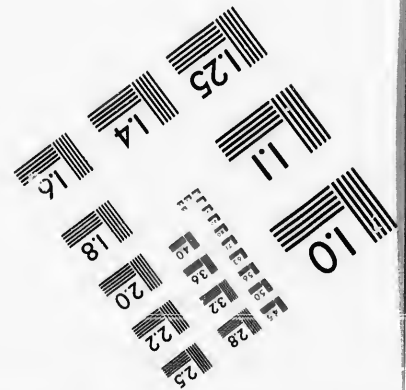
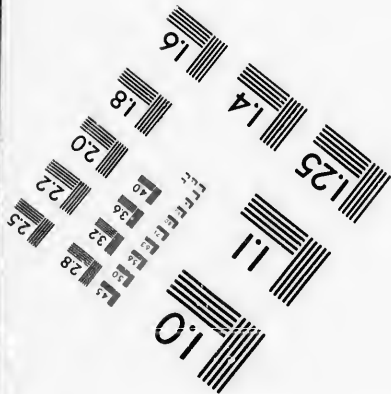
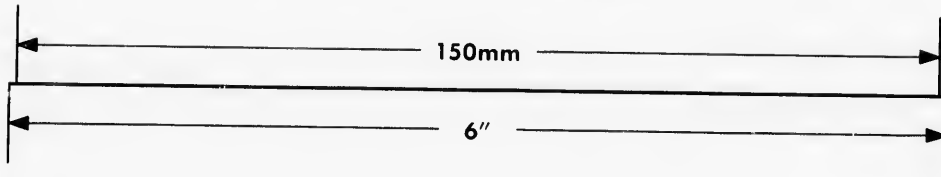
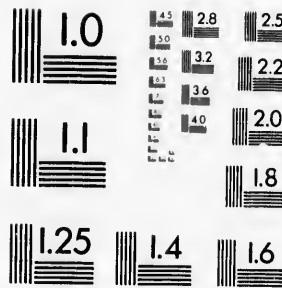
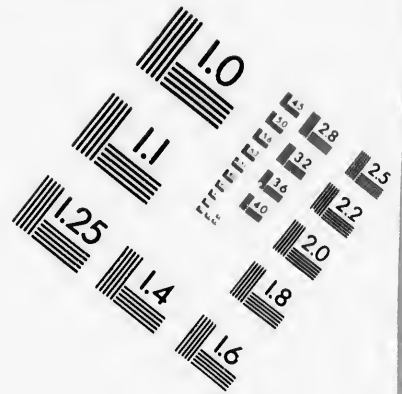
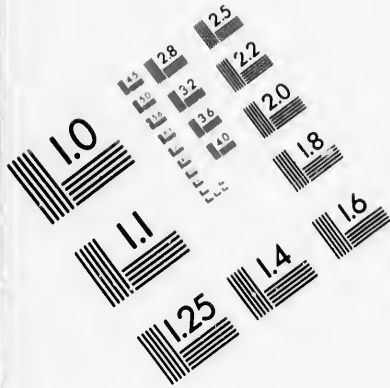


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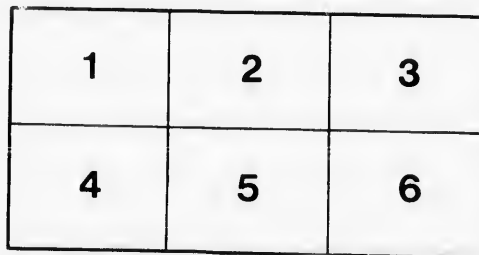
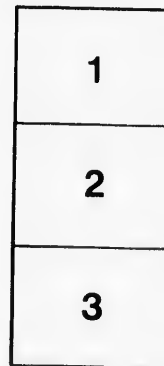
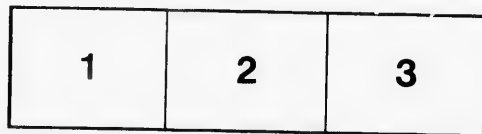
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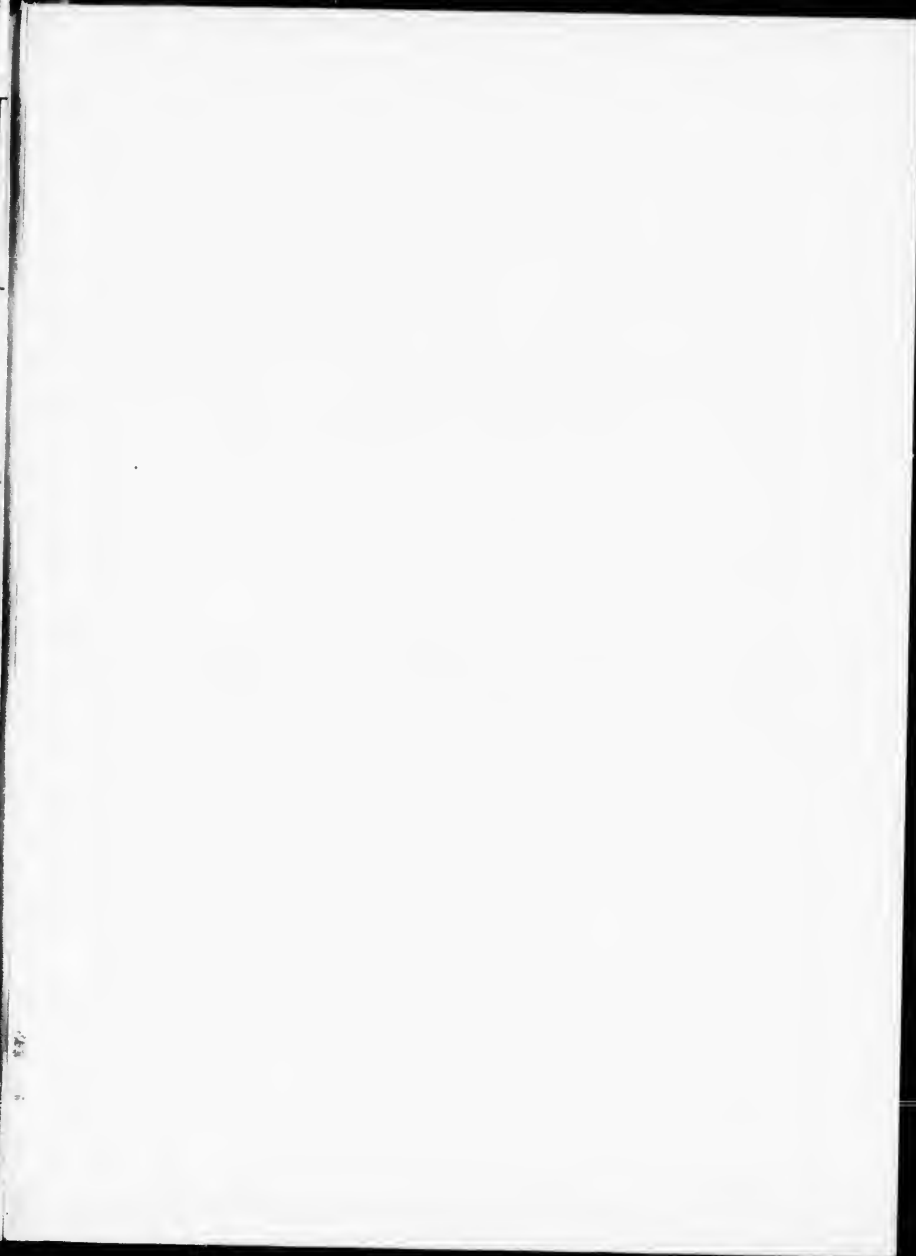
**VIC**  
Opened





