

Please read and send in as full a
discussion as possible at earliest date.

The Canadian Society of Civil Engineers.

INCORPORATED 1887.

ADVANCE PROOF—(*Subject to revision*).

N.B.—This Society, as a body, does not hold itself responsible for the statements and opinions advanced in any of its publications.

MEAN SEA LEVEL AT QUEBEC AND NEW YORK.

By W. BELL DAWSON, D.Sc., M. Inst. C. E., F.R.S.C., M. Can. Soc. C.E.

(To be read before the General Section, November 19, 1908.)

The following information and deductions with regard to Mean Sea Level at New York compared with its determination at Quebec will prove of interest; as it affords a relation which has long been desired by engineers to bring our levels along the St. Lawrence, including the harbours of Quebec and Montreal, into relation with the open Atlantic.

The result is based on a long series of tidal observations at Quebec obtained by the Tidal and Current Survey, under the direction of the author, and on the levels of the Georgian Bay Canal Survey, under the direction of Mr. A. St. Laurent, C.E., the field work being in charge of Mr. C. F. X. Chaloner.

The comparison is based upon the elevations of the sill of Old Lock No. 1 of the Lachine Canal, at the head of Montreal harbour, where the levels meet which have now been carried through from New York via Rouses Point, and along the St. Lawrence from Quebec by Mr. R. Steckel, C.E., of the Public Works department, by the geodetic series taken previous to 1891.

The tidal observations at Quebec have been obtained by a registering tide gauge situated at the Dry Dock at Levis, which gives a continuous record day and night throughout the year. They are reduced throughout to the Admiralty Low Water datum at Quebec, as used for the chart of Quebec harbour. This datum has also been adopted by the Tidal Survey as the plane of reference for the Tide Tables for Quebec. It is defined by the Admiralty in their