

more moderate terms, than any other Company in the Province, and we would recommend all farmers to Insure their property when they can effect it on moderate terms. It is a very serious injury to a farmer of small capital to lose his house or barn by fire, with, perhaps the whole of the produce of his farm for a year. A Mutual Insurance Company, is a union of parties who contribute a certain amount to constitute a fund to pay accidental losses that may occur by fire to any of the parties contributing to the fund, and is the most legitimate mode of providing for losses by fire. The terms of Insurance may be seen by application to the Agent of the Company at Montreal, and they will be found so favorable for farmers, that every farmer in Lower Canada may insure.

We proposed to give a page or two of useful receipts in this number, but they have been crowded out this time by other matter. We shall, however, in future endeavor to make up this deficiency, and give in each number a few of the best receipts we can select from a numerous collection. We are particularly anxious to interest the female portion of subscribers' families in the Journal, and we promise them that we shall not neglect our duty in this respect in future. We may not be able to submit anything new to them, but we shall, at all events, show our disposition to interest them in favor of the Journal. If the ladies would only be favorable to it, there would be little doubt of a vastly increased circulation.

NOTICE.—A Meeting of the Directors of the Lower Canada Agricultural Society is to take place at their Room, in this City, on Friday, the 24th instant, at 11 o'clock, A.M.

By Order,

WM. EVANS,  
Secretary, L. C. A. S.

Montreal, 1st January, 1851.

## PHILOSOPHICAL ESSAYS.

BY JACOB THOMPSON DUNNE.

### ESSAY ON METEOROLOGY.

The *Dublin Review*, No. xviii., Nov. 1840, in an article on the *Economy of the Atmosphere*; makes the following remarks:—"The electric fluid is subject, also, to regular perpetual friction, from the earth moving on its own axis. It is yet to be ascertained whether this action of the earth on the electric medium by which it is surrounded, is not intimately connected with the northern and southern auroral lights, and also with the direction and variations of the needle. The friction in question undoubtedly increases the intensity of the fluid near the surface of the earth; and this intensity would go on always augmenting, unless some provision were made for restoring the equilibrium of the fluid of the atmosphere. Now, according to the doctrine of Professor Daniell, there is twice as much light and heat absorbed in the polar regions as there is in those of the tropics. If this be so, there must be a constant current of the electric fluid (which is, in fact, a heated, subtle element, always capable of being made luminous) from the Equator towards the Poles. The magnetic needle is, very probably, but the index of that current, as the vane is of the prevailing wind; hence the direction of the compass in a direction that would always be parallel to the axis of the earth, were it not for the divergences which take place in the electric current as it approaches the poles. Those divergences would seem to be necessary to the due distribution of the fluid throughout those colder regions of the atmosphere; and when, from any cause, the current is swollen with more of the fluid than those regions can absorb, it will be driven back. The action of repulsion would render the superfluous portion of the current more or less luminous, and hence might arise the phenomena which we call *auroral lights*.

"When we say that the surplus portion of the fluid absorbed in the 'colder regions' of the poles, will be 'driven back,' we assume that there are regions, both in the extreme north and the extreme south, which are less cold than those where the greatest accumulation of ice takes place. This assumption, though apparently paradoxical, is justified by the fact, that the late Russian expedition, under the command of M. Von Wrangle, has discovered an open, navigable sea beyond the 72 deg. of north latitude; and when we consider the briny character of that sea, which prevents it from being frozen, we seem justified in concluding that the climate, between lat. 72 and lat. 90 degs., is much milder than it is at what may be called the *zone of perpetual ice*, found southward of lat.