EMMERSON'S BRIDGES.

Favored Contractors Enriched at Taxpayers' Expense.

Direct and Absolute Evidence That the Government Paid Two and Three Prices for Bridges.

What Engineers Holmes and McCarthy Have to Say—Engineer Murphy of Nova Scotia Contradicts Emmerson.

Chief Commissioner Had No Fault to Find With Dominion Bridge Company's St. George's Contract—The Very Significant Date of Some Former Bridge Contracts—An Unanswerable Arraignment of the Provincial Government.

In the issue of the Sun of September 26th evidence was presented to show that the provincial government had been paying two or more prices for the steel superstructure of the permanent bridges built since 1893.

Previous to that date the work was let by tender to the lowest bidders. During the last five years it has been given out at private contract to favoured contractors at rates always 100 per cent. and usually more, than that above the market price. It has been shown that in 1897 $36,000 was paid to one favoured firm for three steel bridges. One half of this money was a present from the Emmerson government, given at the public expense to the Record Company of Moncton. Any one of eight or ten bridge builders in Canada would have been glad to get these contracts for $18,000. Since the article of September 26th was written it has been discovered that the contracts mentioned were by no means the worst. It can be shown conclusively that three and even four prices have been paid to favoured bridge contractors.

EXPERT TESTIMONY.

The report of the engineer engaged by Mr. Hazen to examine the New Brunswick bridges and report on their dimensions, weight and character, and on their proper cost by comparison with similar structures built under the tender contract system, has already appeared in the Sun, but it will stand repetition. In the meantime it may be said that during more than three months that this report has been under discussion no attempt has been made to break down his testimony in any particular.

A careful analysis and re-examination of the engineer's report shows that the only error was an under statement of the weight of the Petitcodiac bridge, which is 4000 pounds heavier than was calculated. This under statement, it will be seen, was in favor of the government.

All that the ministers or their organs have ventured to say in criticism of the report is that the name of the engineer is not given. Though the unquestioned facts in his report are more important than his name, there is no objection to furnish full particulars.

THE ENGINEER'S NAME.

The engineer engaged by Mr. Hazen was A. R. Holmes, C. E. Mr. Holmes is a graduate in engineering of Kings College, Windsor. He left college with high recommendations from Doctor Butler, formerly professor of engineering in King's. He served for some time on the engineering staff of the Nova Scotia public works department, and afterwards on the engineering staff of the Intercolonial, and resigned from the government service to take a special course in the Institute of Technology at Boston. There can be no question of his competence to perform the work required of him. Moreover his report speaks for itself. Here it is:

THE ENGINEER'S REPORT.

Dear Sir—In accordance with your instructions, I personally visited the grounds and made measurements of the following highway bridges erected by the local government of New Brunswick as follows:

Lefebvre—2 spans, 200 feet each.
Blackville—3 span, 1 centre span 200 feet, end spans 80 feet.
Hutchinson Brook—3 spans, 1 centre span 83 feet, 2 end plate girders 83 feet.
Tabor's—1 span, 150 feet.
Cuissack's—1 span, 153 feet.
Petitcodiac—1 span, 110 feet.
Elgin—1 span, 113 feet.
Campbell's—1 span, 240 feet.

WEIGHT OF THE BRIDGES.

I made all measurements of these structures with steel calipers, tested metallic tape and Chesterman's steel rule, and I think you can rely upon their accuracy. Attached to this report are details of the measurements of the several members of each structure. From these measurements I have made up the weights of each bridge, as follows:

	Lbs.
Lefebvre—2 spans, 118,664 lbs. each, total	237,328
Blackville—3 spans, 118,664, 27,212 27,212, total	173,088
Hutchinson's—1 span, 26,018, 2 spans plated girders (11,096) total	48,210
Tabor's—1 span	72,275
Cuissack's—1 span	75,151
Petitcodiac—1 span	36,381
Elgin—1 span	45,749
Campbell's—1 span	151,972
Total	840,154

UNDER THE TENDER SYSTEM.

