

### Tidal Survey.

The Tidal Survey of the Dominion has again been resumed, with a view of gaining more correct knowledge regarding the strong currents of the St. Lawrence River, Gulf of St. Lawrence, and Strait of Belle Isle. The work already done, establishes beyond a doubt, that tidal observations in published form, will be a valuable aid to navigation in the waters mentioned.

The ordinary mariner concludes that currents are influenced mainly by the winds, but the work now being accomplished proves that the movements of currents is reducible to astronomical laws.

The steamer "Gulnare," which has been engaged in the Tidal Survey during the Summer of 1903, was purchased at a very reasonable figure, and the officers of the survey have been enabled to carry on their observations without interruption, which was not the case when one of the ordinary supply steamers was used intermittently.

### Hydrographic Survey.

The steamer "Bayfield," formerly the "Lord Stanley," was purchased at a cost of \$50,000.00, and the sum of \$10,000.00 has been spent in thoroughly equipping this steamer. The "Bayfield" is a strongly built and powerful steamer; the additional expenditure has made the steamer the most complete Hydrographic Survey vessel ever employed on the Great Lakes by Canada or the United States.

The survey of Lake Superior was begun in 1902, but the old steamer "Bayfield" was unsuitable for the work and has been replaced by the new "Bayfield." The increased navigation on this Great Lake makes it necessary to chart dangerous shoals and rocks which have hitherto been unknown to navigators, and the charts with soundings will be prepared as the survey advances.