

violent gusts of wind, we can easily understand why the two phenomena appear together.

Whether sulphur is ever deposited from the atmosphere seems to be a matter of doubt; it is by no means impossible, when we consider the immense quantities of vapours of sulphur produced by volcanoes, but the only authentic record of any such precipitate or deposit that I have met with is in one of Berzelius' Annual Reports (I unfortunately cannot lay my hands on the article at this moment). The substance was examined by a competent chemist and proved to be sulphur.

In the years 1735 (in the month of October,) and 1814 (in July,) a curious phenomenon was observed in Canada, which has received the name of the dark days; during the prevalence of this peculiar appearance, a yellow substance was observed floating on water, which is described by Chief Justice Sewell in his excellent paper on the subject, as having consisted of sulphur. He attempts to explain the phenomenon by the assumption of a volcanic eruption in Labrador; but whatever may have been the cause of the darkness, and other circumstances (such as a fall of ashes, &c.), there is no ground for supposing that the yellow substance observed was anything but the pollen of some plant or other, especially as storms of wind, thunder and lightning, prevailed for a considerable time.

H. C.

ROAD MAKING.

To the Editor of the Canadian Agriculturist.

SIR—The most important improvement that our country requires, is improved Roads. We have got canals enough for a while—let us now have good roads to get at them. No country can prosper until its principal thoroughfares are thoroughly improved; and unless we very soon get good roads and railways in Canada, we will be behind all the civilized world. See how our neighbours to the south go a-head!—and go to Europe, especially Britain, and see what roads and railways they have there!

I am glad to see a general Bill brought in below, for Joint Stock Companies in making roads and bridges. I hope they will make it as liberal and encouraging as possible for contractors.

Many people dread and object to being obliged to pay tolls on a good road. Why should they, when they can travel with double and treble the load, with more ease, more speed, and more comfort, than they did before? Why, the very saving in tear and wear of wagon, harness and horse-flesh, would more than pay for the toll-bars. What a difference in spring, betwixt a good Macadamized or planked road, and mire and mud to the axle!—and that is generally the time when it is our special interest to get to market. It would be a great improvement if our roads were even drained on each side and graded—much better still if a portion were Macadamized or planked. Where materials are at hand, I should think Macadamizing the roads the most advisable. Is there no machine for breaking stones for roads? I have never heard of any but hammers and human hands. Still I think, in this wonderful age of discovery, some machine might be contrived, with the power of a small steam-engine, to move along, which would break the stones wholesale for roads, at a cheap rate. I wish some mechanical

genius would set his brains to work, and produce something effective for the purpose I have mentioned. No doubt it can be done.

W. F.

Brockville, Feb. 19, 1849.

DEAR SIR,—I was much struck with an article in the last number of your excellent journal, entitled "Ice in hot ashes," in which a traveller describes his having found heavy crystals of ice, resembling shark's teeth, and all set in one way, among a heap of warm ashes; and the aforesaid traveller compares the formation of ice in such a locality to the production of the same substance in a red-hot crucible, an experiment which has lately been made. Now, with all due humility, I would beg to remark that in the experiment alluded to, the vessel has to be made very hot—nearly red, and it seems probable that if the ice in Mount *Ætna* had been produced from a similar cause, the incautious traveller would have burnt both his fingers and the soles of his feet, which he does not mention—in fact he says the ashes were warm. I should be sorry to throw the least doubt on so curious a circumstance, but I may perhaps be permitted to ask whether the above-mentioned traveller may not have mistaken for ice, the beautiful transparent crystals of Celestine or sulphate of strontia, which are very heavy, are as clear as water, have very much the appearance that he describes, and are found in great abundance on the sides of the craters of volcanoes?

Hoping I may be wrong in my supposition,
I remain

INCREDULOUS.

THE ELECTRIC LIGHT.—The electric light must not be considered a new discovery. One of the earliest experiments performed by the aid of the galvanic battery was the producing of an intense light, by transmitting the electric fluid through the interval between two points of charcoal. Nor is the attempt to adapt the electric light to purposes of general illumination anything new. Seven years ago, an American patented an invention for this purpose; but obstinate difficulties were in the way. It was necessary to procure charcoal of a peculiar kind, unvarying in the density of its substance; and to regulate the voltaic current in its passage across the charcoal points. Any variation in the condition or position of the points, or the slightest diminution in the voltaic current, produced a change in the degree of quality and colour of the light so as to render it unavailable for practical purposes, and indeed, it often occurred that one of the points falling from its position, left the surrounding space instantly in utter darkness. Mr. Staite, the patentee of the new invention, however, reduces coke to impalpable powder, makes it into a paste with water, forms it into sticks, and exposes it to violent heat. He then dips the sticks into melted sugar (the chief constituent of which is charcoal), so that every minute interstice may be filled up, and exposes it to heat again. The result is a carbonaceous mass of density superior to any that can be obtained from wood, and which can easily be obtained in the form of straight sticks, an impossibility with charcoal made from wood. The other desideratum, viz. a steady light, dependent on a regular flow of electricity and the maintenance of certain given relations of position between the two carbonaceous points, required certain mechanical appliances of a self-acting kind. Thus, in order to the development of the light, it was necessary that the two charcoal points should be