
- H.—210 steamer passengers per week each way, over the line to Portland, say 420 per week carried, is assumed in the calculations of that Company. My estimate, therefore, must be considered very low.

"The route to and from Europe, which is the most certain and shortest in point of time, must eventually, become the cheapest, and, therefore, the most frequented."

I.—“The merchant of Canada, for instance, will, by the proposed railway, be able to reach Halifax, with nearly the same ease as he can travel to New York. He will, therefore, shape his course, so as to economise time and expense in making his passage to and from Europe.”

“It is known that Canada, New England, and the Lower Provinces, furnish a large proportion of the present travel.”

K.—This is the rate, estimated, and generally allowed in the United States.

L.—One half of the sale of Lands, will, doubtless, be at three times this rate. In the United States, \$5 to \$10 per acre, is usual rate on lines of railway.

M.—The cost of operating the Boston and Ogdensburg line, is 38 per cent, the only long line in United States at present in working order—403 miles. The Halifax and Quebec line, if carefully managed, should be 5 per cent less than the rate taken.

Objections have, and will, no doubt, be again made to the anticipated coal traffic from Halifax. It is asked, how is it possible to convey coal by railway, and ship it at Halifax harbor as cheap as at present, direct from the Mines at Pictou and Sydney? I answer, it will be brought about, simply, on the plainest principles of commercial economy. A port to enjoy an extensive and profitable coal traffic, must be enabled to supply it as cheap, or cheaper, than other competing ports; and be so situated, as to command the *lowest possible freight* to the desired markets. Neither Pictou or Sydney can do the one or command the other.

Both are shut out from the world for 6 or 7 months of the year, consequently, the whole expenses of the year attach, solely, to the shipments of five months. Neither Pictou or Sydney, have any import trade, and therefore, cannot command low freights. Other coal ports have, and thus we see that Newcastle, Liverpool, and Glasgow, send coal to New York, as cheap as Pictou; and to the West Indies, Chagres, Brazil, and Pacific, much cheaper. Quebec and St. John, N. B. are supplied, at less cost from England than from Nova Scotia; and even at Halifax, it is no uncommon thing to see English coal selling lower than that from the Nova Scotia Mines.

Had we a railway to supply deals and other lumber at Halifax harbor, *and no coal by that conveyance*, the coal of Pictou and Sydney would be entirely shut out of our market by English import, by the lumber vessels. This is not a matter of conjecture or doubt, we have only to look to St. John, N. B. and Quebec, for years past, to verify the fact.

Their trade is, therefore, confined to a short season, and to small coasters to Halifax, Newfoundland, and United States, that cannot

find better employment,—when they can do so they leave it. The demand remains thus uncertain, which adds to the difficulty—at times without vessels, at others, more than they are prepared for.

If this is the case then, it is asked, why do not the association reduce their prices, encourage more orders, and do three times the business. Because, they probably find, that no small reduction would serve the end. They must reduce from 15s. and 18s. to 10s. and 12s. per chaldron, and even then their situation would debar them from largely increased export.

Much is said, also, of the cheapness, great advantage, and facility of loading a vessel at the pits mouth, by those who do not well consider the vast outlay of the association to perfect this business. A railway and equipment has been built at Pictou, at a cost that would, at present, nearly build the branch line to Truro. Had the association, years ago, opened a railway to Halifax harbor, by the shortest line, a distance less than the line of the Reading Railroad, conveyed their coal for shipment to extent of 500,000 tons per annum, instead of shipping as at present, 80 to 90,000 tons, and transported the whole of the way and through traffic and travel to the Gulf shore, P. E. Island, and Cape Breton; they, no doubt, would have been in a much more enviable position than they now are. This, at least, is the opinion of men who have had the best opportunity of knowing and judging the matter.

Halifax harbor may be supposed to command a large coal traffic for the following reasons :—

It is open at all seasons of the year.

It has a considerable import trade, which with a railway would be increased tenfold.

It has numbers of vessels inward, seeking outward employment.

A class of superior built vessels, owned in the harbors east and west of it, constantly resort to it for charters.

Coal could be conveyed to the United States at less than one half the freight and insurance that it can befreighted from Pictou or Sydney, the passage from the one being from 3 to 10 days; to ballast and proceed to load at the other, 25 to 35 days.

