

mechanic on the 10th of July, 1871, received a patent for

"THE ECHO AXLE."

It is constructed on entirely new principles. The patentee claims for the "Echo Axle" a large diminution of friction, especially in passing through stiff mud, as it does not "gather" forwards, and a saving of at least 25 per cent. in oil. The wheels are made without "dish." The ordinary wheel, however, may be used. The "Echo Axle" can be built as cheaply as the common axle, *plus* the royalty.

The "Excel Churn" and the "Echo Axle" will be on exhibition in October next in Pictou town at the Pictou county Exhibition.

IMPROVED HAY PRESS.

Mr. McNaughton has also invented a Portable Hand Hay Press, by which he presses 100 lbs. of hay into the bulk of 6½ cubic feet. During last winter he pressed large quantities of hay for exportation at very reasonable rates.

THE ONION.

(From the Washington Commissioner's Report.)

The onion (*Allium cepa*) belongs to the lily family, which includes a large number of bulbous plants widely disseminated over the earth, but principally confined to the temperate zones. Its exact habitat is unknown. On the Eastern continent it grows in its greatest perfection in the warm countries of Egypt, Spain, and Portugal; but in the United States it is found to succeed best in more northern latitudes.

In the colder portions of our country it has been found necessary to shorten its season of maturity, by originating early and vigorous varieties, and to stimulate them into as rapid and healthy growth as possible; and this may be accomplished by selecting from year to year those onions which mature first, and then sowing their seeds.

VARIETIES.

The first requisite for success in growing onions from the seeds is to get the variety best adapted to the locality in which it is to be cultivated, and also seeds of the best quality. A neglect of this care may be regarded as the first cause of failure in cultivating this plant. A variety will never reproduce itself exactly from its seeds, although when it has become "set" by long cultivation and selection it will sometimes reproduce itself for many years with little variation. The onion is governed by the same law in this respect as other plants. Occasionally the differences in color are so great that one variety will be white, another red, yellow, or brown; but the most common variations

relate to the shape of the bulbs, some being more cylindrical, more flattened, or more spherical than others. The variation which occasions the most trouble to the cultivator, and requires the most skill and watchfulness to counteract, is the thick neck or scallion, an imperfect form which onions generally have in their wild state, and to which there is a natural tendency to revert. This peculiarity depends principally on this natural tendency to variation, although the character of soil and cultivation have considerable influence.—The true remedy for this difficulty must be sought in the selection of the onions to cultivate for seed.

The selection of a variety must depend upon the locality in which it is to be cultivated. For cold climates, in which the seasons are short, and consequently little time is given for maturing the plant, the earliest varieties should be chosen. In warm climates, where the seasons are longer, later varieties may be grown. In New England, especially north of Connecticut, the Yellow Danvers is generally cultivated, and found to succeed best. It is quite early, of good form, fine flavor, though not very tender, keeps well, and is very prolific.

Communications.

GRASSHOPPERS.

OAKFIELD, July 25, '71.

Dear Dr. Lawson,—Two of my stump fields that gave capital promise of grass during the early part of June have just been mown, and the crop is miserable. The ground is literally covered with grasshoppers, which rise in clouds at one's approach. I find by catching and feeding them that they have a great taste for clover. Am I right in putting the loss of my crop on the grasshoppers?—and if so, is there any remedy, or rather I should say, any means of getting rid of such unpleasant visitors? With recollections of what they did at Red River, I should like to be quit of them as soon as practicable, or my grain may follow my grass. It would be as well to publish some notice of this, if you think it worth while, as it may direct others who have not as yet suffered as I have to try precautionary measures.—Yours faithfully.

J. W. LAURIE.

NINE MILE RIVER,
July 26, 1871.

Dear Sir,—I was in receipt of your note on the 30th June, and consequently too late to be replied to for the last number of the Journal of Agriculture. In this district the hay crop is good—I think above an average; but labourers are scarce, and it seems difficult to get it cut and cured. Oats, so far as I have seen,

look well, and so does barley; but in regard to wheat I think it is more or less taken with the weevil; it can be seen now in some fields. It is rather early to form an opinion upon the general state of it. However, the Siberian is free from the fly. Potatoes look well; all the different kinds look as though we will have a good crop. The Early Rose is doing nicely. I find that in about six weeks after planting they are fit for table use. Vegetables of all kinds look well, and there is more of some kinds sown than usual, such as turnips, carrots and beets.

There seems to be much more oats and wheat sown than usual. There has been an abundance of Strawberries this year; but fruit will be very scarce. As I have not any other kinds to report on, you will excuse my short note.—I am, &c.,

JAMES GRAHAM.

CALEDONIA, QUEEN'S,
July 1, 1871.

Dear Sir,—Your kind favour of the 21st June came only to hand on 30th. I cannot account for the delay. In answer thereto, I can only say, from the small amount of information I am in possession of, that during the early part of the season, in April, the weather was cold and backward for almost the entire month. This caused much delay in the operations of farm labour; and the month of May was extremely dry, and caused vegetation to be very late until the month of June, which caused much fear of a short crop; but quite early in the month the rain came in abundance, and has since continued occasionally, and now at this date I can assure you that this part of Nova Scotia has a most beautiful appearance and the promise of abundant harvest. As regards cereals and root crops, this season exceeds by far anything we have witnessed for many years. Quite a breadth of the latter has been sown and planted; and, as the crops for the past two or three years have far exceeded that of the last decade, attention has been drawn to the clearing of the forest. As the subject of the railroad through the counties of Annapolis and Queen's raised our ambition to excel (as we do now, that being acknowledged) in the article of potatoes, they are preferred in the market to any that are brought to the county town, by a preference of 10 cents a bushel.

With regard to Wheat, for past years the farmers had discontinued to sow it owing to the repeated failure of the crop; but for the past two years especially the Fife wheat has done well. During the past year, one half bushel sown in the new burnt land produced twelve bushels of clean measured wheat, of an extremely heavy quality. I would here give the weight of it, but I fear it would be questioned by the public.

The Surprise Oats have succeeded well