Implements.

A Weeding Machine.

They have a new agricultural implement in England, which is designed to exterminate weeds among growing grain crops, and it is made on the principle of the small tooth comb. It is used in the grain at the time when the weeds to be pulled have heads but before the crop has arrived at that stage of development. The teeth allow the headless grain to pass through, just the same as the hair of infantile humanity passes through the teeth of the small toothcomb; and, pursuing the parallel, when anything that has no business there comes between the teeth, it is caught and jerked out.

The weeding machine is the invention of Mr. Jurgenson of Newcastle-on-Tyne. It has for its principal part a horizontal cylindrical drum hung between two wheels, which carry it and its attached appliances. This drum carries at three points equidistant on its circumference, three sets of projecting teeth or "iron combs" running horizontally along the length of the drum from end to end. By appropriately arranged gearing as the machine progresses along, the drum is made to revolve, and the iron teeth or combs are at the same time made to recede to and from the circumference of the drum or to work in and out of slots in it, and over or along the top of the corn which is being cleared of the weeds. Should the soil have recently fallen and rendered the soil loose and friable, or should it be in this condition otherwise, the teeth catch and pull the weeds fairly out of the soil; but should the soil be so hard and firm set as to take such a grip of the roots that this easy extraction of the weeds cannot be made, then the combs or teeth pull the heads off, so that they are prevented from "seeding," leaving the stems in the soil. As the drum revolves, and the teeth are drawn in towards its centre, the weeds or their heads, as the case may be as above stated, come against the circumference of the drum, and not being pulled in through the slots, they of course drop off to the ground, or are left to wither and die amongst the crop. At the same time as we have already stated, the combs or teeth exert no action upon the grain plants, the blades of which pass between the teeth; and, so that no hurtful action will be exerted by the combs upon the blades, the teeth are carefully rounded. To allow of the wheels easily passing through the crop, wedge shaped guards are placed at the sides which enter amongst and gently put the crop aside.

Novel, and even comical as is the principle of the weeding machine, it is stated to have been completely successful at many trials of its capabilities. Its principal use in Great Britain will be found in exterminating the Charlock or Wild Mustard with which some districts are so yellow that a stranger might be excused for doubting whether the Charlock were not the crop in cultivation and the cereals the intruding weeds. This same Charlock is spreading in Canada, and it being as prolific and persistent as it is impudent, we may yet be compelled to call in the aid of the patent tooth-comb process. But we recommend Canadian farmers not to allow the Charlock to multiply just for the fun of combing it out in years to come.

We do not see why the same principle cannot be used with thistles, at certain stages of their growth and with certain conditions of the soil.

Unprotected Threshing Machines.

EDITOR CANADA FARMER.—Since the threshing machines began to travel around among the farmers, last fall, scarcely a week passed during the winter, without the occurrence of some accident owing to the unprotected state of the machines. I am quite aware that a law came into force on the 1st September last, which imperatively requires all threshing and sawing machines to be protected. Of course the farmers ought to enforce the law, but how are they to do it? Those who own the machines will not incur the expense of protecting them, unless they are obliged to do so, but if only one or two farmers in each township were to refuse to employ them, they would not get their grain threshed at all.

I would, therefore, suggest that the farmers in every township should combine together, and agree not to hire any machine unless it is protected in every respect as the law requires. I understand that the manufacturers of first-class machines will not send them out unprotected, but there are many men who bought the unprotected machines a year or two ago, and they will persist in running them until they are worn out. Hence combination amongst the farmers for their own safety is necessary in the meantime.

SARAWAK.

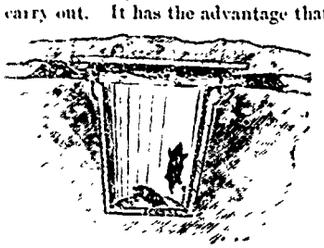
Trapping Moles.

Leaving aside the questions as to whether moles should ever be trapped at all, and whether they ever do any harm to vegetation, let us suppose that the farmer has decided to trap them, friends or enemies. There are several ways of doing this. One commonly in use in England is, the insertion of a noose in the runway. This noose is attached to a stout, springy sapling which is stuck into the ground a little distance off. The sapling is then bent down and the noose is tied in the runway, and fitted with a trigger. On this trigger being touched by the mole, the bent sapling is released, the noose tightens, and the unfortunate mole is hoisted aloft and there hangs, a victim of misplaced confidence and a warning to all depredators, supposed or real.

It is stated that rags dipped in gas tar and placed in their holes will cause moles to vacate the premises; also that smoked fish, similarly placed, will do the same; but we have no positive knowledge on the subject.

An effective trap is in use in Belgium, the principle of which is the suspension aloft of a heavy block of wood, armed with long sharp spikes, which drops between two uprights placed on each side of the runway. The mole in passing along touches a trigger which releases the weight, and the mole is transfixed by the spikes.

Another and more simple plan is one invented by a New Jersey market gardener and by him contributed to the New York *Tribune*. There is no patent right attached to it, and it is one which every farmer or owner of a lawn or garden can carry out. It has the advantage that no reset-



ting is required, and that the catching of one mole does not block the runway. The contrivance is simply a large flower pot—an old tin pail will answer the purpose excellently—sunk beneath the ground, upon a level with the floor of the run. A flat piece of board is laid over the run and the earth heaped upon it, so as to exclude the light completely. In the perfect simplicity of the thing its success chiefly lies. The moles, seeing or feeling nothing, with the highly sensitive "feelers" upon their snouts, run very readily into the trap, from which there is no escape. Every fresh arrival adds to the company, for there is no resetting needed, and there is no disturbance of the ground to excite suspicion. Doubtless the movements of the moles themselves attract other unfortunates to their ruin, for one who has tried the trap with eminent success says that he caught seven moles the first day, and three the second day, after setting it.