To make comparison between the highway bridges built in New Brunswick and those of Nova Scotia erected by their local government, I have obtained plans containing the data upon which public tenders are invited in that province. A full list of the tenders received for each structure will be found in the provincial engineer's annual report, copies of which I enclose herewith for the past four years.

The weights of the several structures are not given in the annual reports, but from the plans and other data I am enabled to make up a very close estimate of the weight of each, which I think you can safely rely upon within 5 per cent., and which will afford you a basis of comparison between the cost of these structures as built by the respective governments of Nova Scotia and New Brunswick.

Below is a list of a number, the weights of which I have worked out in detail as per sheets herewith attached

1 span, 80 feet; weight, 26,739 lbs.
1 span, 100 feet; weight, 28,111.
1 span, 120 feet; weight, 39,047.
1 span, 160 feet; weight, 65,232.
1 span, 200 feet; weight, 129,137.

UNDER THE NO TENDER SYSTEM.

The reports of the commissioner of public works of New Brunswick, which you handed me, do not contain definite information as to the cost of the superstructures which I have measured, except in the case of Lefebvre's, Campbell's and Blackville, which are as follows, as given on page 23 of commissioner's annual report of 1897:

Lefebvre—Substructure, $7,887; superstructure, $15,350; sundry inspection, etc., $735.45; total, $23,972.45.

Campbell's — Substructure, $10,400; sundry inspection, etc., $370.08; total, for superstructure, $10,770.08.

Blackville — Substructure, $5,053.95; superstructure, $10,459.22; sundry inspection, etc., $336.82; total $15,849.99.

THE DEADLY COMPARISON.

The papers you forwarded me bearing upon this subject show that the chief commissioner admitted in the legislature last session that the prices paid to the Record Foundry Co. and to Ruddick of Chatham were at the rate of 6 1-2c. per lb. This would appear to be corroborated by my calculations, as will be seen by the following:

The aggregate weight of these three bridges, Lefebvre, Campbell's and Blackville, is 562,388 lbs. The aggregate cost of these as given in the chief commissioner's report is $36,209.22, showing the cost to have been 6.44c. per lb., taking my weights as a basis.

To enable you to make a comparison of the price per lb. paid by the respective governments of Nova Scotia and New Brunswick, I submit the following:

The aggregate weight of five bridges in Nova Scotia, above mentioned, is 288,266 lbs. The aggregate cost is $10,165, equal to 3.52c. per lb. One half of the above were built upwards of five years ago, when the price of bridge material was 25 per cent. higher than last year.

I would especially call your attention to the fact that the above price of 3.52c. per lb., is not f. o. b. cars at the contractor's works, but delivered, erected, floored and painted complete.

This would show that Nova Scotia bridges are purchased at a price or 2 77-100c. per lb., as compared with 6 1-2c. per lb. paid by the New Brunswick government.

The bridges in each province are very similar in general design and character, and the steel chiefly used in both provinces during the past two years is of the "Carnegie" brand.

MORE IN DETAIL.

To make a further comparison of the cost of different spans in the respective provinces, I would refer you to the following:

In June, 1897, the Nova Scotia government received tenders for Ritcey Cove bridge (See Prov. Eng. Report, 1898), 1 span 160 feet, roadway 18 feet wide. Three tenders were received and the contract awarded to W. P. McNeil, New Glasgow, at $2,200. This included delivery, erection, flooring and painting complete. As against this, a contract for a span of 150 feet, ten feet less than the N. S. span, was let at about the same time to the Record Foundry and Machine Co. of Moncton at a price stated to have been 6 1-2c. per lb. delivered f. o. b. cars at the contractor's works. The estimated weight of the bridge in question, as given above, is 72,275 lbs., and the total cost of the superstructure erected complete and painted, would be $5,239.93, or more than 100 per cent. about the amount paid for a span 10 feet less, in Nova Scotia. Again, in March, 1897, the N. S. government received tenders for Red bridge (See Prov. Eng. Report, 1898), span 80 feet roadway 15 feet. Contract awarded to W. P. McNeil, New Glasgow, for $717, delivered, erected, floored and painted complete. In the same year the N. S. government erected two spans 80 feet, roadway 16 feet 6 inches, at Blackville. The estimated weight of each is 27,212 lbs.; this, supplied at Contractor Ruddick's works at Chatham, is stated to have cost 6 1-2c. per lb.; adding 3-4c. per lb. for delivery, erection, flooring and painting complete, the total cost would amount to $1,972.87.