**VICTORIA JUBILEE BRIDGE**  
Opened for Traffic December, 13th, 1898







Souvenir

# VICTORIA JUBILEE BRIDGE

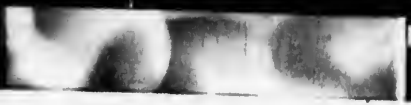
OPENED FOR TRAFFIC


December Thirteenth  
Anno Domini Mlcccxcviii



COMPLIMENTS OF THE  
GRAND TRUNK RAILWAY SYSTEM  
MONTREAL

1900



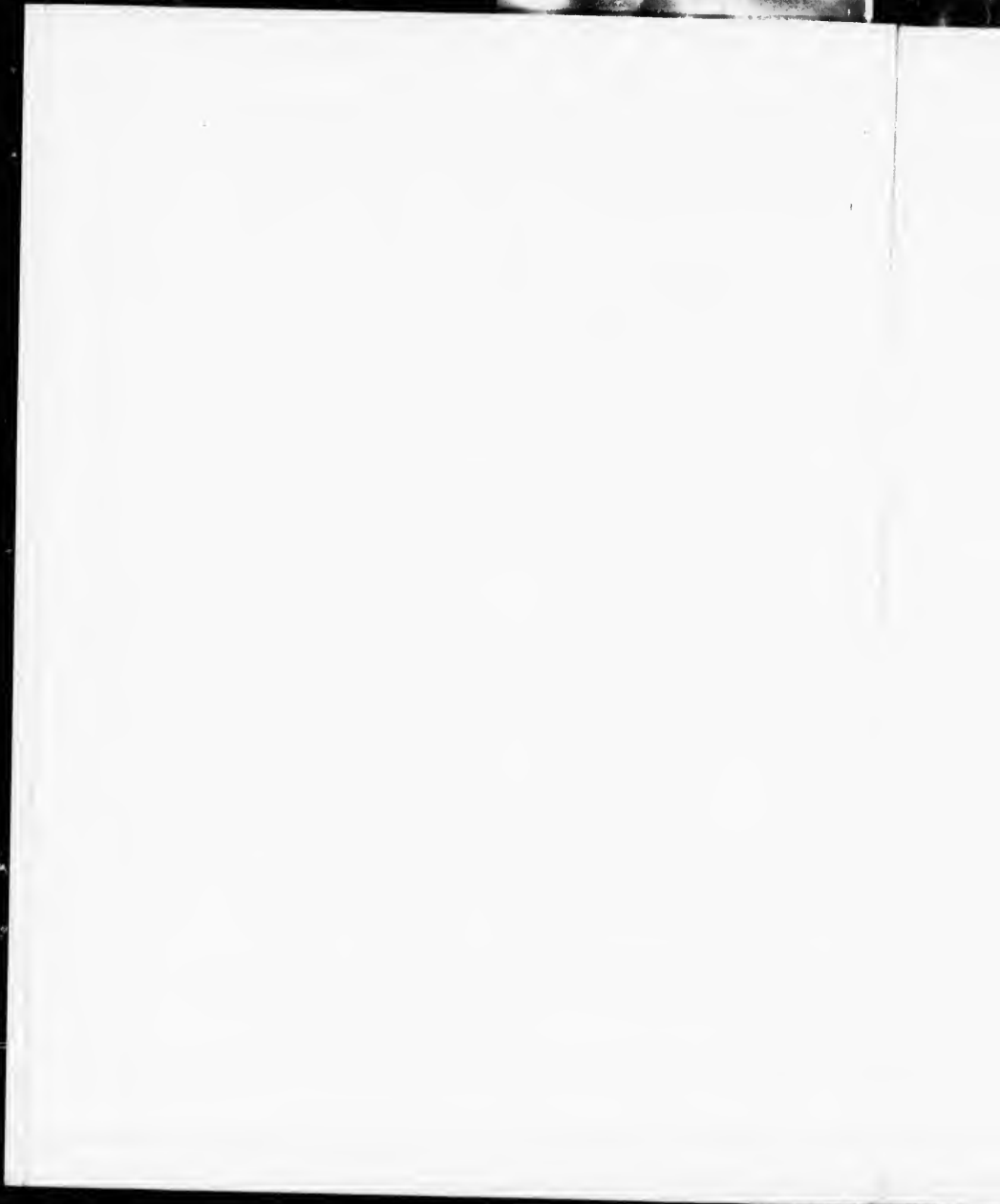
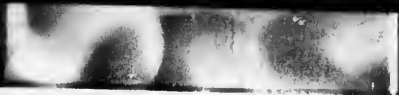


TERMINUS ST. LAWRENCE & ATLANTIC R. W. (NOW PART OF GRAND  
TRUNK RAILWAY SYSTEM) OPPOSITE MONTREAL, 1855

TERMINI DI LAVORO E SCELTA R. R. 1904 PART OF GRAD  
ON R. R. 1904 - 1904 OPPOSITE MONTECALVO, 1925



ST. LAWRENCE & ATLANTIC R. R.  
LONGUEUIL STATION - 1855.

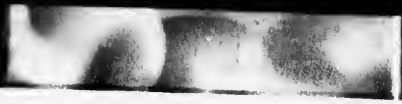


## THE OLD WAY.

**B**ACK in the fifties, Montreal could not boast of a better connection with the railway to the south than by the primitive mode of a ferry across the St. Lawrence River. The terminus of the Grand Trunk Railway, then called "The St. Lawrence and Atlantic Railroad," running from Portland, Maine, was Longueuil, at which place the Company's steamers were in readiness to ferry the passengers to Montreal, the most important city of all the British possessions in America, and one which at that time warranted the expectation of its becoming an immense metropolis.

The population of Montreal was between sixty and seventy thousand, more than half of whom were of French extraction.

Freight was transported in barges, and during the winter months sleighs were resorted to as conveyances for passengers and merchandise. Twice a year there was a stoppage of traffic from one to three weeks during the fall and spring, when the mighty St. Lawrence was impassable. On one occasion a number of passengers were being carried across the ice bridge in a sleigh, driven by one of the Grand Trunk teamsters, when a casualty occurred which proved fatal to one of the number, the others narrowly escaping. When nearing the middle of the stream the



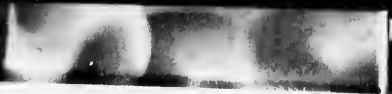
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OLD VICTORIA TUBULAR BRIDGE  
BUILT 1860 — RECONSTRUCTED 1897-99.

RIGHT. 1200 - RECONSTRUCTED 1875-80  
OLD CALIFORNIA AT BEAVER BRIDGE





2

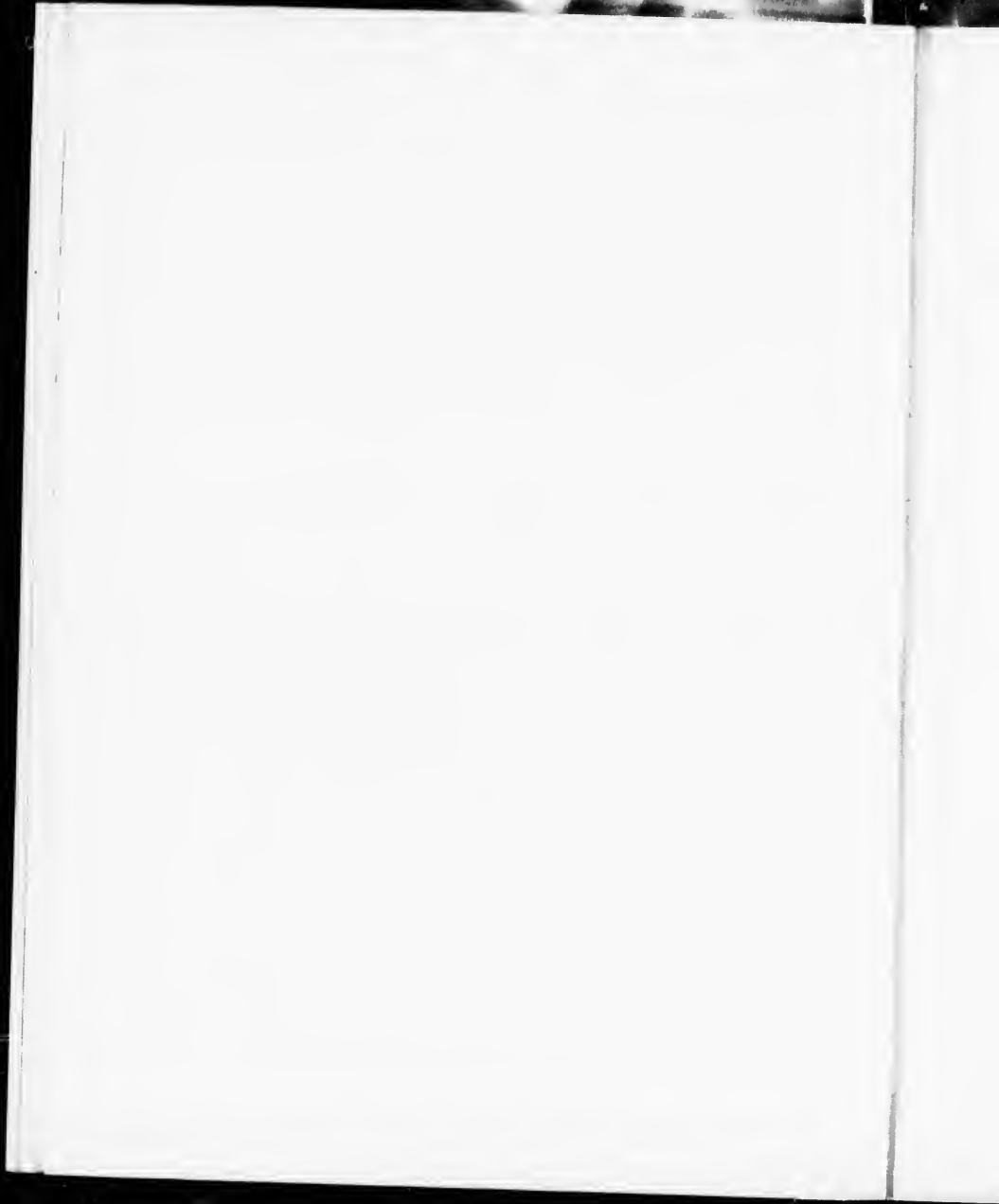
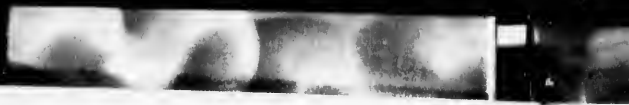
whole field of ice, many miles in extent, began to move, but fortunately stopped after going a short distance, and all escaped in safety, except one man who died from exhaustion and fright.