Another Potato Planting Machine.

We observe that a potato-planting machine has been under trial in Scotland with, apparently, favourable results. The information we have does not state whether the planter opens the drill row and covers the sets at one operation as is done by an American implement of which we lately witnessed a trial; and we should judge, from the non-mention of these features that the Scotch machine does the planting only. The *North British Agriculturist* says of the planter —Mr. Ferguson, Kinnochtry, Coupar-Angus, has designed and got constructed a new potato-planting machine, which promises to effect a considerable saving of labour. The machine plants two drills at a time. The inventor planted the whole of his potato-break this season with it, and never had the work better done. One man and a girl, with one horse, carted the sets and planted at the rate of six acres in seven hours. The machine is easy in draught, and can be made at a very moderate price. It is, we understand, to be exhibited at the forthcoming show of the Highland and Agricultural Society at Glasgow, and will likely there, along with anything else partaking of novelty, be set aside for trial. In these days of excessive high and rising cost of labor, any implement or invention calculated to lessen the farmer's dependence on manual labor is worthy of the closest attention of all concerned in the ownership and occupation of land.

A New Turnip-Thinning Machine.

The *Ayr* (Scotland) *Advertiser* says:—We have had an opportunity of seeing lately Mr. Dickie's new turnip thinner put to a practical test, and the favorable anticipations formed regarding it have been fully realized. We have seen it working on all kinds of land in the Girvan district, from the lightest sand to the stiffest clay, and the manner in which it performed its work was highly creditable. On well-pulverized land, free from weeds,, with turnips of a moderate size, the machine works admirably—in fact, leaves little to be desired. The circular hoe sweeps the plants into the drills as lightly as a brush, leaving the clumps as small as may be wanted. On stiff land the lessening of manual labor is also very great, the hoe breaking effectually the hard crust, saving the hands of the weeder, and enabling him to get over his task much more lightly. Although the machine certainly makes the prettiest work in small turnips, still it is quite effectual although the turnips are a considerable size.

On the farm of Girvan Mains the thinner was used over several acres, in a field with a drill of 600 yards. The turnips were very large, and not affording the most favorable condition for good workmanship. On a part of the field the thinner was not used at all. Mr. Hannah's foreman, who was in charge of a large band of weeders, carefully noted the difference of speed with which the turnips gone over with the machine were singled compared with the others, and his estimate was that it took exactly one-third less time to finish them, and that they were much better done, being more regular, than those singled in the usual way. Slight modifications may be made, and beneficial alterations in the shape of the hoes, as experience may direct, but we are of opinion that it will prove the greatest practical boon to the arable farm since the introduction of the reaping machine.

Champion Reaper and Mower Still a Grand Success.

We noticed on the Fair ground, last week, the celebrated Champion machine, the same as was shipped through our town to Wm. J. Hall, Keene, and from all appearances, and what farmers and mechanics and others tell us, we believe it to be the leading and best machine of the day. The "Champion" men being nearly all strangers amongst us except Mr. Hall, they showed to the immense crowd they had around all day the strength and durability of their machines, the strength of their rakes being unsurpassed. They don't seem to fear anything; they drove over the roughest ground of any machine present; they sailed over obstructions which none of the others attempted to, carried their points, and explained their machines to the farmers; and all the agents that could find fault did all they could, but the "Champion" men seemed to carry the day all through. Any one needing a reaper or mower this season would do well to see the Champion and give it a trial before purchasing, as Mr. Hall informs us they give a guarantee with every machine.—*Peterboro Review, June 11th.*

The agent of the Joseph Hall Works is now in Town, and will exhibit the celebrated Champion Reaper on the Market Square this forenoon. This machine has now attained a world-wide reputation and is acknowledged to be the best Reaping Machine now made. It has no equal; every one should see it to-day.—*Port Hope Guide, June 19th, 1875.*

CAOUTCHOUC IN HARNESS.—The new "wrinkle" mentioned in the CANADA FARMER for May, p. 64, of introducing Caoutchouc in the harness of draught animals, is wrong in principle. Any elastic medium between the horses' collar and the axle of the carriage, will operate against the advantage gained by the momentum acquired, which helps it over the stone or other impediment placed before the wheel. There should be no yielding in the line of traction, if there is, the wheel is left behind, as it were, when it comes to a stone, because the momentum and the power of the horse are in a degree separated, and the horse has to lift the wheel over the stone by increased muscular exertion.

J. F. W.

BUG CATCHER.—A novel machine which I think will be of great value to all who grow potatoes, is intended to catch live Colorado potato bugs. The machine is made somewhat like a wheel-barrow, and is drawn by one horse. It runs between the drills, and has two revolving fans which are driven by a belt from the axle of the wheel, this belt driving a wooden shaft two feet long, with beveled gearing at each end of the shaft to drive the fans, which revolve and knock and shake the live bugs into troughs. The fans can be raised or lowered to suit the height of the potato vines. A barrel with hot water, or a solution of Paris green or weak lye, made from ashes, is placed at one end of the field, to empty the bugs into. A boy and horse will clean from three to four acres per day.—*Cor. Country Gentleman.*