By reference to the sheets of detail weights it will be seen that in Nova Scotia an 80 foot span, with roadway 18 feet wide, is 26,739 lbs., as against 27,212 lbs. for span of same length in New Brunswick.

STILL ANOTHER TEST.

As another comparison, I may cite the case of the Petitcodiac bridge in New Brunswick. Span 110 feet, estimated weight 36,381 lbs., at 7 1-4c. per lb., delivered, erected, floored and painted complete, amounts to $2,687.62, as against similar span in Nova Scotia 10 feet longer, estimated weight 39,047 lbs., built by contract, delivered, erected, floored and painted complete for the sum of $1,190.

An examination of the tenders received by the Nova Scotia government for the past four years, for the superstructure supplied in that province, will, I have no doubt, convince you that if 6 1-2c. per lb., delivered f. o. b. cars at contractor's works, is correct, the New Brunswick government are paying at least 100 per cent. more than the market price.

LESS THAN THREE CENTS.

As further and conclusive evidence on the subject of the market price of superstructures, I enclose herewith a communication from the Dominion Bridge Co., in response to an enquiry (a copy of which is attached). It will be seen that the company, during the past two years, has tendered for 17 spans in Nova Scotia, at prices varying from 2 62-100c. to 2 84-100c. per lb., delivered f. o. b. cars at their works.

The freight, erection, flooring and everything complete, as per figures given, you will find, bring their prices up to an average of 3 1-4c. per lb.

EVEN THEN NOT THE LOWEST.

If you examine the tenders received by the N. S. government for the past two or three years, you will also observe that the Dominion Bridge Co. has been outbid by local bridge builders in almost every case. When measuring the superstructure, I also made measurements of the piers and abutments, and enclose herewith a statement of the details.

It was, of course, impossible for me to get exact dimensions in every case. I made enquiries, however, of persons in the vicinity, who were present when the masonry was being built, and I think it will be found that my measurements agree in the main with those shown on the plans from which the work was actually constructed.

I enclose herewith my note-book, in which you will find all the measurements recorded, with sketches showing the general design and details of various members of which I have estimated the weight, etc.

Yours respectfully,
A. R. HOLMES, C. E.

J. D. Hazen, Esq., Barrister, etc., St. John, N. B.

AGREES WITH EMMERSON'S TESTIMONY.

From this report it will be seen that whether the comparison is made by the length of the span, or by the weight of the material, it is shown that the bridges let by tender were furnished for less than half the price paid to the Record Company. But it did not require a measurement of the bridges to prove that the government has been paying more than six cents per pound for them. In the public accounts committee last session accounts were examined of the superstructure of Saunders Brook and Dingee bridges. The following are copies:

Saunders Brook bridge—Record Foundry Company's account, 3,586 pounds at 6 1-2 cents, $233.09.

Dingee Bridge—Record Foundry Company's account, 12,686 pounds, at 6 1-2c., $816.09.

As the province was charged in the public accounts with $448.41 for the Saunders bridge and $1,186.17 for the Dingee bridge, Mr. Pinder and Mr. Dibblee asked what had become of the balance above what was paid the Record Company. Mr. Emmerson stated that the balance represented freight from Moncotn and the cost of erection, flooring, painting, etc.

