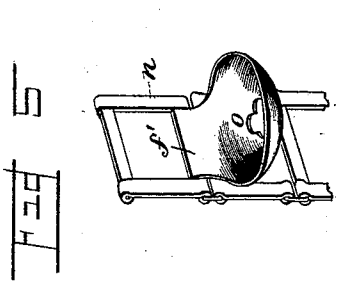
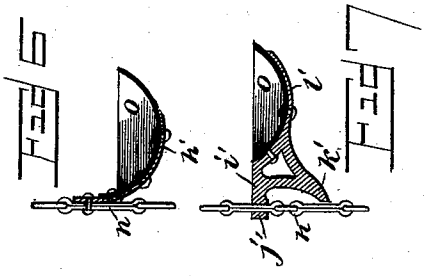
(No Model.)

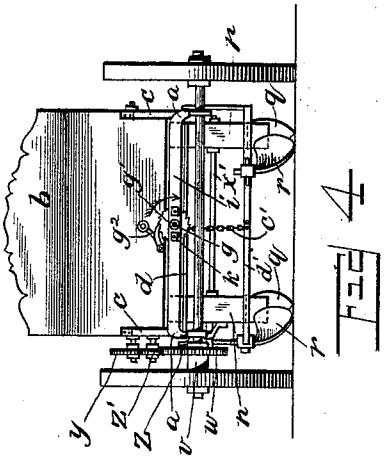
E. SKORPIL.

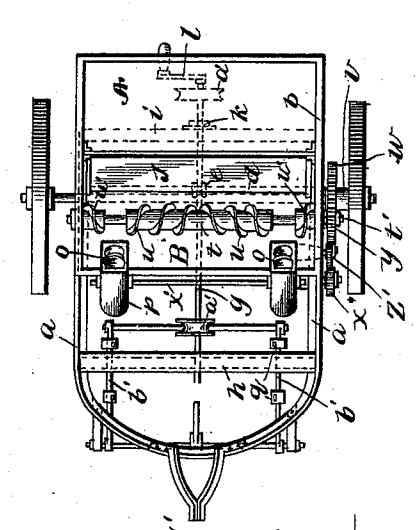
POTATO PLANTER.

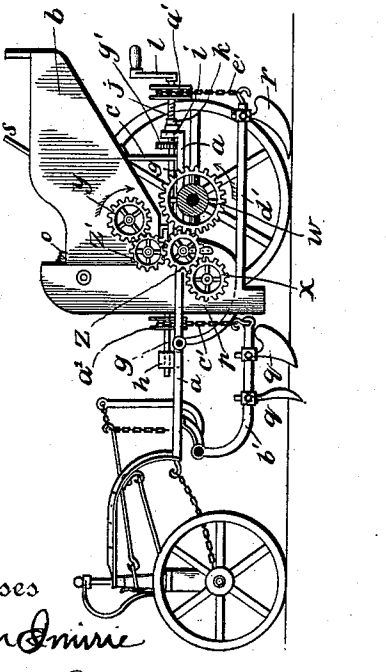
No. 478,137. Patented July 5, 1892.

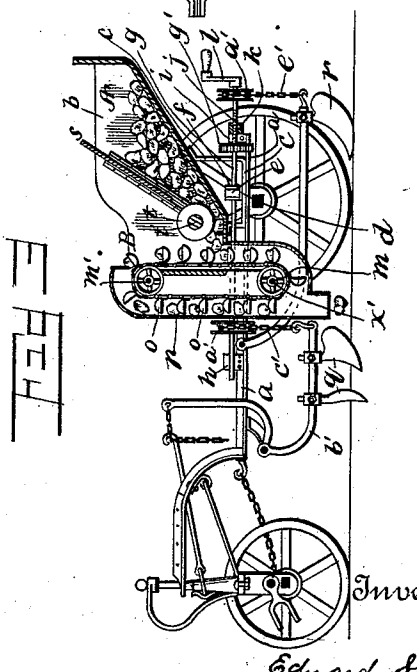












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UNITED STATES PATENT OFFICE.

EDUARD SKORPIL, OF NAGY-UGROCZ, AUSTRIA-HUNGARY.

POTATO-PLANTER.

SPECIFICATION forming part of Letters Patent No. 478,137, dated July 5, 1892.

Application filed July 22, 1891. Serial No. 400,377. (No model.)

To all whom it may concern:

Be it known that I, EDUARD SKORPIL, a subject of the King of Hungary, residing at Nagy-Ugrocz, have invented new and useful Improvements in Potato-Planters, of which the following is a full, clear, and exact description.

This invention relates to an improvement in potato-planting machines which distinguishes itself from the machines now in use by its most simple construction, as also by its reliable work.

Referring to the drawings, Figure 1 is a side view; Fig. 2, a rear view. Fig. 3 is a vertical longitudinal section. Fig. 4 is a plan view of the whole planting apparatus. Figs. 5, 6, and 7 are views of different forms of potato-catching cups.