Thus it may be imagined by those living in the present period that great difficulties and dangers were experienced by travelers to and from Montreal in the old days, before the Grand Trunk Railway erected that wonder of engineering skill, the "Victoria Tubular Bridge," which stood the test of a heavy traffic for nearly forty years.

### VICTORIA TUBULAR BRIDGE.


It is probable there never was an undertaking so beset with difficulties as the building of the "Victoria Tubular Bridge" at Montreal. The contractors had to contend not only with a rapid stream two miles wide, but with shoves of ice from three to seven feet in thickness, and from fifteen to twenty square miles in extent.

The engineers of the Victoria Tubular Bridge were Robert Stephenson and Alex. M. Ross, C. E. Mr. Ross, who had been connected with many large railways and public works in Europe, came to Canada in the year 1852, and after conferring with prominent men in this country and the management of the Grand Trunk Railway, with a view to bridging the St. Lawrence, returned to England in the fall, after suggesting a tubular bridge to connect the north with the south shore.





BRONZE MEDAL ISSUED IN COMMEMORATION OF OPENING  
OF VICTORIA TUBULAR BRIDGE.



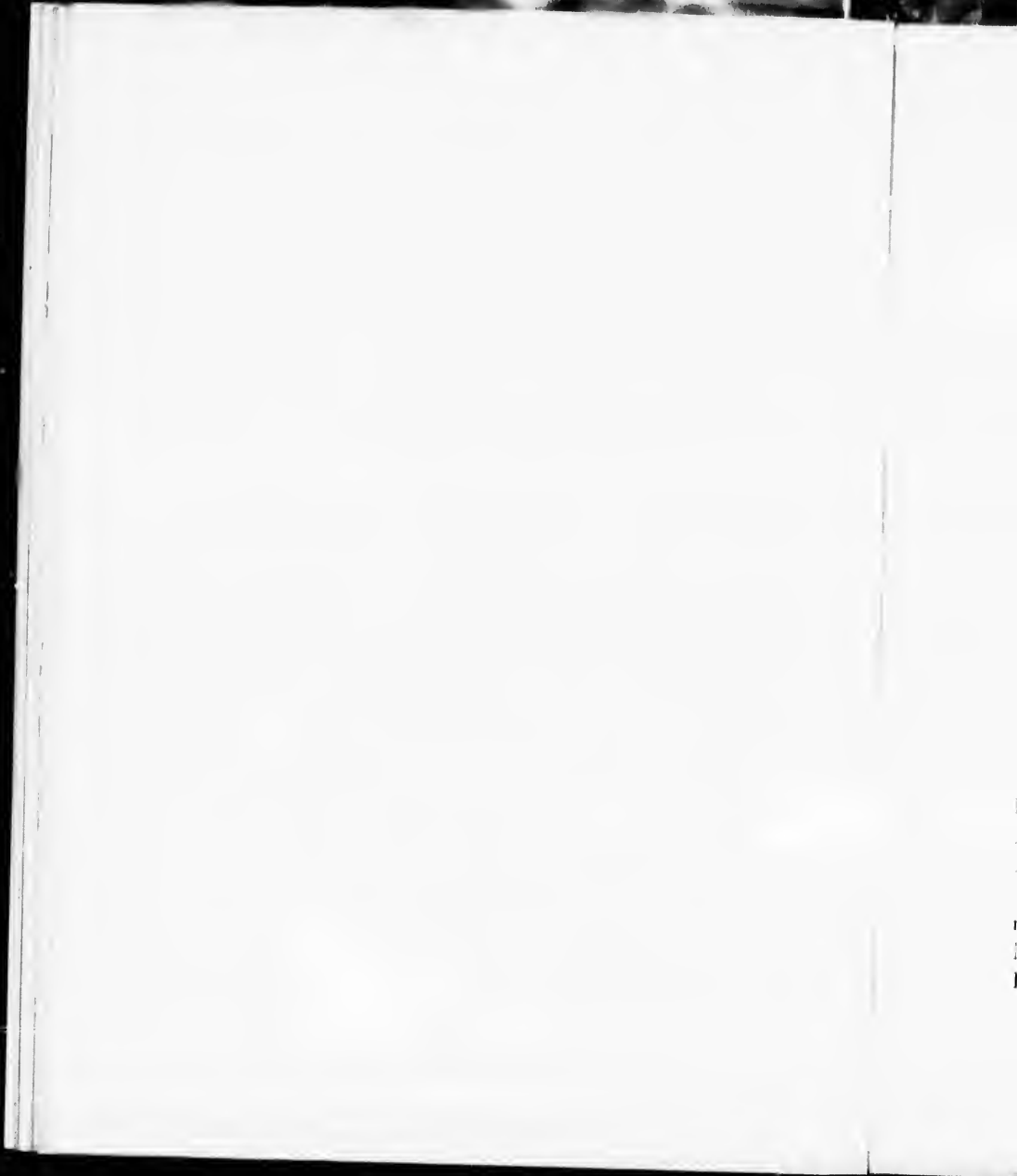
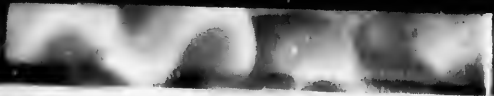
SOUVENIR MEDAL ISSUED AT OPENING OF  
VICTORIA TUBULAR BRIDGE.

FROM THE FIELD IN CONNECTION WITH THE  
ACTION TAKEN BY THE BUREAU

TO THE FIELD IN CONNECTION WITH THE  
ACTION TAKEN BY THE BUREAU







The first stone for the first pier of the old bridge was laid July 22d, 1854, by Sir Cusack Roney, along with Vice-President Holmes, Mr. James Hodges, Alex. M. Ross, C. E., and other gentlemen, who were also joined by Lady Roney, Mrs. Hodges, Mrs. Maitland and others, each taking the trowel and assisting in preparing the mortar-bed for the first stone in the first pier of the great undertaking.

#### FIRST CROSSING OF VICTORIA BRIDGE.

On November 24, 1859, Vice-President Blackwell, Hon. G. E. Cartier, Attorney General; James Hodges, Alex. M. Ross, C. E., Walter Shanly, Major Campbell, Messrs. Gzowski, Macpherson, Forsyth, Captain Rhodes and others, were the first to cross the Victoria Bridge. Mr. Blackwell was on his way to England to attend the Grand Trunk meeting, where he was able to report himself as coming "via Victoria Bridge."

On August 25, 1860, the Bridge was officially inaugurated, and the last rivet driven by H. R. H., the young Prince of Wales, on which occasion a grand banquet was held near the bridge, and addresses were given by the Prince, the Duke of Newcastle, Mr. Blackwell, Mr. Alex. M. Ross, C. E., Mr. Hodges and others.

To commemorate this event, Mr. Blackwell had a medal prepared by J. S. Wyon, Chief Engraver of Her Majesty's seals, a gold one of which was presented to H. R. H., the Prince of Wales, and a bronze one to each



INVITATION TO THE INAUGURATION OF  
VICTORIA TUBULAR BRIDGE.

ANOTHER SOUVENIR MEDAL OF OPENING OF  
VICTORIA TUBULAR BRIDGE.

FLORIDA FLORIAN BEBE E  
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FLORIDA FLORIAN BEBE E  
OTHER SOULIER BEBE E OPIZING OF

*Gentlemen's ticket*

# Victoria Bridge, Montreal.

INAUGURATION BY H. R. H.

## THE PRINCE OF WALES,

AUGUST 25, 1860

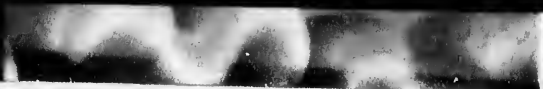
No. of Feet, *80a*

GALLERY TICKET.

*Mr. + Mrs. Walsley  
B.M.C.H.*

This Ticket will be valid only to be present at the ceremony of the inauguration of the Victoria bridge.







of the officers of the Grand Trunk Railway. It bears a fine impression in relief of the Prince as he then appeared, with the Prince's feathers on the reverse side, and the words "Welcome, Albert-Edward, Prince of Wales, visited Canada and Inaugurated the Victoria Bridge, 1860." A reproduction of the commemorative medal (which has now become a possession of curiosity and of great value to those who received them), appears in this souvenir.

The following particulars respecting the Old Victoria Tubular Bridge may be interesting:—

Length of ironwork, - - - -	- 6,592 feet
Total length, - - - -	- 9,144 feet
Number of piers, - - - -	- 24
Number of iron tubes, - - - -	- 25
Width of centre span, - - - -	- 330 feet
Width of side spans, - - - -	- 242 feet
Thickness of centre piers at summer water level, -	- 28 feet
Thickness of side piers at summer water level, -	- 18 feet
Material of piers, - - - -	- Limestone
Quantity of masonry (piers and abutments), -	- 100,000 cubic yards
Total weight of masonry, - - - -	- 225,000 tons
Height of tubes, - - - -	- 18½ to 22 feet
Width of tubes, - - - -	- 16 feet
Total weight of tubes, - - - -	- 9,044 tons
Height from water, - - - -	- 60 feet
Grade of tubes to centre, - - - -	- 1 in 130
Cost of Bridge, - - - -	- \$7,000,000

Engineers: Messrs. A. M. Ross and Robert Stephenson.