The committee could get no accounts for the other bridges, but simply the Record Company's receipts. They asked for particulars and were told that there were no details, but that the bridges were all the same price, namely, 6 1-2 cents per pound. The 6 1-2 cent price for the bridges delivered on cars at Moncton is thus established by the engineer's report and the testimony of the chief commissioner. These two bridges will be discussed later. Mr. Emmerson's statement is given here as official evidence of the 6 1-2 cent price. Mr. Holmes mentions a letter from the Dominion Bridge Company, of Montreal, in reply to an enquiry for their prices. The manager of the Dominion Bridge Company writes as follows:

THREE CENTS IS MORE THAN ENOUGH.

Dear Sir:—

We have duly received your favor of the 11th inst., and in reply thereto would say that we shall be pleased to furnish you with manufactured metal work for highway bridges at prices varying from 2.65 cts per pound to 3c per pound, f. o. b. cars at our works. These prices are for the metal work fully manufactured and fitted ready for erection at sites, and cover painting one coat before shipment. The exact price we can quote you for any particular structure will depend on the design of the span, and on its length and capacity and resulting weight, the shorter and lighter span being the more expensive, the longer and heavier spans the cheaper; but our price is not in any case likely to be below or over the figures named above. If you will send us full particulars of any work that may be offering, we will make a careful estimate of the same, and will name you a definite price for the metal work.

Freight rates from our works to the various I. C. R. points are as follows: Campbellton, 21c.; Newcastle, 25c.; Moncton, 27c.; Amherst, 27c.; Truro, Halifax, and New Glasgow, 28c.; Antigonish 30c.; and Sydney, C. B., 32c.

The various items of erection expense will vary a great deal with the locations. Carriage from railway station to site may be taken at 25c. per ton per mile. Lumber for flooring is obtained locally at prevailing prices. The cost of labor for the erection, including setting the false work, assembling and riveting the metal work, laying the flooring and painting the metal work after assembling, may be figured roughly at 70c. per 100 lbs. for the shorter and lighter spans, and 50c. per 100 lbs. for the longer and heavier spans, or say from $1.50 to $3.00 per lineal foot of bridge.

NOVA SCOTIA TENDERS.

Re Nova Scotia work. We have tendered to the Nova Scotia government since the first of the year on seventeen different bridges, and on referring to our records find that we have estimated this work at prices varying from $2.62 to $2.84 per 100 lbs. of metal work, on cars at our shops. The tenders were lump sum prices for the completed bridges, and were reached by adding to the above prices for metal work, the cost of freight to the nearest railway station, and a lump sum which had in each case been named us by the erector who does our lower province work, as the price at which he would contract to take the metal work from the cars, transport it to the site, and do all the work connected with the erection of the bridge. His price also covered furnishing and laying the wooden flooring.

Re the value of bridge work for the last few years, there has been but little change for some time. The metal market is now perhaps 10c. per 100 lbs. higher than a fair average for 1897, and just about the same as in 1896.

Steel has practically superseded iron in bridge work, and is now a good bit cheaper. Some iron bars are still used for adjustable rods, etc., but iron of suitable quality for bridge work now costs say 20c. per 100 lbs. more than steel. Iron bridge plates and shapes are no longer generally made, and can hardly be obtained.

Yours truly,
DOMINION BRIDGE CO., LTD.,
By PHILIP JOHNSON,
Manager.

LESS THAN THREE CENTS.

This letter shows that while Mr. Emmerson has been paying $6.50 per hundred pounds for New Brunswick bridges at the contractor's works, the highest price named by the Dominion Bridge Company was $2.84 per hundred pounds.

But even at the price quoted the Dominion Bridge Company has not been able to hold the business in Nova Scotia against the competition of local firms.

In 1894 seven contracts for steel bridges were made in Nova Scotia. All were put up to tender and the competition was close. Notwithstanding its low price the Dominion Bridge Company got only three bridges.

In 1895 the Dominion Company got five bridges and the Canadian Bridge Company six out of twenty-six Nova Scotia bridges. In 14 cases a New Glasgow firm was the lowest tenderer. Instead of bargaining privately for double the Montreal Company's price the local builders went into competition and under-bid the upper province concerns.

