

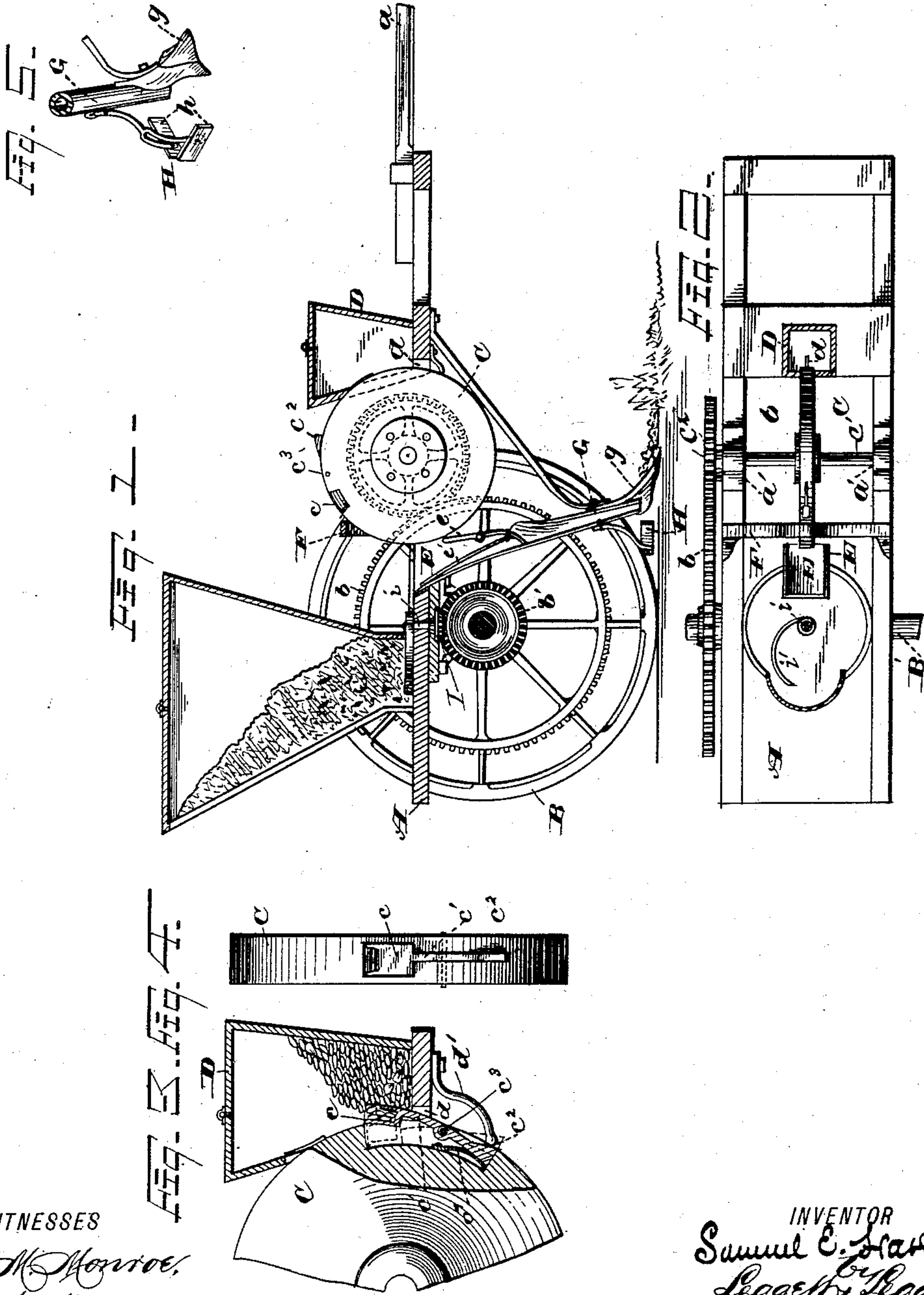
(No Model.)

S. E. HAKE.

CORN PLANTER.

No. 338,403.

Patented Mar. 23, 1886.



WITNESSES

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UNITED STATES PATENT OFFICE.

SAMUEL E. HAKE, OF NILES, OHIO.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 338,403, dated March 23, 1886.

Application filed July 31, 1885. Serial No. 173,125. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL E. HAKE, of Niles, in the county of Trumbull and State of Ohio, have invented certain new and useful
5 Improvements in Corn-Planters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

10 My invention relates to improvements in corn-planters; and it consists in certain features of construction and in combination of parts hereinafter described, and pointed out in the claims.

15 In the accompanying drawings, Figure 1 is a side elevation, partly in section, of my improved corn-planter. Fig. 2 is a plan view of the same, but with the hopper shown in horizontal section. Fig. 3 is an enlarged elevation in section of a portion of the disk, feed-cup, and
20 corn-hopper. Fig. 4 is an edge view in elevation of the feed-disk. Fig. 5 is a view in perspective of the drill-tooth and covering device.

