



### The Field.

#### Collard's Patent Horse Hoe and Pea Harvester.

We give herewith three illustrations of a farm implement for which a first prize was awarded at the last Provincial Exhibition, and which, we are informed, has been found in practice to be thoroughly efficient and satisfactory. It is the invention of Mr. H. Collard, of Gananoque, C. W., and is a combined machine, which can be used either as a horse hoe, a scarifier, or a double mould plough. For the first purpose, the two mould-boards with which the complete implement is furnished are removed, leaving in the standard and spear and the two knives, and regulating the breadth of the working gear with a screw crank. Fig. 1 shows the implement in this form.

To employ it as a scarifier, the maker's directions are:—"Take out the whole of the plough by loosening the two screw bolts that fasten it in the beam; afterwards tighten the front bolt so as to fasten the colter or centro scarifier, and take out the two knives and put in the four scarifiers, two in each wing; set them so that they will work to an equal depth; fasten the back two with the wedges used with the knives, and the front two with the thumb screws."

Fig. 3 represents this form of the implement; and fig. 2 shows the mode of adapting it as a double mould plough to hill up corn, potatoes &c., to do which it is requisite to take off the two outside wings, together with the four scarifiers, by taking off the two nuts that fasten them to the front end of the beam, and two small iron pins that connect them to the spread irons at the back end; screw the crank in so as to be more out of the way, and put into its proper place the whole of the double mould plough.

In this form it is also said to be a very convenient and efficient plough for digging up potatoes.

The implement here illustrated and described, has received three or four first prizes at Provincial shows in Upper Canada, and two in Lower Canada besides upwards of thirty at county Township and shows. Indeed it has invariably taken the first prize wherever exhibited.

Mr. Collard is also the inventor of a pea harvester which is said to do its work well. It consists of a rake with the shaft curved towards the head like those commonly used in binding grain. At the base of the teeth is fixed a steel plate, with the front edge notched into sharp serratures, like the teeth of a coarse saw. The accompanying illustration will give a good idea of this simple implement. Mr. Collard claims for it that, by following the directions which he gives for its use, one man, after becoming

accustomed to handling it, will cut more with it than four men would be able to do with scythe, take them off cleaner, and shell fewer peas. If this be

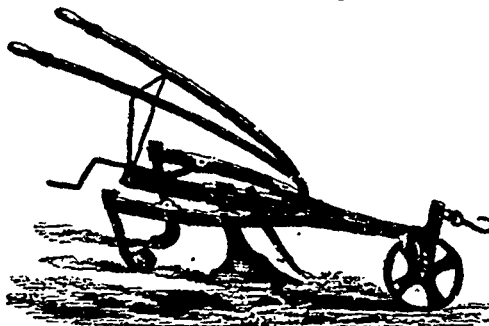


FIG. 1.

the case, it will indeed prove a blessing to the farming community, for there are few jobs on the farm that

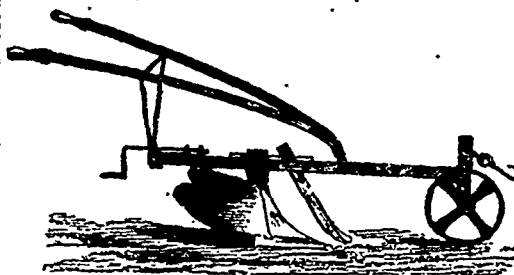


FIG. 2.

are more tedious, tiresome, and back-breaking, than pulling peas with the scythe in the old-fashioned way.

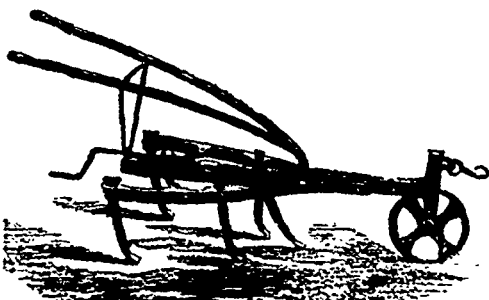


FIG. 3.

Every labor-saving implement is to be hailed as a means of making life on a farm at once more pleasant and more profitable.



PEA HARVESTER.

The pea harvester is inexpensive, and, until some horse machine still more efficient is invented, deserves at least the easy test of a trial.

### Familiar Talks on Agricultural Principles.

#### FORESTS AND CLIMATE.

The influence of forests on climate has been more than once noticed in this journal, and earnest warnings have been given regarding the natural consequences of an indiscriminate felling of trees, and the denudation of the surface of a country by the ruthless axe; but we think the subject of sufficient importance, and the need of reiterated remonstrance pressing enough, to bring the matter again and again before the attention of our readers. This subject has recently received the careful consideration of various legislatures in the adjacent States, and the propriety of planting new tracts of wood, and preventing the entire destruction of older growth of forests, has been deliberately and earnestly discussed. Much valuable information has been thereby collected, in reference to this important element in the economy of nature, and the immense value of trees, in an agricultural and climatic point of view, is now much more generally understood and felt than formerly. The early settlers in our own country have looked upon the forest as useful only in supplying timber and fuel, and have still more commonly regarded it as an encumbrance, to be got rid of as speedily and completely as possible. Large tracts of land have been indiscriminately cleared of every vestige of tree, and already the effects of this wholesale destruction are seriously felt in many sections, not only in the increased scarcity and high price of fuel, and the removal of kindly shelter to stock and crop, but also in more general changes, affecting the climate of the whole Province, and not confined to the local condition of the cleared sections themselves. Our own brief history may thus read us a useful lesson, if we would only heed it, and the more extended experience of older countries is full of instruction on this very point, which it behoves us to consider carefully, and apply to the circumstances of our own land and people.

This subject is one of somewhat complicated and very extensive bearings, and it would be quite impossible to enter fully upon its various details within the limits of a single article. We can merely point out some general facts and principles that have been satisfactorily established, and refer to the most important deductions to be derived from them.

The effects of forests on a country are due in part to their mere mechanical influence as dead matter, and in part to their physiological action as living bodies. Of the first kind is the effect they produce as a screen from the sun's rays upon the ground beneath, which is thus preserved more moist and of more even temperature. They moderate, also, the violent action of tempestuous showers of rain, which, in an open country, wash from the surface its richest soil, work out unsightly and wasteful channels, and running off too rapidly to sink in any considerable quantity, or to any depth, deprive the ground of a large portion of