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within at least 20 feet of this point, so that any bridge over the St. Lawrence at Montreal must be elevated about 45 feet over low water mark. Fixing the abutments, therefore, at this height, the additional cost of elevating the whole bridge gradually from either shore to the height required to pass over the navigable channel will not be much greater than the cost of a draw-bridge, and the necessary approaches and expense attendant upon it. The fact that there is but one navigable channel, and this so narrow that it can be spanned by a single arch, has enabled me, by elevating to the extreme height this arch only, to make an arrangement of the bridge which while it admits of the greatest economy in the construction, enhances the architectural effect, and offers an unmistakeable guide to lead the river craft into the proper channel.

By increasing the centre span the channel may be crossed higher up and the bridge shortened,—the width of the other spans and the length of the approaches may be increased or thiminished and the outline of the structure may be varied, but I am of opinion that the plan now proposed for bridging the St. Lawrence will, in all essential features be found the most secure, effective, and economical.

The second condition is, that the bridge must be a solid one adapted to the passage of railway trains.

Suspension bridges in this country have of iate been adopted for large bridges, and are now about to be applied to railway purposes. Where a channel is too wide to be spanned by beams or arches, or where the depth of water or narrow chasms make piers or towers impracticable, the suspension bridge is the only and most economical resource. For railway purposes a single span may be made available, but for a long bridge where a succession of spans are required, if constructed in the ordinary manner the vibration would be destructive to the work, and if constructed on any other principle their economical advantages disappear. From the vastly in-