

inland Lighthouse stations on the lakes, a record at stated times of the state of the weather, rain, winds, etc., and to have them forwarded to him for the purpose of inaugurating a thorough system of meteorological observations, and rendering the data thus obtained useful and valuable, not only to scientific men, but to the commerce and maritime interests of the country. In order to commence the system however, it was necessary that instruments, books of report and forms should be procured and some extra assistance provided for, to make the calculations and tables. On my recommendation the sum of \$5,000 was placed in the estimates for this service, and that amount was duly voted by Parliament, and the necessary instruments, records and forms procured and distributed to the stations recommended by Professor Kingston. A list of the chief and ordinary stations selected will be found in Appendix No. 13, along with a full and very interesting report on the subject by the Professor, who, I may here state has assumed the duties of this laborious undertaking gratuitously, which form no part of the regular duty of the Magnetic Observatory at Toronto, of which he is Director.

The chief stations established at present are at Toronto and Woodstock in Ontario, at Montreal in the Province of Quebec, at St. John and Fredericton in New Brunswick, at Halifax in Nova Scotia and at Winnipeg in Manitoba. It is also proposed to make a chief station at Ottawa as soon as the requisite funds have been voted for the erection of a small building suitable for the purpose, which it is proposed to erect on some part of the grounds adjacent to the Parliament Buildings, where it will not be an objectionable feature in the general appearance of the Buildings and grounds attached thereto.

The observations will be made by some of the employés of my Department.

At Montreal the observations are made and forwarded to Professor Kingston at Toronto by Dr. Smallwood, a scientific gentleman, and also a great enthusiast in the science, who has for many years been engaged in making similar observations for the information of himself and the public generally, and who kindly offered his services to assist in maturing and perfecting the proposed scheme.

Dr. Smallwood has for a number of years conducted the Montreal Observatory, and furnished the correct time to the shipping, by means of a time ball erected on the top of a high building in the immediate neighborhood of the old Custom House.

He also furnishes the correct time for firing the signal gun at Ottawa, for the purpose of regulating the Government time, under the directions of the Postmaster General. His Observatory is also connected with the Fire Alarm Circuit at Montreal, by means of which he furnishes the correct time at 7 a.m., at noon, and at 6 p.m., for the use of the workshops and factories. A report of his proceedings will be found in Appendix No. 14, along with some interesting tables, one of which shows the atmospheric pressure, temperature, wind, rains, snow and extent of clouds for 1871, forming a resumé of the most important phenomena of the climate at Montreal. Another very interesting table having an important bearing on our maritime interests is also given, which indicates the climatology of Montreal and its vicinity for the last twenty-three years.

Taking the average or mean of the state of the weather in the fall or the approach of the winter in the St. Lawrence for the period alluded to, the doctor comes to the conclusion