Cuba, Porto Rico and Jamaica, offer great inducements for vessels going out for freights to take coal, the tonnage dues are returned and other advantages gained; to ballast and lose time in going to Pictou in summer, would take away all the benefit looked for, in being despatched from a loading port; and from November to June, the very season of crop, and for vessels to go out to those ports, they could not proceed to the mines at all.

The same applies to Bermuda, St. Thomas, Chagres, &c., all becoming large depots for coaling the various lines of steamers, en passant.

Coal brought by railway from 60 to 120 miles, can, it may be supposed, be put on board ship at Halifax or St. John, at 10s. per ton, currency, if the data I have adduced is correct. At all events we have the fact before us, in the London papers advertisements, that coal is now delivered at the station of the Great Northern Railway Company from Yorkshire, *in quantities to suit, of best quality*, at 13s. 6d. per ton, or carried to any house in London at extra cost of 6d. per ton per mile distant from the station; affording at this rate, *a paying freight* to the railway company, and *a profit* to the retail vender.

To attempt to follow out all the advantages that would result from cheap coal to our own province, and to our city and its vicinity in particular, would here be out of place, but I may be permitted to direct attention to the following facts. In a climate like this, cheap fuel is as necessary to the comfort and health of the labouring class, and the poor, as their daily food. We know that their coal costs, on average, bought in small quantities, through the year, \$6 to \$6½ per chaldron. If we could reduce this their greatest tax to \$3½ to \$4, by cheap railroad supply, we should give them, on 10,000 chaldrons, (their wants in the city) from £5000 to £6000 per annum. Or in other words, we should save, in the consumption of the city alone, from £10,000 to £12,000 per annum, and when increased in population, probably, twice that sum.

The increasing use of coal is well exemplified, by reference to the product of the mines of Pennsylvania:

In 1820, their total supply was - 365 tons

In 1850, they sent to market - 3,371,255 tons

From this exhibit, it might be naturally concluded, that the large and increasing domestic supply of coal, from the various States producing it, had diminished the foreign import, or indeed, with their protective Tariff, had totally annihilated it, but so great is the increase of its use and demand, that the very contrary is the fact. The following shews the import, for the years, as stated:—

1820	-	-	-	-	673,711 bushels,
1830	-	-	-	-	1,640,295 "
1840	-	-	-	-	4,560,287 "
{ 1848	-	-	-	-	4,710,000 "
{ 1849	-	-	-	-	4,800,000 "
{ 1850	-	-	-	-	4,333,526 "

In the year 1845, alone, the import rose to 8,543,327 bushels, shewing what might be expected from even diminished duty, and what further quantity from a (free trade) reciprocity.

The difference of cost of transport, on long and short lines of railway, is so strikingly exemplified in a paper before me, that in connection with the observations I have made on the subject, in the foregoing pages, it claims our consideration.

A memorial has been presented to the Liverpool Chamber of Commerce, from Mr. Ed. Higgin, directing the attention of the Chamber, to the mode in which the manufactured goods of Manchester, are being diverted from Liverpool, as the natural port of shipment for those goods to the East, and carried to London. Mr. Higgin shews why London ship owners are able to compete with those of Liverpool, namely the great influx of produce laden vessels to London, and the diminished cost of railway carriage to London. Up to June, 1848, the exports from London were insignificant, but now they have become so considerable that four-fifths, which he estimates are extracted from Liverpool amount to 7046 tons weight, and about 11,858 tons cubic contents, the loss to Liverpool during the two years was £36,392. The memorial then proceeds to shew that goods are carried from Manchester to London, at the rate of 1½d. per mile, whilst the mileage of goods to Liverpool was at the rate of 4½d. per mile; and that the shipment of 100 bales of yarn, at London for Calcutta, was at the rate of 20s. per ton, £5 9s. 7d. less than that of Liverpool; consequently compelling the Liverpool shipowner to reduce the freight to 15s. per ton, to enable him to compete with the London ship owner. The remedy proposed is that of compelling the railway companies to carry freight from Manchester to Liverpool at a cheaper rate, or to charge a higher one to London.

