

Agricultural Implements.

DRILLS—continued.

For hand use, the Harrington (Mass.) Single or Combined Seed Sower and Hand Cultivator has been found to do excellent service, and it is claimed for it that it is the only one which will sow beets and parsnips with regularity. As a sower it will also distribute guano and other fertilizers, and it has no shovels, reels or brushes to get out of order. It makes the drills, and evenly drops and covers the seed. Fig. 1.

The removal of the hopper and its accompanying parts from the frame, and the substitution of the cultivator attachment, will change the implement speedily into a hand cultivator. Fig. 2.

The Eagle Seed Sower, made in Massachusetts, is also a very complete one of its class. It drops the seed by the reciprocating motion of the seed-box, so that, as in the Harrington, there is no need for brush or cylinder, and this box-motion, keeping the seed in constant agitation, prevents the clogging of the outlet.

The implement is made in Nos. 0, 1, 2, and 3. The two first are of simple structure and small, better adapted for the smaller seeds than for corn, beans, &c.

Nos. 2 and 3 are provided with hinged ploughs, and hill-dropping attachments for planting corn, beans, peas, &c., in hills. The wheel is furnished with adjustable catches on the opposite side of the drills, so arranged, that 2, 3, 4, or 6 catches can be applied to drop at different distances.

The rod on the box-board, engaging with the catches on the wheel, raises the box, and a slide is drawn in which fills the measure. As the catch slips off the rod again the box is lowered, and the measurer emptied in the hill.

The drops are arranged to work in differences of 5 inches, from 10 up to 40 inches. The rod is also constructed so as to throw itself out of gear when the drill is drawn backwards, and the box may be taken off to be emptied.

An excellent rustic hand drill for turnips or carrots is made thus. Take a circular piece of inch board about 18 inches through; thin off the edge slightly and bore an inch hole in the centre. Take then another piece of wood 3 1/2 or 4 feet in length, out of which manufacture your handle; drive an inch hardwood pin through it, about two inches from the ground end, and upon this pin, as axle, let your circular board revolve—secured, of course by another pin to prevent its coming off. Next take a common tin custard-dish or small shallow milkpan, say 12 or 14 inches in diameter, and around its upper rim punch small seed holes, or cut out notches sufficiently large to answer the same purpose, and keep them about 3 or 4 inches apart. Fasten this dish, bottom outwards, securely on the side of your wheel-board opposite to that along which the handle runs, and your implement is complete. A hole in the bottom of the tin, which may be opened or closed by means of a plug, serves for the purpose of filling or emptying.

To use this implement, you simply run it along the top of

your drills, beds &c. Its own weight and the sharpness of the wheel edge causes it to sink into the ground an inch or two, and thus the seed-rut is made; at the same time, the seed keeps pouring out in the proper quantity and at intervals of 3 or 4 inches.

If holes a little larger than those used for turnip

both in Canada and the United States, though we look for as great improvements yet to come in them, as in any of the implements of husbandry. Although the 2nd class drill, viz.; the double-handed implement for one row, seems to be in general a favorite, there is still an objection to it, which we have

heard often repeated and that is, that in working it, the operator has to step along with a foot on each side of the drill, a proceeding which, if continued for any length of time, becomes very tiresome and annoying. Single handed drills are got up in such variety that separate descriptions seem almost an endless job. The main object in selecting one is to see that the seed can be regulated in quantity as exactly as possible, and that there is no clogging in the delivery. A double-row horse drill which gives much satisfaction to Canadian farmers, is constructed

on a principle originally Scottish. The drill consists of two transverse hardwood bars, about 2 in. square, and about 8 or 10 inches apart, the ends of which are fastened into castings which widen as they descend, to serve for the insertion of the ends of two different iron axles, also transverse, one in front and the other behind.

On the front iron axle are two hollow rollers to shape the tops of the drills. These also slide on the axle to suit any unevenness in the ridges. On the hinder iron axle are two plain rollers to cover in the seed and roll the drill, after the seed has been deposited.

The seed-boxes are fastened above to the wooden bars, and within them two conical tin seed-canisters revolve. These canisters are connected by a small iron-axle, which stretches across the seed-boxes, and is driven by a belt passing over a centre-pulley to a corresponding pulley in the centre of the hinder iron axle. It will, thus be understood that the canisters are driven by the hind rollers. The seed delivery consists of small holes in the periphery of the canisters, opened and closed by means of a circular tin band or slide, and this band is so adjusted, that any set can be opened, from the smallest size for turnip seed, to a size large enough for beets, or mangel wurtzel. An iron frame work also in connection with the front rollers communicates with the delivery tubes behind, in such a way that when the rollers spread apart or come together, the seed tubes will do the same, thus keeping the seed constantly in the middle of the furrow.

By simply raising the handles of this implement at the ends of the drills, the entire seeding apparatus is thrown out of gear. A couple of small iron handles also extending backwards enables the operator to raise any or all of the seed tubes to pass an obstruction.

