

The *Anemoscope* is self-registering, and shews the direction of the wind; while the *Anemometer* records constantly its velocity in miles. The latter instrument is simple and novel in construction, and furnishes results which coincide with those in use at Toronto, Liverpool, and other places. Attached to it is a self-registering *Rain-gauge*, which shews the commencement and the termination of each fall of rain and the amount in tenths of an inch.

The *Snow-gauge* presents a surface of two hundred square inches, while there is an *Evaporator*, with a surface of fifty inches.

Among other instruments may be mentioned those:—1. For ascertaining the amount of dew; 2. For measuring the amount of water in a given quantity of snow; and 3. For the measurement of the degree of evaporation from the surface of ice.

The quantity of *Ozone* is registered by the methods adopted by Schoombien and Moffat.

Without the building, is the apparatus for the investigation of atmospheric electricity, consisting of a long pole, 70 feet high, furnished with a slide or groove, by means of which is hoisted an apparatus to which is attached a collecting lantern. This is supplied with two lamps which are kept constantly burning in order to secure insulation. The electricity thus collected is conveyed by copper wires to a conductor within the observatory, where it is connected with a variety of electrometres and other contrivances by which is precisely ascertained the *intensity* and *kind*.

Investigations are also made on the formation and varied shapes of snow-crystals, of which copies were exhibited as obtained by the Chromotype process, which is intended to be likewise applied to the self-registration of the Barometer and Thermometer.

The fixed hours of observation daily are, 6 and 7, A. M., and 2, 9 and 10, P. M. Extra hours are often requisite, and indeed hourly and minute observations are sometimes necessary.

It may be also mentioned that Dr. Smallwood invariably records observations upon storms, the aurora borealis, meteors, and other phenomena, while notice is taken regularly of the periodic appearance of animals, birds, &c., as well as the time of the leafing and flowering of plants.

Such then is but a short description of the apparatus by means of which Dr. Smallwood has for many years sedulously carried out his valuable Meteorological observations. The whole has been constructed at his own expense; and while many of the instruments bespeak their own cost, there are not a few contrived by himself, which exhibit a vast amount of ingenuity, combined with simplicity and economy. Not to speak of the outlay necessary to complete such a series of apparatus for standard observations, the greatest credit is due to Dr. Smallwood for the indefatigable manner in which he has laboured for years in the cause of Meteorological Science—unassisted by Government patronage, and unrecognised, even to the present day, by any Scientific Society or Institution. His observations extend so far back as the year 1841. Year by year he has varied and extended his investigations by means of gradual additions and new contrivances, until at the present time, in spite of all difficulties and the shameful short-coming, on the part of those Authorities, Societies and Institutions, which should have extended to him the right hand of support and recognition, it may be asserted, we believe, without contradiction, that he possesses the simplest and most ingenious