"With this general notion in their minds, and considering wheat to be in present circumstances one of the most important vegetable substances, our friends agreed to try experiments, and in October last they undertook the following operations:

"In a field which had been sown for rye because the land was deemed too poor for wheat, a plot of twelve square yards, untilled and left without manure, was carefully strewed over with the grains of wheat, and wheaten straw was laid upon it closely and about one inch in thickness. In a garden also, which had been neglected several years, a few square yards of earth were trodden over, and the surface being made close and hard, some grains of wheat were scattered on this hardened surface, and a layer of straw one inch in depth was carefully laid over it, and left as in the former case to take its chance, without any ulterior attention; and in order to make doubt impossible concerning the mere secondary functions of mineral earth in vegetable reproduction, 20 grains of wheat were sown upon the surface of a pane of glass, and covered with some straw alone, as in the other cases. The germination of the seed was soon apparent, and most healthy in developement. 'The winter has been rigorous,' say our correspondents, 'for this part of the country, and the earth has sometimes been frozen in one solid mass to a depth of six inches in the garden where the wheat was sown; and this has happened several times during the winter, to the great injury of many plants, and even to the entire destruction of some; while the spots protected by the straw were never thoroughly congealed, nor were the grains of wheat, though lying on the surface, under the straw, at all affected by the cold. During the spring excessive droughts, prolonged and several times repeated, have prevented vegetation on the common plan from flourishing in healthy progress, while our little spots of wheat had hardly felt the inconvenience of excessive dryness, for the earth protected by the straw has never been deprived entirely of the moisture; and our blades of corn were flourishing when all around was drooping and uncertain.—To conclude, then, we have thoroughly succeeded in our practical experiment, and the wheat produced is of the finest quality. The straw was more than six feet high, and in the ears were 50, 60, and even 80 grains of wheat, of full developement, the admiration of all who saw them; and particularly those, which grew upon the pane of glass, and which were quite as healthy and as large as those which grew upon the common earth. It must be observed also, that there was not the smallest particle of earth upon the glass, and that the plants were left entirely to themselves, without being watered or attended to in any way whatever from the time of sowing to the time of reaping. The result of these experiments has been admired by several influential agriculturists, who *mean to make* extensive application of the same principle next season; and we hope that you will publish to the world these practical results, that others may convince themselves of their importance by similar experiments. The cause of this success, we think, may be explained in the following manner: Straw being a bad *conductor of heat* and a great conductor of electricity, maintains the root of the plant in a medium temperature, and prevents the earth from being deprived entirely of moisture. The moisture of the earth, or the substratum, being continual, facilitates the constant and gradual absorption of carbonic acid from the surrounding atmosphere, and hydrogen and carbon, the chief elements of nourishment to vegetables, are thus economised in regular supplies, where they are constantly required, and pass in combination with oxygen from the roots up to the stems and branches of the plants, in which they are assimilated; and the oxygen thrown off in