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*For the Journal of Education.*

## ON SOME OF THE COLLATERAL ADVANTAGES WHICH MAY BE DERIVED FROM A WELL ORGANIZED SYSTEM OF PUBLIC SCHOOLS.

(Continued from page 42.)

In a Circular, dated Albany, November, 19th, 1849, addressed by the Regents of the University of the State of New York, to the Trustees and Principals of various Academies in that State, the subjoined remarks and statements are offered :—

“With the progress of improvement and the development of new discoveries, this science (meteorology) has, of late, scarcely kept pace with the general increase of knowledge, and the Regents have, for several years, felt that their present arrangement was scarcely compatible with the increased demand upon it. The phenomena of Storms have attracted great and deserved attention. It is a mighty problem whether human ingenuity cannot so far discover and foretel their approach, as somewhat to prevent the fearful loss of life and property with which they are usually accompanied. The regularity or the alterations of the temperature, when accurately ascertained in various parts of our State, may, as they have been already in a certain degree, be applied with advantage to the labours of the husbandman in the introduction of new articles of culture, and in the improvement of agricultural processes. Again, a proper study of climate as to its heat and cold, dryness and moisture, and all its other incidents, can alone furnish us with safe data, by means of which we can even hope to eradicate epidemic and endemic diseases, or at least mitigate their severity. These are but a few of the considerations which justify and require the full investigation of meteorological phenomena by the public authorities.”

The work of co-operation has already commenced in the State of New York and Canada. The simultaneous indications of the barometer and thermometer are transmitted, by means of the electric telegraph, from city to city. They only approach organization, however, in the State of New York as yet.

Professor Guyot says, in 1850 :—“In compliance with the directions received from Professor J. Henry, Secretary of the Smithsonian Institution, who secured the co-operation of the Presidents of the telegraph lines, I have placed a barometer and a wind vane in the telegraph offices of New York, Albany, Syracuse, and Buffalo. . . . A storm coming from the west will be announced at any place along the line before it reaches it, and in the *maritime cities*

*long before it reaches the coast.* . . . This is only, it is hoped, the beginning of an extensive system, from which science, as well as the whole community, may expect the happiest results.”

The following simultaneous report of a widely extended storm is taken from a Toronto paper, (the *Patriot*,) of Dec. 24th, 1850 :  
BUFFALO, December 23rd,—Thermometer 21°. Severe snow storm *last night and to-day*, with high north-east wind ; about 20 inches of snow. *No trains from the east to-day.*

ROCHESTER, December 23rd,—2½ feet snow, with wind from north,  
UTICA, December 23rd,—2 feet snow ; high wind from north-east.

ALBANY, December 23rd,—Thermometer 21°. About 2 feet snow. Strong wind.

MONTREAL, 7 P. M., December 23rd,—A severe snow storm from the east. About three feet of snow have fallen last night. Thermometer 16°.

NEW YORK, December 23rd,—It is now blowing a gale from the north-west. There has not been such a sea in the North river for the last 10 years. A number of vessels have dragged their anchors, and it is feared great damage has been done. . . . 7 P. M.,—the gale is still raging with increased violence. It is feared the shipping has suffered severely.

Although the phenomena of our winter north-east storms do not appear to be well understood, yet it is reasonable to suppose that if arrangements had existed for conveying meteorological intelligence in a proper form, from Halifax and Quebec to New York, ship-owners and captains of vessels would have placed faith in the announcement, and been prepared for the reception of a tempest which occasioned so much damage. This storm is referred to, not as being the best illustration of what may be expected to result from the co-operation of magnetic telegraphs, in conveying intelligence of approaching storms, but because its occurrence is still fresh in the memories of those who witnessed its violence. Canadian merchants are necessarily greatly interested in whatever tends to diminish the risk of loss attending the shipping interest on account of storms. The Gulf of St. Lawrence and the coast of Newfoundland and Nova Scotia are peculiarly liable to the destructive visitation of tempests which show themselves inland some hours before they arrive at the coast. We have now telegraph stations in connection with one another from Port Sarnia to Quebec, and from Quebec to Halifax, covering an extent of country of more than 1,200 miles in length, and running for more than half its distance down the valley of a great river, and in a nearly uniform direction to the north-east, by east. We ask whether it would not be advisable to imitate the example of the Smithsonian Institution, and place a barometer and wind vane in a few of the most important stations along that very extensive and important line of communication ? It would at least serve to awaken ship-owners and merchants to the important services which might be rendered by an inexpensive yet complete organization to indicate the approach of storms. It would be a storm alarm on a stupendous and magnificent scale, extending over an immense tract of country, and susceptible of indefinite expansion towards the west upon the co-operation of the telegraph companies in the Western States of the Union. A knowledge of the approach and phenomena of storms, forms but a small part of the benefits to be derived from simultaneous meteorological observations. It is true that their investigation, pursued under the splendid