This, completely confirms the results of the working of *long* and *short* lines of railway, wherever tested. The value of railways to a *new country*, is truthfully set forth in a recent paper from the pen of Edmund Dwight, Esq., of New York, which must commend itself to every enquiring mind. He says:—

“The value of railways, as a productive investment of capital, is as nothing compared *with their indirect creation of wealth*. In a new country the results are *beyond* calculation. The question whether land is worth \$50, or \$20, or \$1, or nothing, per acre, is simply a question of transportation. The lands of Illinois are as rich as the lands of New York. An acre of land in the State of New York is worth \$40 per acre, because the freight to market leaves the farmer a nett profit of say 40 cents per bushel, and other products in proportion. But an acre of

land in Illinois is worth only \$5 per acre, because the cost of transit leaves the producer, say 5 cents per bushel.

Thus, assuming for illustration, that the cost of production is 60 cents, in either case; the New York farmer sells for \$1 and realizes 40 cents profit; the Illinois farmer sells for 65 cents, and realizes one-eighth the profit of the other.

Now reduce the transit from Illinois, say 20 cents per bushel, and the nett profit is quadrupled, and the value of the land is enhanced in the same ratio. Illinois which was worth \$5 per acre,—now becomes worth \$16, and it approaches the value of New York just as the transportation is reduced.

A railway traversing the level regions of the West, costs say \$12,000 per mile. If a breadth of ten miles, on either side, was worth \$5 and rises to \$20 per acre, as it probably will in a few years, the value thus created is equal to fifteen times the cost of the road. Such an enhancement is only the natural result of a railway in a new country, for at the same time that it multiplies the per cent profit in all the products of the land, it augments the amount to a degree only limited by the capacity of the soil.

A *new Country* is enriched by railways far more than an *old one*. Thus in England land had already reached its maximum value before her costly system of railways was constructed. The Western States on the contrary rested like unworked mines, awaiting the developement of their boundless resources."

CONCLUSION.

Occupied with the detail of an active business, I should have declined intruding the results of the investigation of my leisure hours upon the public, did I not share with many of my friends, in a high degree, a deep sense of the important crisis at hand, on which the welfare of our country hangs tremblingly at stake. Our people awakened to the great importance of a railway, and encouraged—but with hope deferred—patiently to look forward to the united action of their Representatives, to secure for them the desired boon, await with nervous anxiety the approaching meeting of our Legislature.

A responsibility of no ordinary magnitude rests upon its members. When the people "ask for bread, will they give them a stone,"—the blighting—withering stone of party feeling and political discord? Will *local* jealousy and selfish rivalry arise, and prompt the "eye to say unto the hand, I have no need of thee, and the head to the feet, I have no need of you," as if the

body could improve, limbless, or the tree flourish, branchless : or will they approach the question with that calm and dignified composure, which its importance demands, and which no party feeling or personal antipathy should be permitted to ruffle ?

Not only is the earnest attention of the Provinces, and the eyes of their statesmen directed hither, but the rulers of our parent land, united with her sons of noble minds, and christian hearts, await a favorable decision of our railway question, to aid with ready hand, that healthy stream of colonization, which is designed to prove a bond of closer union and of mutual wealth.

If my endeavors to elucidate the question, simply tends to facilitate a deeper enquiry, or remove *one* doubt, on any perplexing point, the end I have in view is fully gained. With such feelings, the indulgence of the public, and their patient consideration of the subject, is asked.

APPENDIX.

EXTRACT OF A LETTER FROM A HIGHLY INFLUENTIAL AND INTELLIGENT GENTLEMAN OF BOSTON, IN REPLY TO ENQUIRIES ON THE SUBJECT OF THE HALIFAX AND QUEBEC RAILWAY:

“*Boston, 24th Sept., 1851.*”

“The building of the Boston and Maine road, with which I am at present connected, as its executive head, was commenced many years since, as a spur from the Boston and Lowell road, at a point fifteen miles out of Boston, to Andover, a distance of eight miles, and in the progress of improvement has come to be an independant road, extending from this city to the East and to the North West, and now performs the service of *ticketing to twenty one different railroads*, embracing one hundred and thirty one stations, and including Calais on the one hand, and Detroit and Chicago on the other; but its own lines terminate at South Berwick, in Maine, and at Methuen, a border town in this State.