In 1896 the Montreal firm bid on 22 bridges, but the Nova Scotia builders were below them in nearly every case, and sometimes 20 per cent. below. It was in this year that Mr. McNeill, of New Glasgow, took the Ritcey Cove bridge at $2,200. The Dominion Bridge Company's tender of $3,084 was of course rejected. For a bridge ten feet shorter this province paid, computing at the 6 1-2 cent rate, $5,239.93.

THE AMOUNT OF THE STEAL.

The following table gives a clear view of the amount of the steal in the case of the only three bridges of which the cost of superstructure is given in the public accounts:

Name.	Span. ft.	Weight, lbs.	Market Price.	Dunnerson Price.	Loss.
Lefebvre	(2) 200	237,328	$7,119 84	$15,350	$8,231 00
Blackville	(3) 1-200 2-80 241	173,088	5,192 64	10,459	5,266 36
Campbells		151,972	4,559 16	10,400	5,840 84
Totals		562,388	$16,871 64	$36,209	$19,438 20

We have given the market price at three and a half cents per pound, which is five per cent. above the highest quoted price of the Dominion Bridge Company, while the actual Nova Scotia cost was at least ten per cent. below the Dominion Bridge Company's lowest prices.

COMPARED WITH THEMSELVES.

Let us now compare the government's prices under the private bargain system with the prices under the tender system. The sworn evidence of the builder of the Drummond County Railway bridges, given in the parliamentary investigation last year, was that the price of steel railway bridges had fallen 1 1-12 cents per pound since 1893. But in this province the movement has been the other way. The price has increased. So far as can be ascertained no bridge has been furnished by the private bargain system at a lower price than 6 1-2 cents per pound. But so long ago as 1892, when the current price of bridges was some forty per cent higher than it was in 1897 the Woodstock bridge was supplied at about four cents per pound.

That bridge comprises 1 span of nine of 87,893 pounds each, and one of 87,560 pounds—total weight 1,088,564. The price paid for the superstructure was $42,000, or 3.86c. per pound.

Let us compare this price with the sums paid for three private contract bridges built in 1897. The aggregate weight of the Lefebvre, Campbell's and Blackville bridges is 562,388 pounds. This is a fraction more than half the weight of the Woodstock bridge. On the basis of prices paid last year the Woodstock bridge would have cost over $70,000 instead of $42,000, which was paid at a time when the market prices were one third higher.

We may also compare the Blackville bridge, built by the Record Company by private contract, with three smaller bridges built six years ago by tender and contract. The Blackville bridge weighs 173,088 pounds and cost $11,250.72. The Salisbury bridge weighs 75,000 pounds and cost $3,600. The Trout Creek bridge weighs 51,500 pounds and cost $2,730. The St. George bridge weighs 50,000 pounds and cost $2,470. The three bridges built under honest competition weigh 176,500 pounds, or 3,412 pounds more than the Blackville bridge. These three bridges built six years ago, when the prices were much higher, cost $8,800, or $2,450.72 less than was paid for the single Blackville bridge.

So it appears that whether comparison is made with larger or smaller bridges Mr. Emmerson has pushed up the price when every other purchaser has been pushing it down.

ALL TWO PRICE STRUCTURES.

These are two price structures:

The Blackville Bridge.
The Lefebvre Bridge.
The Campbell's Bridge.

As shown above the excess of price in these three structures is over $18,000.

Then there are other bridges of which the government has not furnished a return of the price paid. Among these are:

Bathurst bridge, weight lbs.	210,000
Tabor's	72,000
Cuissack's	75,000
Hutcheson	48,000
Bull Creek	9,600
Total	414,600

Assuming an excess of price proportionate to that on the three bridges of which the cost is given, there is in these five a further gratuity to the builders of more than $13,000. But as will now be shown, two prices is by no means the rule. It is probable that in the case of some of these last mentioned structures three or four times the market prices were paid, as in the cases following:

A THREE PRICE BRIDGE.