Builders: Messrs. Peto, Brassey & Betts, under the superintendency of Mr. James Hodges.

2



SOUVENIR OF VICTORIA TUBULAR BRIDGE OPENING, 1860.

H. R. H., ALBERT EDWARD, PRINCE OF WALES, AND SUITE.

Taken at Montreal During Opening Celebration of  
Victoria Tubular Bridge, 1860.

OF THE VIRGINIA FISH AND GAME COMMISSION

ALBERT EDWARD BRIDGE, JR., D. D.  
Fishes of the North Atlantic Ocean  
Virginia Fish and Game Commission, 1908







POINT ST. CHARLES.

MO

CIT



POINT ST. CHARLES,





MOUNT ROYAL.

NOTRE DAME CATHEDRAL.

CITY OF MONTREAL, AS SEEN FROM GRAND CANAL.



FEDRAL.

ST. HELEN'S ISLAND.

LONG

N FROM GRAND TRUNK VICTORIA JUBILEE BRIDGE.



's ISLAND.

LONGUEUIL.

ST. LAMBERT.

LEE BRIDGE.



LONGUEUIL.

ST. LAMBERT.

A REMINISCENCE OF THE BRIDGE  
BUILDERS.

The traveler on leaving the Montreal side of the bridge going east, may have observed on his left a gigantic boulder placed upon cut stone mason work, surrounded by a picket fence. This boulder was dug up in the vicinity of the bridge while the latter was under construction, and was placed where it now stands by the workmen employed on the construction, in commemoration of the immigrants who died from ship fever during the years 1847-'8. The boulder bears the following inscription:—

To

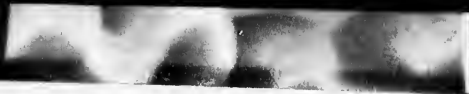
Preserve from Desecration the Remains of 6,000 Immigrants  
who Died of Ship Fever A. D. 1847-'8

THIS STONE

Is Erected by the Workmen of Messrs. Peto, Brassey & Betts,  
Employed in the Construction of the

VICTORIA BRIDGE,

A. D. 1859.





STONE ERECTED TO VICTIMS OF SHIP-FEVER EPIDEMIC, 1847-8, BY WORKMEN  
ON CONSTRUCTION OF VICTORIA TUBULAR BRIDGE.

ON COLLECTIONS FOR THE BUREAU OF REVENUE  
BY RECEIPTS FROM THE BUREAU OF REVENUE





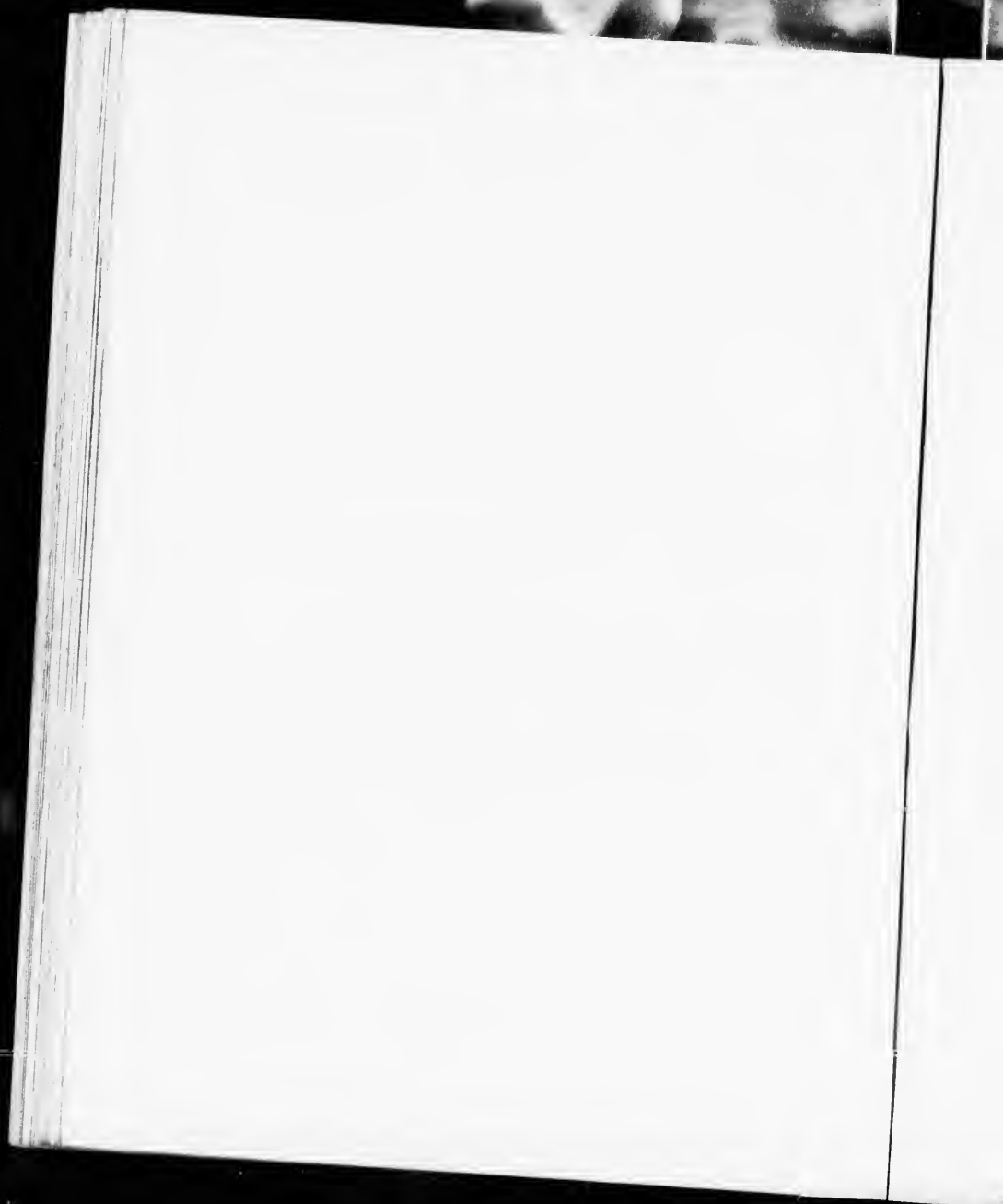


## VICTORIA JUBILEE BRIDGE.

At the time of the completion of the Victoria Tubular Bridge in 1860 it was considered the eighth wonder of the world, and was the admiration of not only the promoters and the Railway Company, but of all Canadians and others who looked upon it. Through increase in traffic, and with the onward march of time and improvement, the old bridge had become inefficient to meet the demands of the Grand Trunk Railway System, and the management concluded that it must be replaced with a structure which would meet all needs. Accordingly a new open-work steel bridge, with double tracks, carriage-ways, and foot-walks for pedestrians, now rests on the piers which held the Old Victoria Bridge for so many years.

On December 13th, 1898, the second track across the Grand Trunk Railway's new Victoria Jubilee Bridge over the St. Lawrence River at Montreal was completed, and the bridge opened for traffic with a double track, the first train to pass over it being the St. Johns local, with passenger engine No. 265, Conductor Lavigne and Engineer Day. While apparently of small moment in itself, this fact marked an interesting event in the history of the Grand Trunk Railway System, as well as in the history of the development of the commerce of both Canada and the City of Montreal.

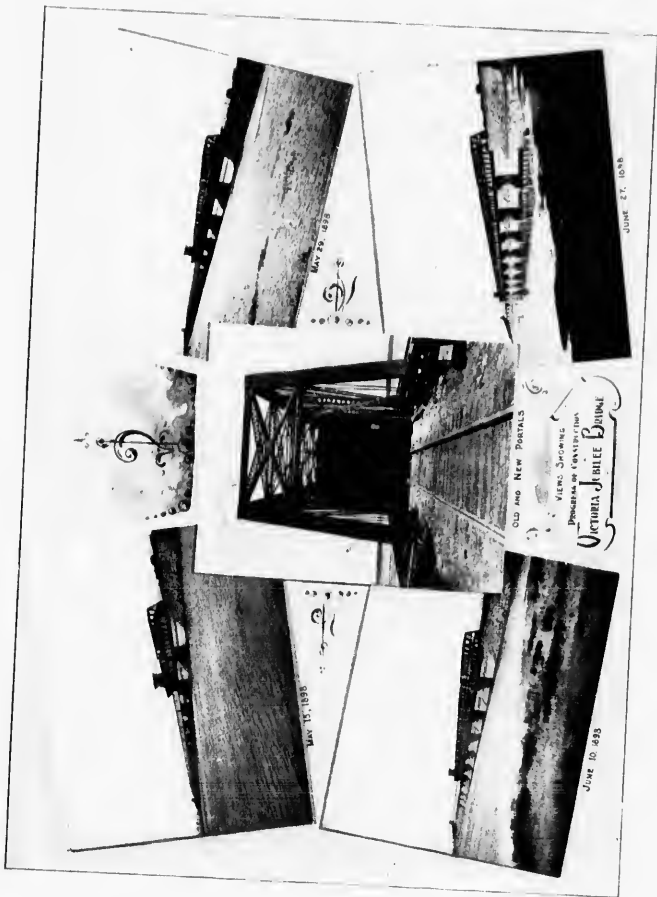
The Chief Engineer of the new bridge was Mr. Joseph Hobson, Chief Engineer of the Grand Trunk Railway





RECONSTRUCTION VICTORIA TUBULAR BRIDGE.