The machine rests on four wheels and has the form of a four-wheeled plow, whose fore part is for the guiding and directing of the machine. The rear frame of the machine consists of a horizontal angle-iron frame *a*, on which the seed-box *b* is movably arranged. The seed-box *b* has at its rear lower sides two flat iron stays *c*, by means of which it rests on the horizontal parts of the parallel side bars of the frame *a*. The two stays *c* are connected with one another by a flat rod *d*, Figs. 2, 3, and 4, in the center of which a small bearing *e* is fixed. In the latter, which is secured against longitudinal displacement by the two edges *f*, lies a long spindle *g*. The spindle *g* runs in the middle of the frame *a*, below the seed-box *b*, in a longitudinal direction to the machine and lies in the cross-piece *h* in front and in the cross-piece *i* of the frame *a* at the rear. The spindle *g* is so laid into the rear cross-piece *i* that it runs with its screw-thread *j* in a screw-nut *k*, fixed to the cross-piece, whereby the seed-box *b* can be moved longitudinally, if it is desired to do so. The spindle *g* is turned by means of a crank *l*, whereby it screws into the socket *k*—that is, is moved in a longitudinal direction—and thus in taking the bearing *e* also moves the seed-box *b*, which glides with its stays *c* on the frame *a*. At the front wall of the seed-box *b* one or more—in the present case two—elevator-like potato-scoops are so mounted that the flat cups *o*, fixed to the endless chain band *n*, which runs around the rollers *m* and *m'*, go downward in the front through the cylindrical elevator-tube *p*, while they enter at the lowest part of the seed-box, going upward on the other side. On the way through the seed-box *b* each cup *o* catches a potato, which is carried along to the tube *p* and falls from there at every turn of a cup *o* around the lower axle into the furrows made by the plowshare *q*, arranged movably before the elevator. Two plowshares *r*, arranged movably at the rear, cover the furrow over and the potato is planted. The seed-box *b* is divided into two parts A and B by a slide *s*. In the part A the potatoes are stacked up and are brought by a horizontal worm running below the slide *s* in the seed-box into space B to the cups *o* of the elevator. This worm has four separate screw-threads, of which each two *u* and *u'* run opposite to one another. The elevators and also the worm *t* are actuated from the axle *v* of the rear wheel by means of the toothed wheel *w*, wedged on same, Fig. 1. The lower common axle *x'* of the elevator chain-wheels *m* also has a toothed wheel *x* for this purpose, and the worm *t'* has a toothed wheel *y*. An intermediary wheel *z* transmits the movement of the toothed wheel *w* to toothed wheel *x*, and simultaneously by means of the toothed wheel *z'* to the toothed wheel *y*. The toothed wheel *z* is so placed that it can be exchanged for a larger or smaller one, whereby a greater or less rapidity of the movement of the cups *o* can be obtained—that is, the planting distance be changed. To the spindle *g* a chain-wheel *a'* is wedged in front as in back. To the front chain-wheel *a'* hangs by means of chain *c'* the front plowshares *q*, which are fastened to the same frame *b'*. To the rear chain-wheel, however, are fastened by means of chain *e'* and on a frame *d'* in common the plowshares *r*, which cover over the furrows, so that by turning the spindle *g* the furrow openers and coverers can be elevated, and potato-planting machine can be made to stop working, and vice versa. If the spindle *g* be turned by means of the crank *l* in the direction of the arrow in Fig. 2, the seed-box *b* is moved, as already stated, to the front, whereby the toothed wheel *z* is put beyond the toothed wheel *w* as it is mounted on the seed-box *b*. At the same time the chains *c'* and *e'* wind around the chain-wheels *a'*, whereby the plowshares *q* and *r* are raised, and thus

put out of operation. On spindle g there is also a small ratchet-wheel g', which holds it fast by means of a pawl g^2. Figs. 5, 6, and 7 show three different forms of potato-feeding cups which can be used, of which Fig. 5 is the simplest one, without a handle, and which is riveted to the chain band n by a flap f' cast in one piece with the cup. Fig. 6 shows a somewhat more solid and strong form of a cup o without handle, in which the cup o is riveted onto a strong rib h', fixed to the chain band n. Fig. 7 shows a cup with a handle, in which the handle i' sets with its upper end j' on the elevator chain band n and rests with its lower end k' against the band n. The cup o itself is riveted to the rib l' of the handle i'. When using the cup o with a handle, the worm t is left off, as the handled cups stir up and easily catch the potatoes.

I claim—

1. In a potato-planter, the combination, with the horizontal frame a, a seed-box movably arranged thereon, and stays for supporting the rear part thereof on the side bars of the frame a, and a cupped elevator in said box, of a screw-threaded spindle g, mounted in cross-piece i and bearing e, and crank l, whereby the spindle is operated and the seed-box moved longitudinally, substantially as set forth.

2. In a potato-planter, the combination, with a movable seed-box divided by slide s into two parts A and B, an elevator-tube in the front portion thereof, rollers, endless bands mounted on rollers located in said tube, and scoops on said bands, of a horizontal worm in chamber A, running below the slide s, having separate screw-threads for feeding the potatoes into chamber B, substantially as set forth.

3. In a potato-planter, the combination, with a movable seed-box divided by slide s into two parts A and B, an elevator-tube in the front portion thereof, endless bands mounted on rollers located in said tube, and scoops on said bands, of a horizontal worm in chamber A, running below the slide s, having separate screw-threads for feeding the potatoes into chamber B, furrow-opening plowshares movably arranged in front of the elevator, and covering-plowshares movably arranged at the rear of the whole device, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

EDUARD SKORPIL.

Witnesses:
JOSEF SKORPIL,
GERUERÖRÖNY.