“The number of miles completed under its several charters (for it passes into three States), amounts to ninety three and a half, at a cost of four million and ninety five thousand dollars (\$4,095,000). In this outlay are comprehended immense charges, not usual to roads in the country. These are, for the Boston terminus, which contains very expensive passenger's, merchandize, machine and engine buildings, on land and bridges, of great cost, amounting to \$700,000 for the two first miles; for the Lawrence and Methuen branch of three miles, \$170,000; for twenty eight miles of double track, \$390,000 extra; and for a very full equipment, growing out of the necessity of running 58 trains daily in and out of Boston, \$160,000; leaving as the cost of 88½ miles of road, of single track, the sum of \$2,675,000, or about thirty thousand dollars per mile.

“This road, like all others in this country, was built under many disadvantages. The capital not being supplied in advance, great pecuniary embarrassment was experienced, and many sacrifices submitted to, in order to sustain the enterprise.

“There are two other items of expenditure, not considered above, from which very great deduction must be made, before the case can bear any parallel to your project,—these are, land damages and superstructure, and I estimate the excess of them to be \$900,000, or a trifle over \$10,000 per mile; thus bringing the nett cost, without estimating fractions, to *Twenty Thousand dollars per mile.*

A short road of twenty eight miles in length, running from Dover to Altonbay, N. H., is just now being completed, at a cost of nearly *twenty one thousand dollars per mile.*

The Portland, Saco and Portsmouth railroad, extending from Portland to Portsmouth, a distance of 51 miles, and now under a lease to the Boston, Maine and Eastern roads jointly, has cost one million, three hundred thousand dollars, or 25 6-10 thousand dollars per mile, from which should be deducted for excess of costs of rails, land damages, and half the interest, \$187,000 or 3 6-10 thousand dollars per mile, showing the actual sum for your purpose to be *twenty two thousand dollars per mile.*

"Of all the States in this Union, New Hampshire now stands the fifth in the amount of expenditure for railroads, although she at first manifested great reluctance in coming forward to foster this branch of internal improvement. She at length yielded to the progress of light and to the will of the people, and is thus reaping the benefit at this time.

"She *was* represented by that most distinguished legal gentleman, * * * * * to be a very good State to *emigrate from*, on account of the hardy character of her soil and of the Webster like strength of her sons; but *now* she is a very good State to "*hold fast to*," as her statistics show, that the ratio of increase in population for the 10 years from 1840 to 1850, *is double that of the ten preceding years*, and the advance is proportionally great in wealth. This is a consequence, in my judgement, sure to follow the progress of railroads, as might be illustrated in a variety of ways; not the least important of which, is the great advance in the value of property and the rapid accumulation of population, wherever they penetrate. These you may not hope to realise to the same extent that have been enjoyed in our neighbourhood, where property has, in many instances, been quadrupled in value and population doubled in a period of ten years.

"Portions of our New England railroads pass through a wilderness country, where the promise was not very inviting, *but they have worked wonderful results*, causing the wilderness to blossom as the rose and the heart of man to rejoice therein.

"An analysis of our railroads generally would give evidence that undue expenditures have been incurred *for want of ready cash*, and of that knowledge in the science and art of railroad building, indispensable to the economical outlay of capital, and will also show that no certain accuracy can be deduced from aggregating the cost of them, as embodied in general reports, which are required to be submitted to our Legislatures from year to year.

"I shall not attempt at this late day to discuss the subject of the utility of railroads to all countries, new or old, but it seems to me that a new country with nearly all its resources undeveloped, holds out the bow of promise which none but a sceptic, in all that is good and useful, could resist. It is moreover sound policy in a nation to foster the best interests of its constituency, having for their object the improvement of their condition. A government will be best loved, that best cares for its subjects.

"The people themselves, though they may be slow to realize it, will be sure to reap a harvest in the increased value of their property and products, and will also secure those social advantages, which will both promote personal happiness and the common wealth."

(From Morton's Report on the St. Lawrence Railway.)

INCREASE OF PASSENGERS AND FREIGHT BY THE ESTABLISHMENT OF RAILWAYS.

"From Baron Charles Dupin's Report on the Paris and Orleans Railway:

"Experience has proved both in France and abroad, that in a short space of time the facility, expedition and economy afforded by Railways more than doubles the number of passengers and the quantity of merchandize.

"In order to support such statements we will quote the following facts relative to the Railways of Belgium, England and Scotland, in positions of extreme difference, and giving rise to a variation in the returns which far exceeded all anticipation."