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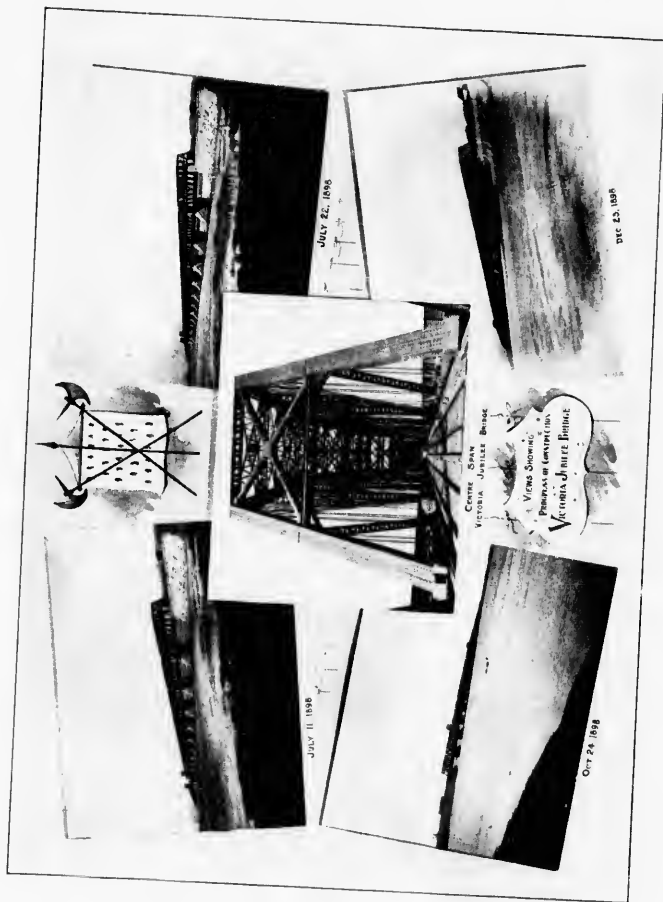






RECONSTRUCTION VICTORIA TUBULAR BRIDGE.

