

The Canadian Engineer

A weekly paper for Canadian civil engineers and contractors

Canadian Engineering Has Triumphed at Quebec

Great Central Span of the Quebec Bridge Successfully Floated, Then Hoisted Through Thirty-Four Two-Foot Lifts in Two Days—With New Mooring Tackle Arrangement Ordinary Storms Are Not Feared Now, and There Seems To Be No Reason Why Plan Should Not Succeed

Quebec, P.Q., 11 p.m., September 18th.—Canadian engineering has triumphed at Quebec. The great suspended span of the Quebec Bridge, weighing 5,080 tons as lifted, has been successfully floated to the bridge site, connected to the lifting chains, and hoisted 68½ feet. It now rests for the night, safely moored, within 82 feet of its final level.

The work is progressing smoothly, no accident of any serious account having occurred and only one minor accident which did not in any way affect or delay the lifting.

Not counting the first lift, when the weight of the span came onto the hanger chains only when the hydraulic jacks were within 6 inches of their top positions, there were required seventy-five 2-ft. lifts to hoist the span into its final position. Of these, twelve lifts were accomplished yesterday and twenty-two to-day.

The average time of yesterday's lifts was 16 mins 34 secs.; of to-day's lifts, 13 mins. 35 secs.; of both days, 14 mins. 27 secs.

Last Saturday morning, September 15th, was the date finally determined upon for the floating of the span, pro-



Fig. 1.—Connecting the South End Hanger Chain to Sub Links of Lifting Girder. Engaging the Leafs Before Driving Lifting Pin

vided that the meteorological observatory's reports were favorable. Telephone communication was obtained with the observatory at Toronto at 10 a.m. Friday, and R. F. Stupart, the director of the observatory, reported as follows:—

“Centre of low pressure area over North Dakota travelling southeast. Another centre of low pressure off the South Carolina coast. Centre of high pressure over Gulf of St. Lawrence.”

The barometer reading at the bridge site was 30.45. Report from R. F. Stupart at 10 p.m. Friday:—

“We do not expect any more wind than at present during the next fifteen hours and after that it may increase

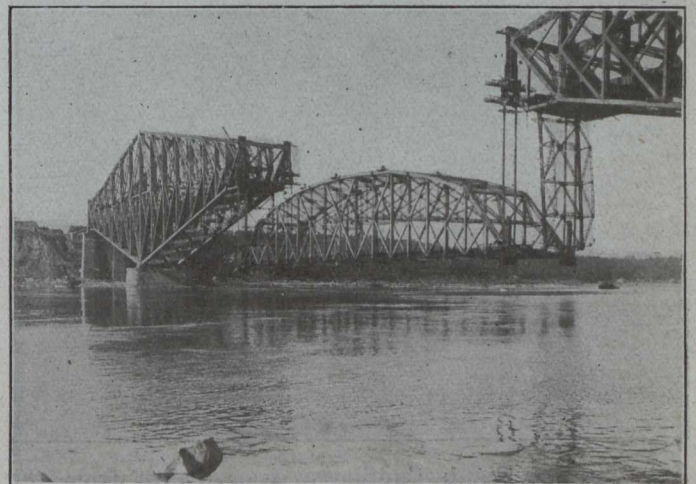


Fig. 2.—The Quebec Bridge at 5.30 p.m., September 17th, 1917

very considerably. Still from northeast. Tropical storm over Atlantic off Carolina coast may move due north.”

Barometer reading at bridge site, unchanged at 30.45.

As the velocity of the wind at the bridge was over 20 miles per hour, and as it was feared that if the tropical storm were to move due north its effects might be felt at Quebec earlier than desirable, announcement was made about 11 p.m. that the floating would be “postponed on account of uncertain weather conditions.”

The judgment of the engineers was justified, even though the threatened tropical storm did not materialize. Saturday proved to be a dark, gloomy day with frequent gusts of high wind and occasional choppy wave action early in the morning.

A conference was held Saturday afternoon to decide whether to attempt to float the span early Sunday morning, even should favorable weather reports be received that night. It was decided to make no attempt under any circumstances to start the work on Sunday, although work would have been continued on Sunday had it been started on Saturday.