Comparison of the number of travellers conveyed daily throughout the whole or a portion of the line:

Railways.	No. of Passengers before the establishment.	No. of Passengers after the establishment.
Manchester and Liverpool	- 400 - - - -	- 1,620 - - - -
Stockton and Darlington	- 130 - - - -	- 630 - - - -
Newcastle and Carlisle	- - - - - 90	- - - - - 500
Arbroath and Forfar	- - - - - 20	- - - - - 200
Brussels and Antwerp	- - - - - 200	- - - - - 3,000

Increase of the number of Passengers by the establishment of a Railway.

Liverpool and Manchester	- - - - - 300 per cent.
Stockton and Darlington	- - - - - 380 "
Newcastle and Carlisle	- - - - - 455 "
Arbroath and Forfar	- - - - - 900 "
Brussels and Antwerp	- - - - - 1,400 "

Thus even taking as a criterion, the road on which the proportional increase is least of all, we still find that the number of passengers will increase not only 100 but 300 per cent. The transport of merchandize will experience a similarly rapid increase.

Progress in the conveyance of merchandize by railway compared to that of passengers.

Year.	Passengers.	Tons.
1834 - - -	- 924,063 - - -	- 22,909
1836 - - -	- 1,248,552 - - -	- 161,501
1838 - - -	- 1,535,189 - - -	- 274,808

Thus while the number of passengers, increased 60 per cent. in four years, in the same time the quantity of goods increased 1,100 per cent.

Extract from an Official Report on English Railways, made to the French Government by Edward Teisserence, its agent, charged with the special duty of making a study of these Railways.

"The Darlington Railway has produced by its low rates of passage and freight, a complete revolution in the region of country which it traverses. It has increased the value of land 100 or 200 per cent. By these low rates the freight, estimated at 80,000 tons has been increased to 640,000 tons. The passengers estimated at 4,000 have been increased to 200,000."

Statement shewing the Increase of Passengers on various Railways in the United States.

NAME OF ROAD.	Year.	Number of Passengers.	Year.	Number of Passengers.	Increase.
Fitchburg - - - -	1845	196669	1847	494034	297366
Western - - - -	1842	190436	1847	388111	197675
Boston and Worcester -	1843	262830	1847	598305	335475
Eastern - - - -	1842	431000	1847	892896	461896
Utica and Schenectady -	1843	147868	1847	266534	118666
Utica and Syracuse - -	1843	114843	1847	199503	84660
Auburn and Syracuse -	1843	83316	1847	140605	57289
Auburn and Rochester -	1843	105190	1847	189345	84155
Tonawanda - - - -	1843	67604	1847	134068	66464
Attica and Buffalo - -	1843	68896	1847	130799	63903
Baltimore and Ohio - -	1843	149533	1847	288674	139141

VALUE OF THE FOREST—FROM FACILITY OF CONVEYANCE.

"The amount of Lumber annually manufactured in the State of Maine, probably *exceeds 400 millions of feet*, which with the numerous other productions of the *Forest*, cannot be valued at less than *six million of dollars*.

"Maine is the largest ship building State in the Union, and the tonnage of vessels *annually* built by her, is over one third of the total tonnage built by all the *principal* ship building States.

"In the amount of her shipping she is now the third State in the Union; no other State exceeding her, except New York and Massachusetts."—*Morton's Report, E. & N. A. Railway.*

The State of Maine draws all this prosperity and wealth from her wilderness woodlands.

LUMBER TRADE OF MICHIGAN.

The State of Michigan is becoming as famous as Maine for the amount of lumber made from her pineries, and exported to the cities and villages on the chain of lakes.

A correspondent of the *Detroit Tribune* furnishes the following estimate of the quantity of lumber that will be made the present year in that part of Michigan below Saginaw Bay:—

Total amount of lumber manufactured and exported from 30 mill establishments, } 104,950,000 ft.

This, does not include the amount made on Lake Huron, above Saginaw Bay, nor that to be shipped from ports on Lake Michigan, and which will probably amount to 150,000,000 feet additional.—*Hunt's Merchants' Magazine*.

EFFECTS OF INTERNAL IMPROVEMENTS—ON VALUE.