RECORDER OF DEEDS



JULY 22, 1898

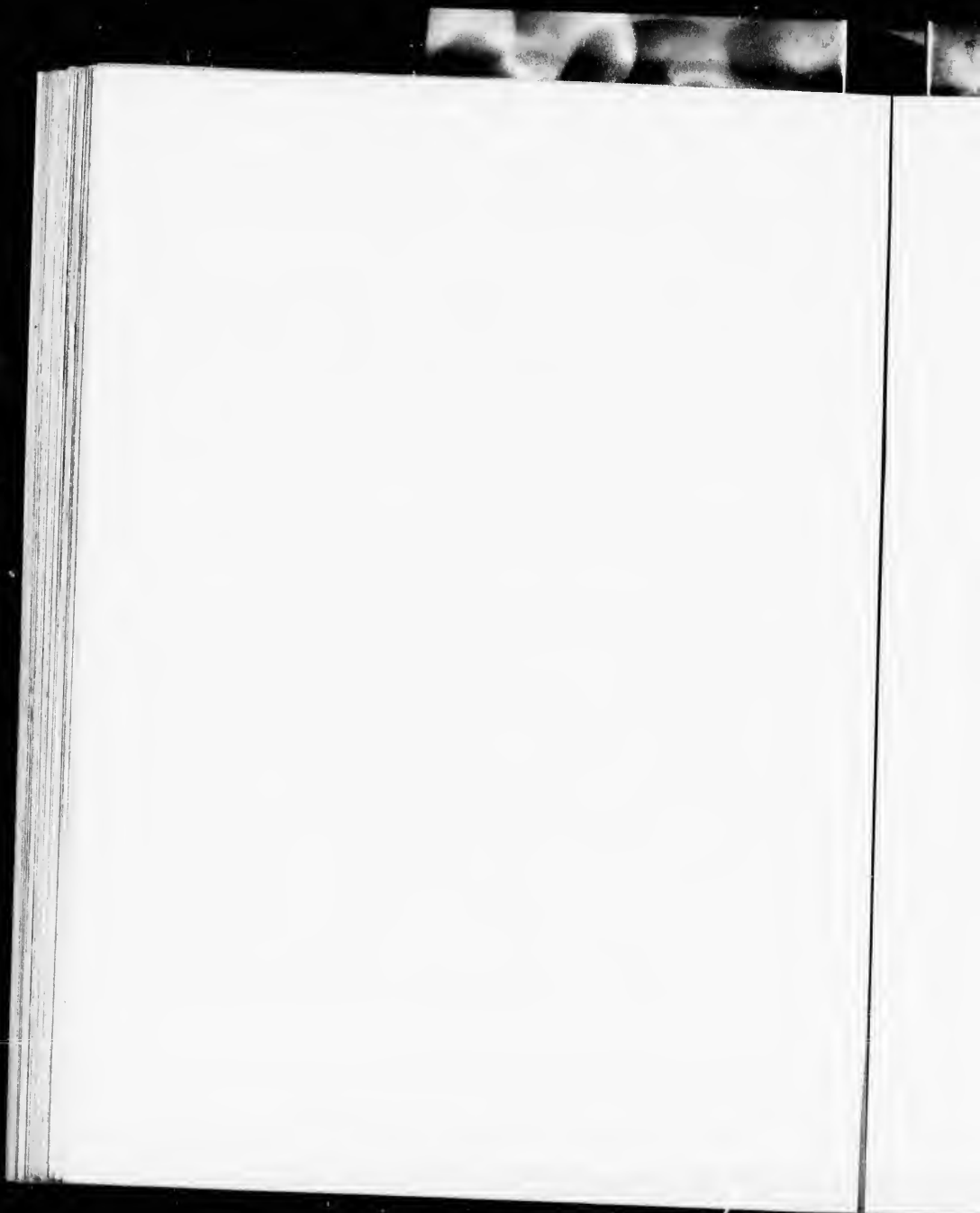
JULY 23, 1898

JULY 24, 1898

JULY 25, 1898

THE  
GRAND  
VICTORIA JUBILEE BRIDGE

A  
VIRGIL  
PRESENTS  
TO  
THE  
VICTORIA JUBILEE BRIDGE

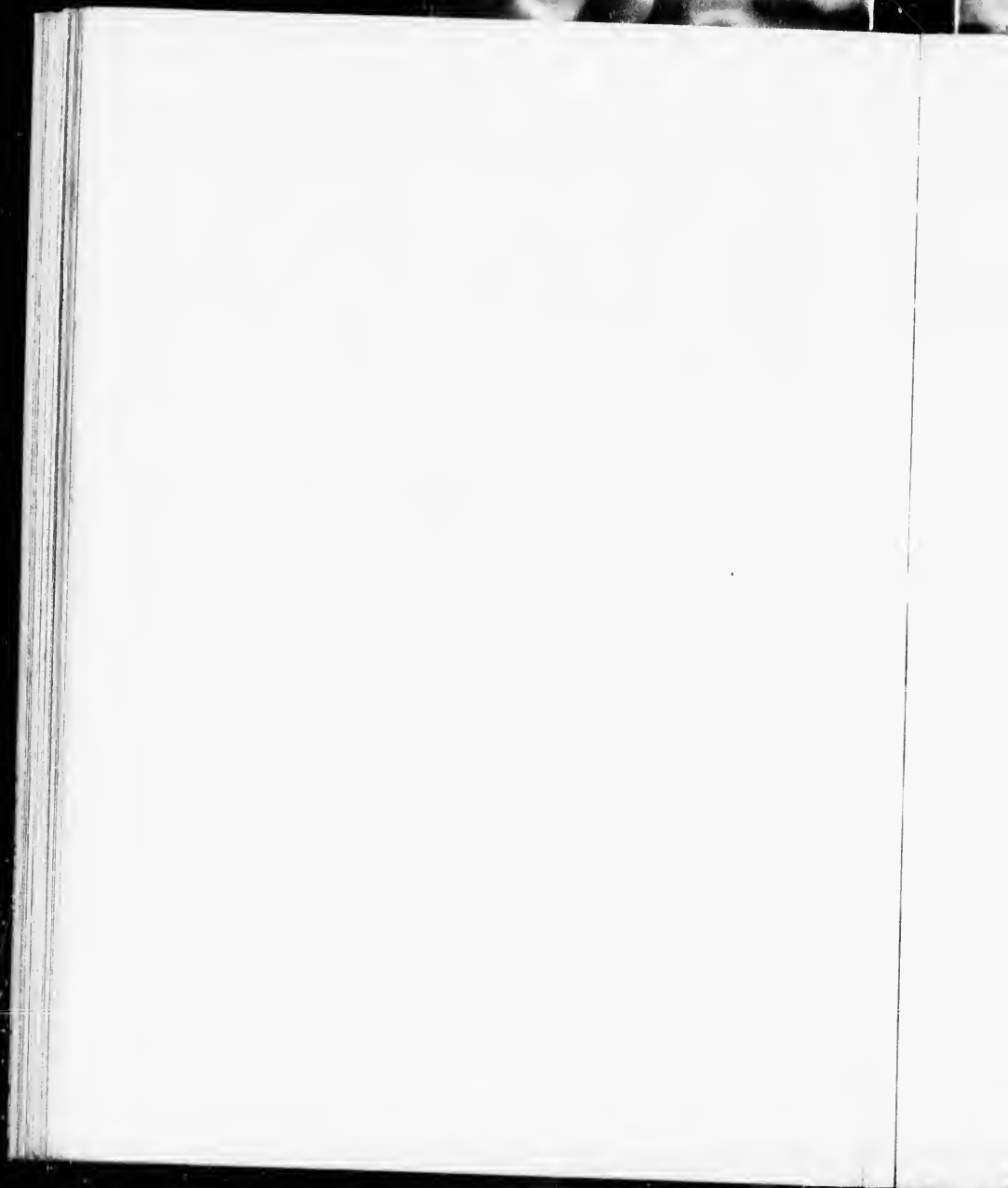


System. The contractors were: The Detroit Bridge and Iron Works for the erection of the whole of the superstructure, and for the construction of nineteen spans of it, including the centre one. The remaining six spans were constructed by the Dominion Bridge Company of Montreal. Mr. William Gibson, of Beamsville, Ontario, built all the masonry required for the enlargement of the abutments and piers.

The work was commenced in October, 1897, by the erection of the first span on the west end,—the structure being built completely around the tube of the old bridge, the latter being cleverly utilized as a roadway on which a temporary steel span was moved out to the first pier, and the new structure then erected outside the temporary span.

The progress of the work was delayed for the period of two months during the winter of 1897-8, owing to very severe weather, and the actual time of construction only extended over a period of about eight months; during that time the enormous traffic of the Grand Trunk was delayed but very little, practically nothing to speak of, the longest time on any one occasion that the line was closed to traffic being about two hours, and the total length of time closed during construction being about twenty hours. This is a very remarkable result, when the following facts are taken into consideration:—

While the old bridge, entire, weighed 9,044 tons, the new bridge weighs 22,000 tons. The total length of bridge is 6,592 feet; number of piers, 24; number of spans,



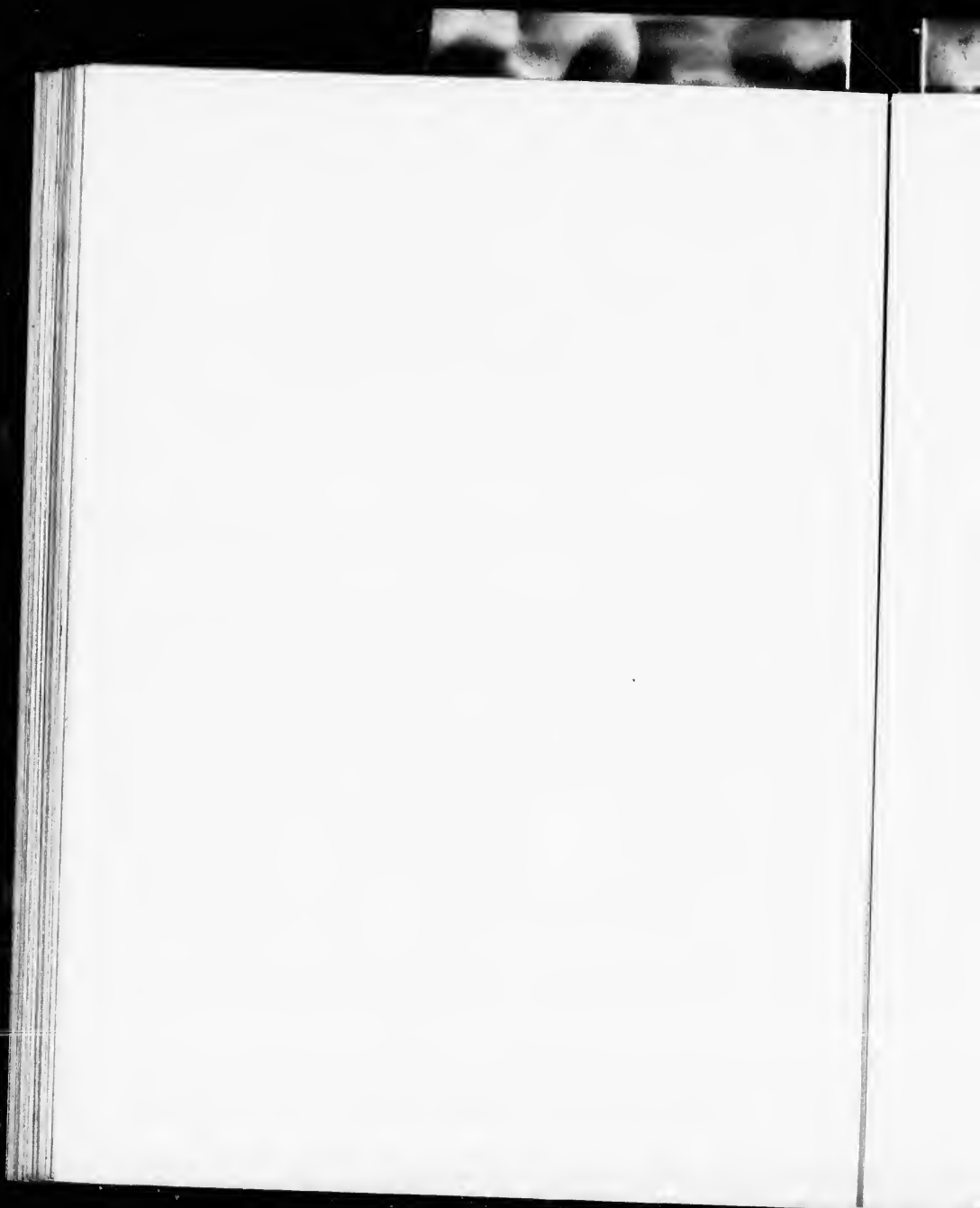


VICTORIA JUBILEE BRIDGE — COMPLETED 1899.

VICTORIA HARBOUR BRIDGE - COMPLETED 1890.







25; length central span, 330 feet; length side spans, 242 feet.

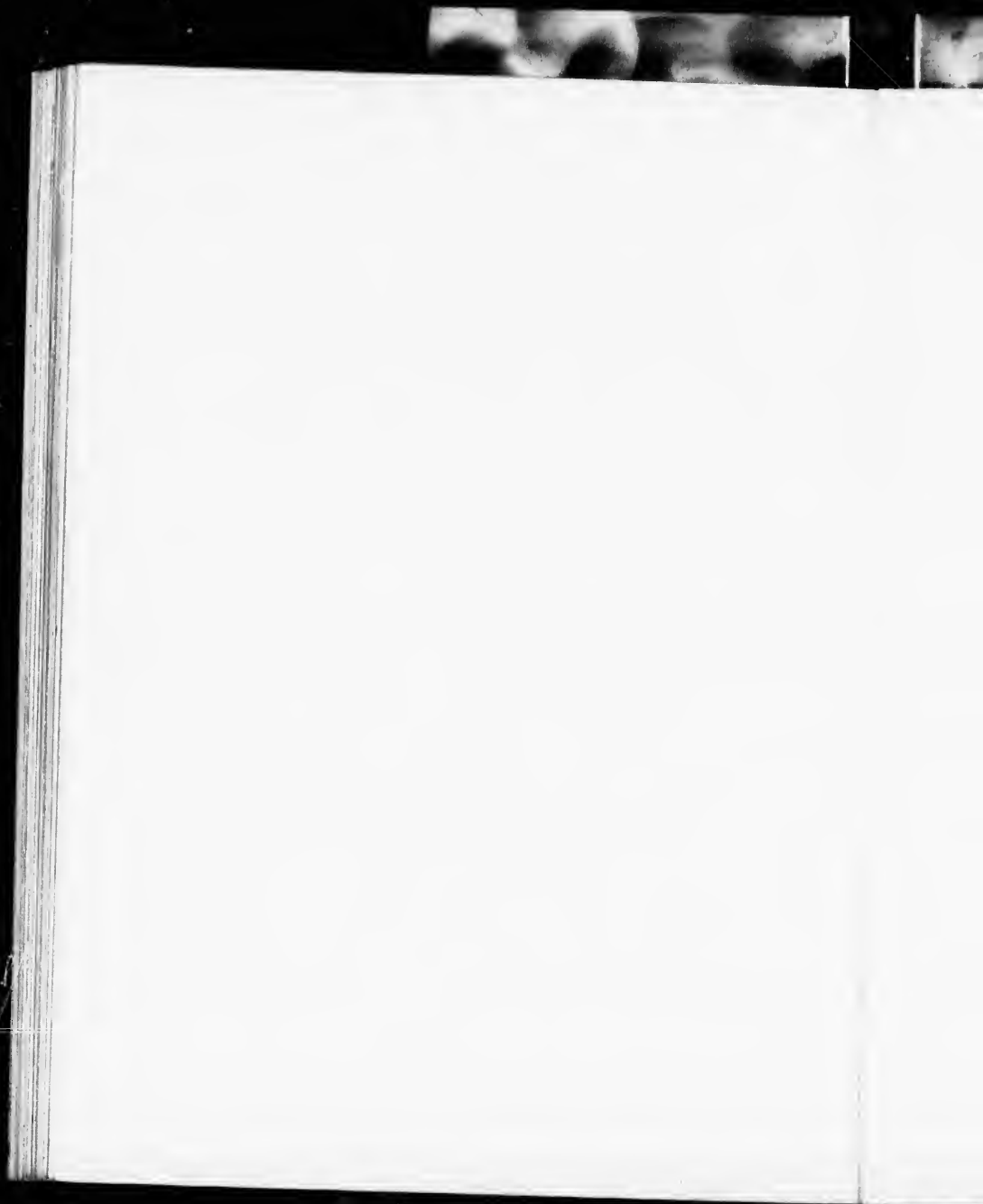
While the width of the old bridge was sixteen feet, the width of the new bridge is sixty-six feet, eight inches; the height of the old bridge superstructure was eighteen feet, the height of that of the new bridge over all is from forty to sixty feet.