Another form of the same machine differs from the foregoing in the driving apparatus, which, instead of a belt, consists of two pulleys, one near each end of the canister-axle, working by friction against the surfaces of the two front rollers. An objection was raised to this scheme however. It was that, 1st, the friction surfaces of the ground rollers, working continually in the soil, became in time gummed up with it, thus preventing a uniformity of work; and 2nd, there was no guarantee that the seed-canisters,

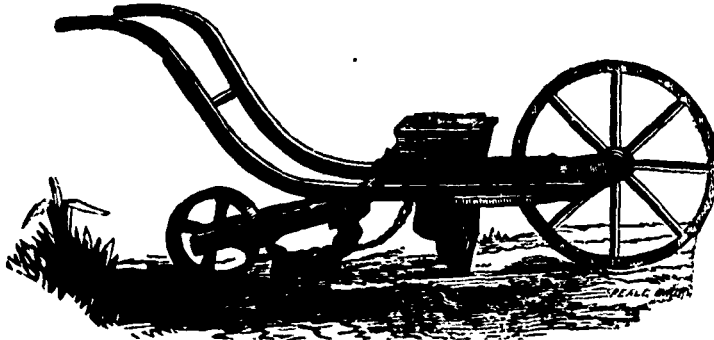


FIGURE 1.

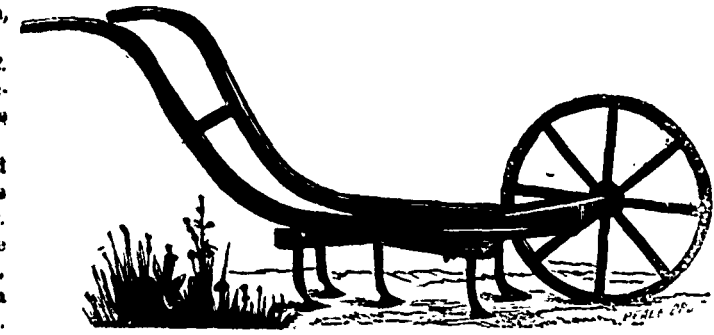


FIGURE 2.

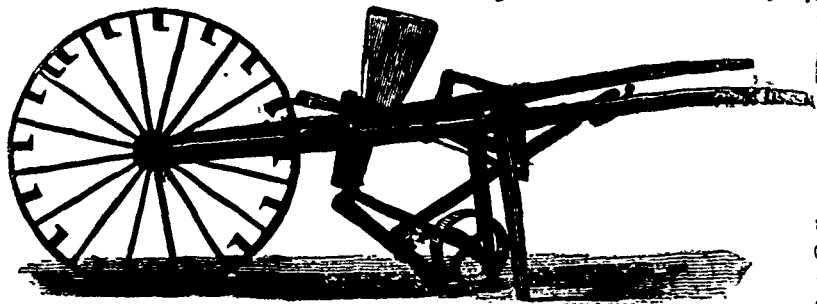


FIGURE 3.

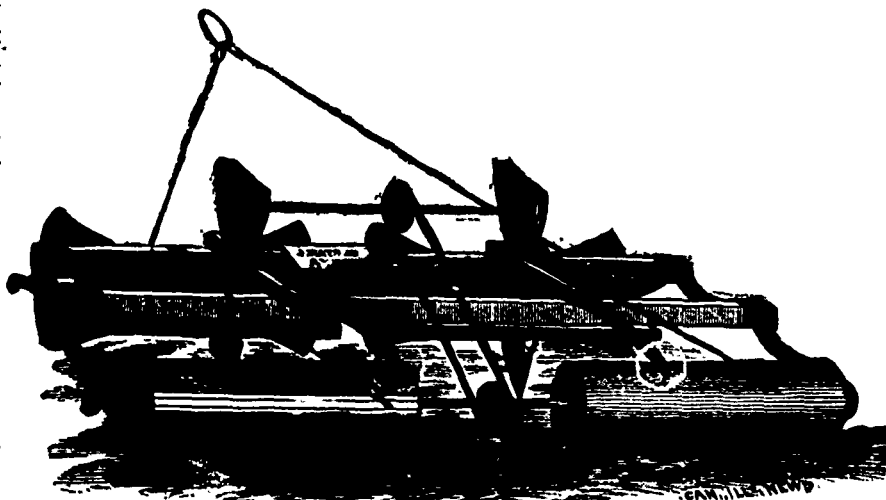


FIGURE 4.

seed be punched between every two of the former, they will answer for carrot seed, and may be plugged up when the implement is required only for turnips. We have known an implement such as this to give so

much satisfaction that it was borrowed for years over a whole settlement.

The smaller seed-drills may, in general terms, be divided into three classes: 1st, single-handed drills,

to sow one row at a time; 2nd, double-handed ones, for the same purpose, and 3rd double-handed ones for 2 rows at once.

Very good implements of each class are now made