Tables showing the effect of Internal Improvements on the value of Property in the City of New York.

Table 1st.—Chronological Table of the Assessed Value of Real and Personal Estate in the City of New York, during the Three Commercial Periods.

First Period.—From 1815, to the completion of the Erie Canal.

Year.	Assessed Valuation.	Year.	Assessed Valuation.
1815 - - -	£20,409,010	1824 - - -	£20,768,919

Second Period.—From the opening of the Erie Canal, to 1832.

1825 - - -	£25,290,011	1832 - - -	£36,575,654
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Third Period.—From 1833 to 1840.

1833 - - -	£41,623,797	1840 - - -	£63,033,879
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During the latter period, namely, since 1832, about 470 miles of Railroad have been completed and put in operation in the State of New York, besides about 2500 miles of Railroad in other States. Thus it will appear that since the introduction of the *Railroad system* the value of Real and Personal Property in the City of New York, have increased over *twenty-five millions of pounds*.—*Morton's Report*.

CAPABILITIES OF RAILWAYS OVER WATER CONVEYANCE FOR PASSENGERS AND FREIGHT.

When the New York and New Haven railway was proposed, it was an almost universal opinion that it could not succeed, from the fact that it was located along the shore of Long Island Sound and would have to sustain a direct competition with steamboats of the most superior character for speed elegance and comfort. Up to that time they had supplied the connection between the cities above mentioned.

The splendid steamer Connecticut had accomplished the passage in the short time of three hours and forty-five minutes, equal to 21 miles to the hour. It was thought, that the dangers of the passage were not greater than by railway, as the Sound was land-locked between these cities, affording a navigation more safe and free from

the waters emptying into the St. Lawrence above and below the Falls of Niagara. There were then present no high official personages, no celebrated engineers—distinguished commercial or political leaders; all but one were inhabitants of the township of Thorold, farmers and country traders—the recent comrades of the gallant Brock. They had before them no successful precedent; a people four times as numerous, and commanding the trade of that Atlantic which scarce one of these Canadian schemers had ever seen, were just commencing the Erie Canal. There was then but one steamer upon Lake Erie;—Huron and Michigan were known only to the Indian and fur-trader;—Buffalo, a city of 40,000 souls, was then a village, and Chicago and Milwaukie were yet “in the womb of time.” The whole commerce above Niagara, upon 50,000 square miles of water with 3,000 miles of coast, employed but forty sail, two only of which exceeded one hundred tons. Yet in that feeble and unostentatious commencement we trace the origin of that policy which has since broken down the barriers interposed by nature between the commercial intercourse of central North America and the world: and the unassuming actors have lived to see hundreds of floating palaces propelled by steam, and five hundred sail ploughing “the world of waters” in the West. They have seen the tonnage of 1818 increased a thousand fold—the population round the lakes thrice doubled—and an emigration of gold seekers sailing in a lake-built brig, two-thirds the circuit of the globe—to colonize the old conquests of Spain.

In 1833, after having extended the navigation of the St. Lawrence nearly 1,000 miles into the interior, by the opening of the Welland Canal, Upper Canada voted £70,000 for the improvement of the river between Prescott and the eastern boundary of the Province; this being an object “highly important to the agricultural and commercial interests of this Province,” as stated in the preamble to the act; and in 1834 the Legislature authorized a loan of the munificent sum of £350,000 for this purpose, and dictated the grand dimensions of 200 feet by 55 feet breadth for the locks, with not less than nine feet of water. In 1837 the canal mania reached its height in the Upper Province; £245,000 additional stock was authorized for the permanent completion of the Welland Canal, the wooden locks of which were rapidly giving way; and in the session of that year the enormous sum of £930,000 was voted by Upper Canada for internal improvements. These magnificent “resolves” were rendered in a great measure nugatory by the political crises which followed shortly after.

Upon the union of the Provinces in 1841, at the first session, £1,319,180 sterling, was voted for the St. Lawrence and Welland Canals, Burlington Bay Canal, and harbors upon the lakes, and upward of £350,000 for other internal improvements. The favorable report of the committee—in which the grant for the improvement of the St. Lawrence was contained—was secured by the leader of that party, who, upon the Thorold ridge, upward of twenty years before, projected the commercial obliteration of the Falls of Niagara.—*Keefe's Prize Essay.*