The total cost of the new bridge, which provides double track for railroad trains, and drive-ways for vehicles on each side, was about \$2,000,000. The contract price of the old Victoria Bridge was \$7,000,000.

The superstructure of the bridge, exclusive of its own weight, in which are included floors, railway tracks, guard rails, etc., is designed to carry the undermentioned moving loads: (1.) Trains running in both directions, consisting of two consolidation engines and tenders, coupled, of an average weight of 5,200 pounds per foot of their length, followed by a car load of 4,000 lbs. per foot; (2.) A moving load on each carriage-way of 1,000 pounds per foot. There is no limit prescribed for the speed of either railway trains, of electric street cars, or of ordinary carriages.

The new bridge ranks, from an engineering standpoint, with the foremost structures of the age, as the bridge which it replaced ranked the foremost as a monument to the skill of the engineers and bridge-builders of the period in which it was built.

The opening of the double track on the new bridge marked an era in the handling of traffic over the Grand

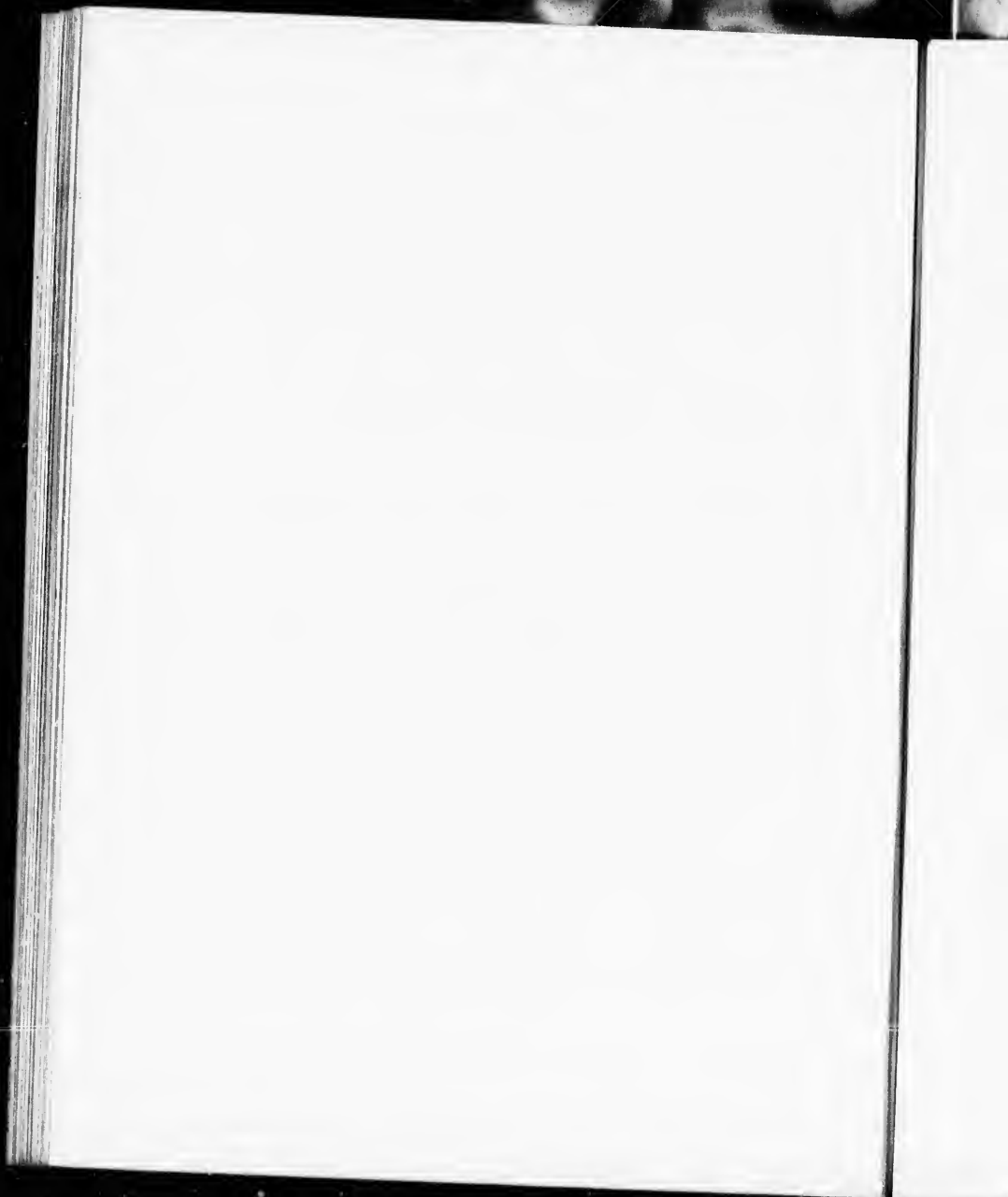




APPROACH TO VICTORIA JUBILEE BRIDGE.

ALPACCH TO TIGLORIA ILLIPE BRIDGE.