The steel bridge at Petitcodiac is a single span of 110 feet. It was built in 1895 and 1896 by Mr. Willard Kitchen. Mr. Blair was then premier of the province, and he had the same regard for the Kitchen firm that Mr. Emmerson has for the Record Company. The department went through the form of asking for tenders for the substructure of the Petitcodiac bridge.

In response the following tenders were received:

(See return brought down 1897).

Tenders.	Amount substructure.
J. A. Killam, present site	$2,689.37
Joseph McBay, present site	3,895.25
J. B. McManus, present site	2,000.00
J. B. McManus, new site	1,869.25
Fred P. Reid, new site	3,120.50
E. A. Bleakney, present site	2,292.00
E. A. Bleakney, new site	1,987.00
Willard Kitchen, sub and superstructure	6,474.00
G. O. Dunham, present site	2,725.00
G. O. Dunham, new site	2,550.00
James E. Simonds, new site	2,795.00
W. Brewer, present site	1,900.00
W. Brewer, new site	1,800.00
Robert A. Smith, J. W. Steeves, jnr.	2,695.00
J. W. Steeves, jnr.	2,695.00
W. G. McKenzie, present site	2,700.00
W. G. McKenzie, new site	2,490.00

HOW THE GAME WAS WORKED.

It will be observed that while ten contractors made offers for the substructure alone, as they were asked to do, Mr. Kitchen put in an offer for both sub-structure and superstructure, which was not asked for. Of course many contractors would have tendered for the whole work if they could have had the chance, but they would have given the province a one-price bridge and that was not government policy. Accordingly Mr. Kitchen got the job at his own price and without competition.

Deducting the lowest tender for the sub-structure, which was $1,800.00, from the tender price of $6,474.00, Mr. Kitchen's contract gave him $4,674.00 for the steel work of a single 110 foot span. It can easily be shown that this is more than three prices.

THE PROOF.

As Mr. Emmerson has an objection to nameless engineers, it may be stated here that this bridge was measured by engineer George McCarthy. Mr. McCarthy was on the engineering staff of the Intercolonial Railway some years ago. He has since taken a full course at McGill University, obtaining his degree with high honors and winning no less than eleven prizes. Later he was engaged from time to time with the C. P. R., and is now employed on the staff of the Montreal Harbor works. He was recently elected an associate member of the Canadian society of civil engineers. Mr. McCarthy measured the Petitcodiac bridge and computes the weight at 40,902 pounds.

This gives 11 4-10 cents per pound as Mr. Kitchen's price for a bridge which any contractor would have built in that year for one third of the price.

AND EXTRAS BESIDES.

Even that was not enough. The accounts show that the province paid for the bridge as follows:—

In 1895	$1,808.28
In 1896	5,202.20
In 1897	62.00
Total	$7,172.48

Being $698.00 more than the three price contract called for.

If it is objected that the lowest sub-structure tender was too low, and that the work was worth much more, it can be shown that not more than $200.00 at the most should be deducted on that account. For as a matter of fact Mr. Kitchen sub-let the superstructure to J. B. McManus at his tender price of $2,000, and this part of the work was done without a cent of extras.

Mr. Kitchen therefore got $4,474 and several hundreds of extras for a steel structure which he could easily have sub-let at one third of the figure.

SHOWN BY COMPARISON.

For the Petitcodiac bridge Mr. Kitchen got, after paying for the superstructure $4,474 and extras. It is a 110 foot bridge.

In the same year a steel bridge of 112 feet, but one foot narrower, was built in Colchester County, Nova Scotia for $1,498, without extras, a longer bridge for less than one third of the price received by Mr. Kitchen.

In 1894 Stewart, of New Glasgow, built a 112 foot bridge at Weirs, in East Hants, for $1,500, without extras, also less than one third of price of Mr. Kitchen's 110 foot bridge.