25 A suitable frame-work or platform, A, is mounted on carrying-wheels B, that are connected by a revolving axle, B'. On this axle are mounted the spur-wheel b and the bevel-gear b'. The frame or platform A has thills
30 a, for attaching a horse, or may have suitable handles for propelling the device by hand.

C is a feed-disk, mounted on the spindle C', the latter being journaled in the boxes a', that are attached to the frame A. The spindle has
35 mounted thereon the gear C², that engages the gear b. A feed-cup, c, has an open end and a solid end, and at the latter is attached to the lever c'. This lever and cup are set with the face of the disk flush with the periphery of
40 the disk, except the end of the lever at c², that, when the disk is in the closed position shown in Fig. 1, projects outward from the disk, forming an incline. The lever c' is pivoted at c³ to the disk, and when the cup is in the open
45 position shown in Fig. 3 the incline c² is about flush with the disk.

D is the corn-container or hopper, and is slotted so that the disk enters the same, the edges of the slotted part of the hopper embracing the disk so close that the corn cannot

escape. A narrow slot, d, through the bottom of the hopper allows the incline c² to pass; but this slot is too narrow to allow the kernels of corn to escape. The disk being rotated by the gears connecting it with the axle, as
55 said, when the cup c is passing up through the hopper D, the incline c² strikes the abutment d', by means of which engagement this end of the lever is forced inward and the cup is forced outward, as shown in Fig. 3, and consequently
60 the cup scoops up its fill of corn. When the incline c² has passed the abutment d' the spring c⁴ returns the cup to its closed position. (See Fig. 1 and dotted lines, Fig. 3.) The kernels of corn are thus confined in the cup as they
65 ride over with the disk. When the mouth of the cup is above the hopper E the incline c² strikes the abutment F, by means of which the cup is again opened, and, the mouth of the cup at this time presenting downward, the corn is
70 discharged into the hopper E. The abutment F consists of a bail that spans the disk, and is secured to the platform A. The hopper E has a pivoted tilting side, e, that is held in position along the bottom of the hopper, as
75 shown in Fig. 1, by the spring e'. When the incline c² strikes the upper end of the side e, the spring e' being weaker than the spring c⁴ that backs the incline, the side e is tilted, opening the hopper and discharging the corn.
80 The hopper E discharges into a tube, G, that terminates at the rear of an ordinary drill-tooth, g. The latter makes a slight furrow, into which the corn falls, and a covering device, H, follows and closes the furrow.
85

The covering device consists of two vertical plates, h, set edgewise and in a triangular form, with the apex presenting.

The tube, tooth, and covering device are usually bolted or clamped together, and secured
90 by suitable braces leading to the frame above.

The relative sizes of the gears b and C² will depend on the size of the wheels B and the distance apart that it is desired to drop the corn. For instance, if the wheels B are nine
95 feet in circumference and it is desired to plant the corn three feet apart the relative sizes of the gears b and C² would of course be three to one. The bevel-gear b' on the axle B engages a bevel-pinion, I, that is attached to a short
100

vertical shaft, *i*, that passes up through the platform A, and has attached above the platform a curved arm, *i'*.

J is a hopper or container for pulverized fertilizing material. The hopper is secured to the platform, and on the side next the hopper E is cut away, leaving an aperture for the arm *i'* to sweep through. The arm *i'* scoops out a quantity of the fertilizer and advances it along until it falls by gravity into the hopper E, simultaneously with the discharge of corn into this hopper. When the hopper E is opened, as aforesaid, the corn and fertilizer fall through into the furrow.

In place of the gears *b* and C, sprocket-wheels and an endless chain might be substituted, and various other changes might be made without departing from the spirit of my invention.

What I claim is—

1. In a corn planter, the combination, with a seed-disk having movable pockets therein, of a container for fertilizing material, a revolving arm arranged to enter the container and discharge a quantity of the fertilizing material with the corn, substantially as set forth.

2. The combination, with a vertical disk having movable pockets therein, springs for holding the pockets in closed adjustment, and gearing connecting the disk with the ground or carrying wheels, of a seed-hopper having a slot therein for entrance of the disk, and devices for opening the pockets.

3. In a seed-planter, the combination, with a disk having a recess in the periphery thereof, of a lever pivoted within said recess and provided at one end with a seed-cup and a spring for holding the cup within the recess, of a seed-hopper and devices for engaging the free end of the lever for moving the cup away from the disk, substantially as set forth.

4. In a seed-planter, the combination, with a frame and fertilizer and seed-hoppers, of a seed-disk having movable cup, substantially as described, the curved arm for discharging the fertilizer, and gearing connecting the arm and disk to the ground-wheels, substantially as set forth.

5. In a seed-planter, the combination, with a frame and hoppers secured thereon, of a seed-disk having a movable seed-discharging cup, the curved arm for discharging the fertilizer, gearing connecting the arm and disk to the ground-wheels, the implement for making the furrow, and the devices for closing the furrow, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 20th day of July, 1885.

SAMUEL E. HAKE.

Witnesses:

JAMES J. MAHONEY,
JULIUS N. CONDERY.