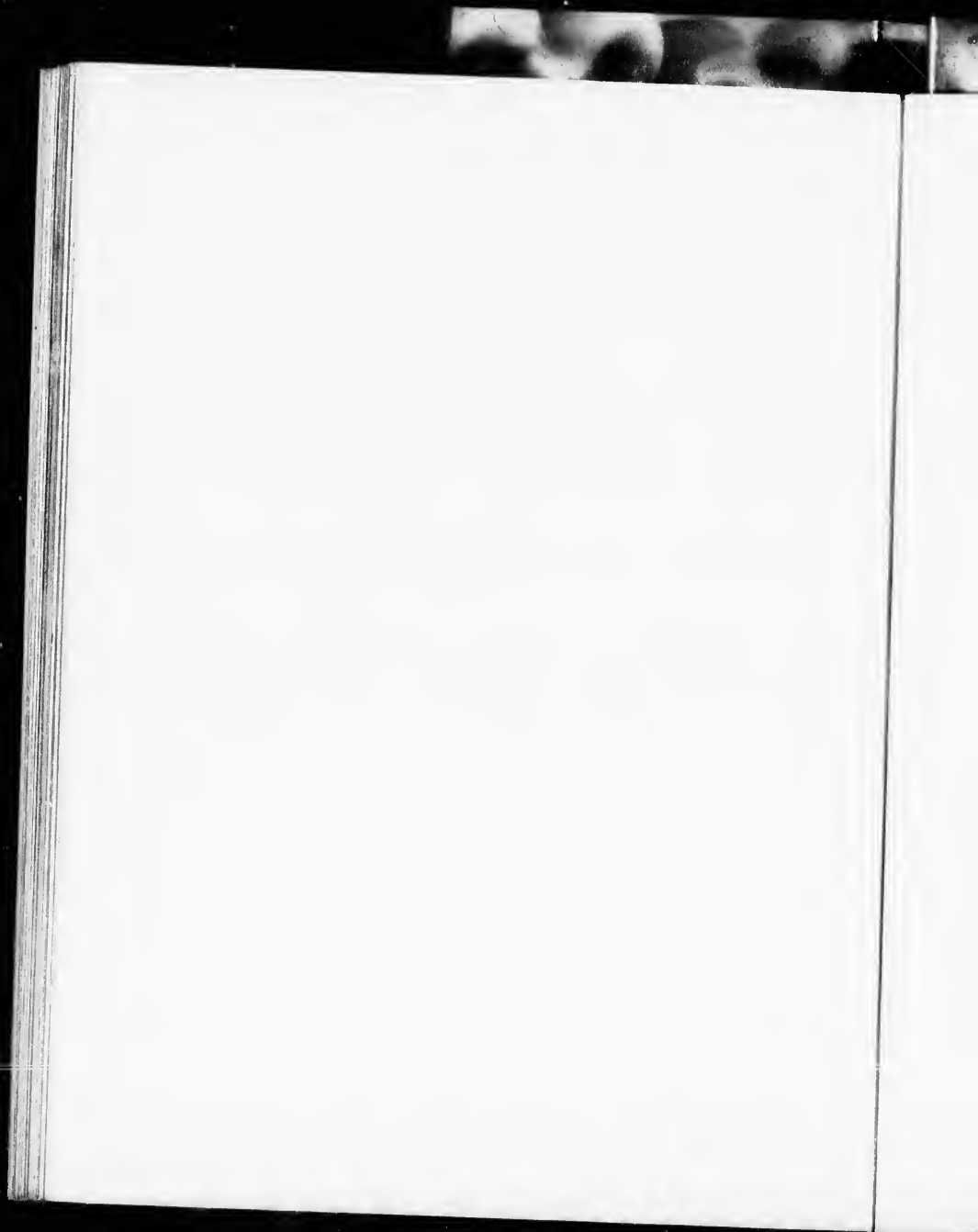




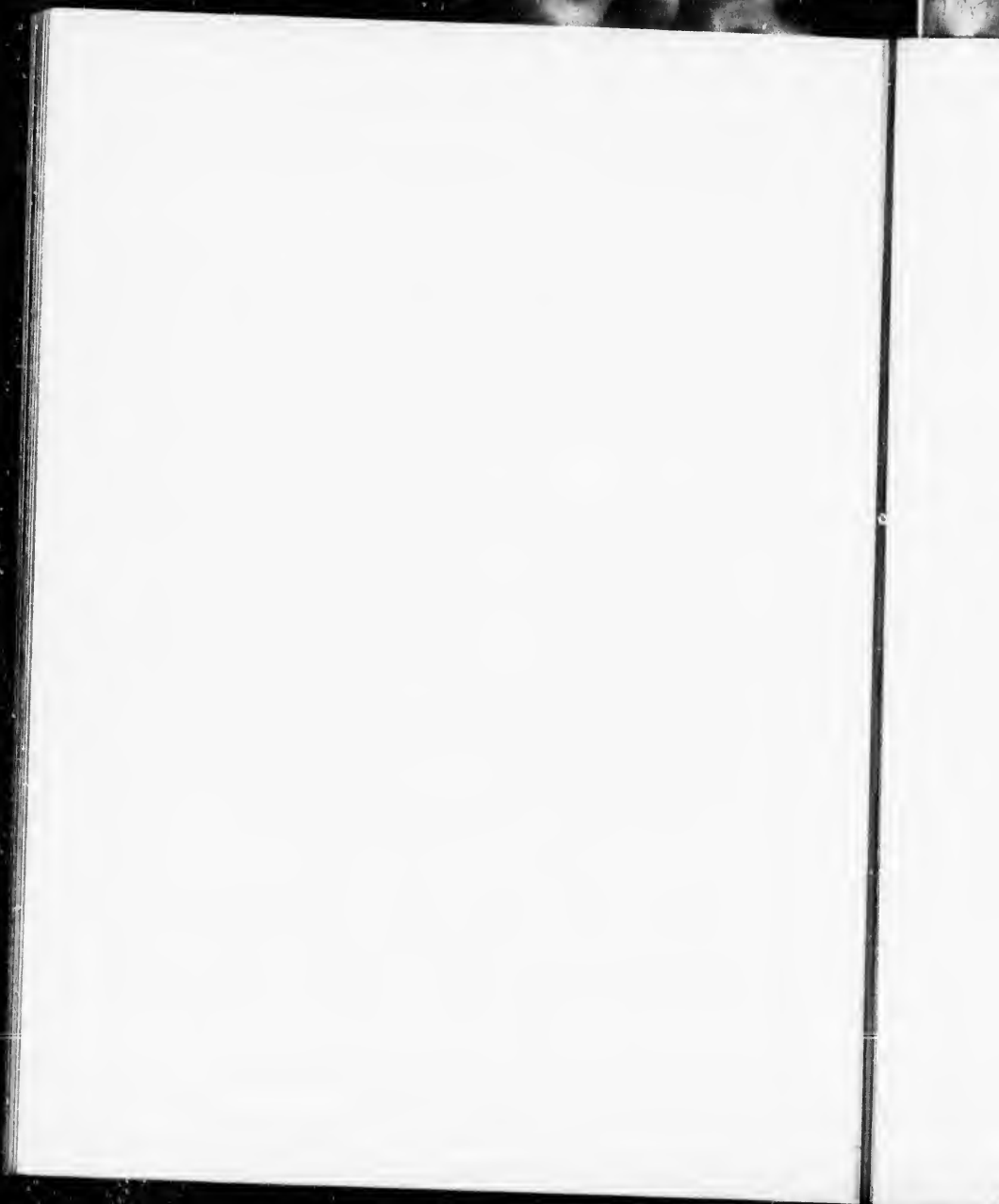


Trunk Railway System, for whereas the old bridge could accommodate a maximum of but 100 trains per day,—as they were required to travel at a low rate of speed, and one train could not follow another until the preceding one was out, thus losing a considerable amount of valuable time during a day,—the present bridge has almost an unlimited capacity in this respect, as trains can be moved swiftly, and follow each other in rapid succession, owing to the establishment of a modern electric block system, which will permit two or three trains on the bridge in each direction at the same time. This will enable the Grand Trunk to handle with facility the large and constantly increasing freight business,—which has heretofore been more or less hampered, owing to the limited capacity of the old bridge,—as well as handling in a proper manner the large passenger business which constantly comes to and through Montreal, and with increased volume during the summer tourist season.

The view from the train while crossing the Victoria Jubilee Bridge is one of much grandeur, and if seen while approaching Montreal from the south shore, cannot but arrest the artistic sense of the beholder. With the St. Lawrence River sweeping under this massive structure, with hundreds of steamboats, sailing vessels, steam tugs and craft of every description, scurrying hither and thither on its waters opposite the harbor, and the City of Montreal, lying in its beautiful location at the base of Mount Royal as a background, forms one of those beautiful pictures which delight the eye of the artist and awakens the







admiration of all. The massive stone warehouses that line the harbor for miles, the extensive manufactories, from whose tall chimneys belch forth volumes of smoke, and which can be seen on the shores of the river as far as the eye can reach, tend to show that Montreal is the commercial metropolis of the Dominion of Canada. While speaking of Montreal, it might be said that when the old Victoria Tubular Bridge was completed in 1860, the population of this progressive city was, as already stated, between 60,000 and 70,000, and to-day the population is given as more than 300,000.

A synopsis of the dimensions and interesting features of the new bridge is appended:—

Length of steel work, - - -	- 6,592 feet
Length (including approaches), - - -	- 9,144 feet
Number of piers, - - -	- 24
Number of steel truss spans, - - -	- 25
Length of centre span, - - -	- 330 feet in the clear
Length of side spans, - - -	- 242 <sup>feet</sup> to 247 <sup>feet</sup> in the clear
Thickness of centre piers at summer water level, -	- 28 feet
Thickness of side piers at summer water level, -	- 18 feet
Material of piers, - - -	- Limestone
Quantity of masonry (piers and abutments), -	- 100,000 cubic yards
Height of ordinary spans (centre to centre of chords),	40 feet
Height of centre span (centre to centre of chords),	60 feet
Width between main trusses (centre to centre), -	- 31 feet, 2 inches
Extreme width of Bridge, including roadways, -	- 66 feet, 8 inches
Height from water at centre to underside of bridge, -	- 60 feet
Grade of trusses to centre, - - -	- 1 in 150
Total weight of superstructure, - - -	- 44,000,000 pounds
Cost of Bridge (new work), - - -	- \$2,000,000





BRONZE PLATE ON FIRST SPAN VICTORIA JUBILEE BRIDGE.

Bronze Plafond of First Span Victoria Jubilee Bridge.



VICTORIA JUBILEE BRIDGE

· ERECTED · 1897 - 9 ·

SIR CHAS. RIVERS WILSON, *President*

JOSEPH PRICE, *Vice President*

CHAS. M. HAYS, *General Manager*

JOSEPH HOBSON, *Chief Engineer*

· CONTRACTORS ·

· DETROIT BRIDGE & IRON WORKS ·

FOR ERECTION OF SUPERSTRUCTURE AND

CONSTRUCTION OF NINETEEN (19) SPANS

INCLUDING CENTRE ONE

· DOMINION BRIDGE COMPANY ·

FOR CONSTRUCTION OF SIX (6) SPANS

OF SUPERSTRUCTURE

· WILLIAM GIBSON ·

FOR MASONRY OF ENLARGEMENT

OF ABUTMENTS AND PIERS







**VICTORIA TUBULAR BRIDGE**

Opened by H. R. H., The Prince of Wales, Aug., 25th, 1860



