(No Model.) 2 Sheets—Sheet 1.

W. SHORTLO.

CORN PLANTER.

No. 418,387. Patented Dec. 31, 1889.

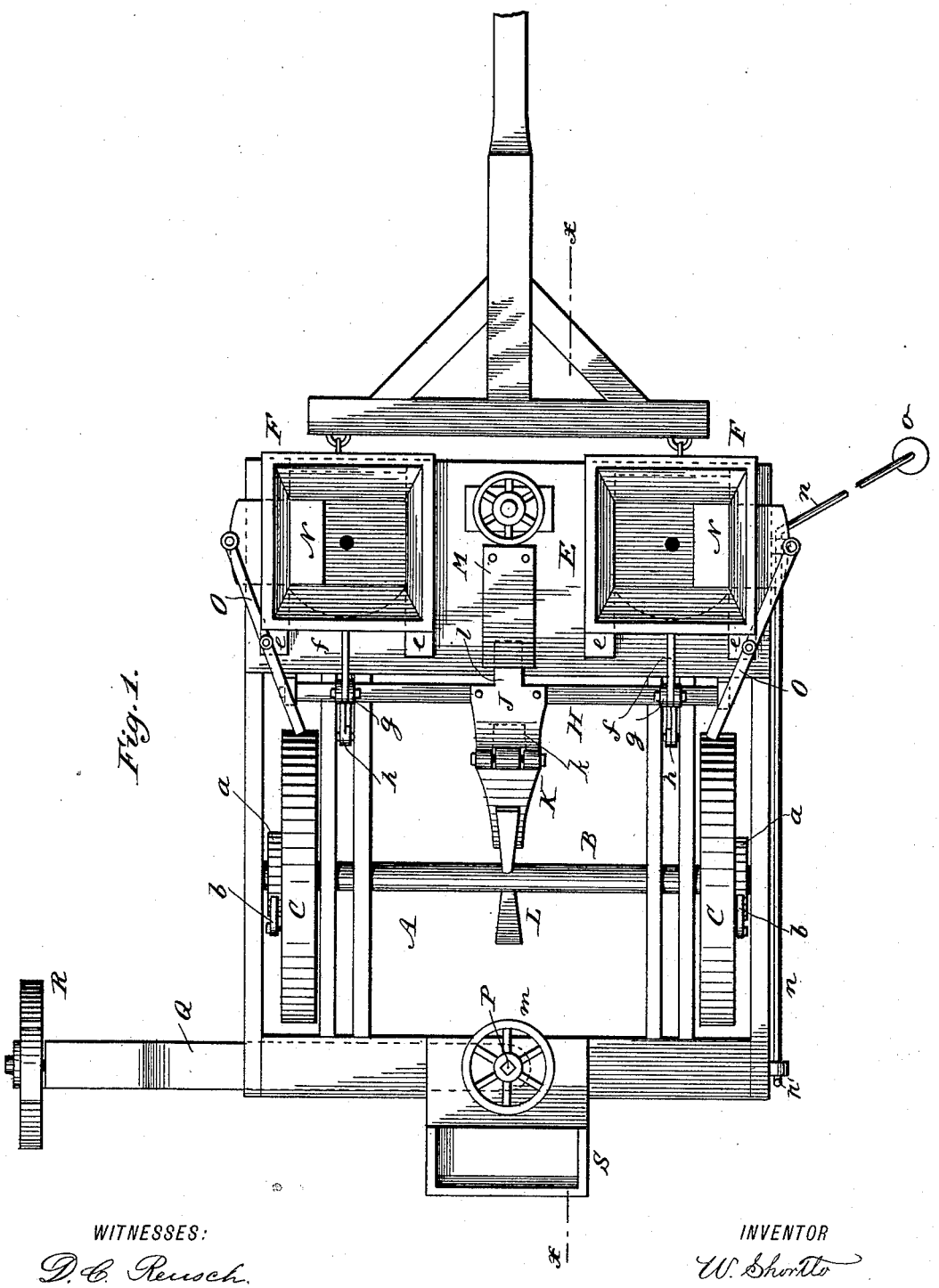

Fig. 1.

WITNESSES:

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Fig. 2.

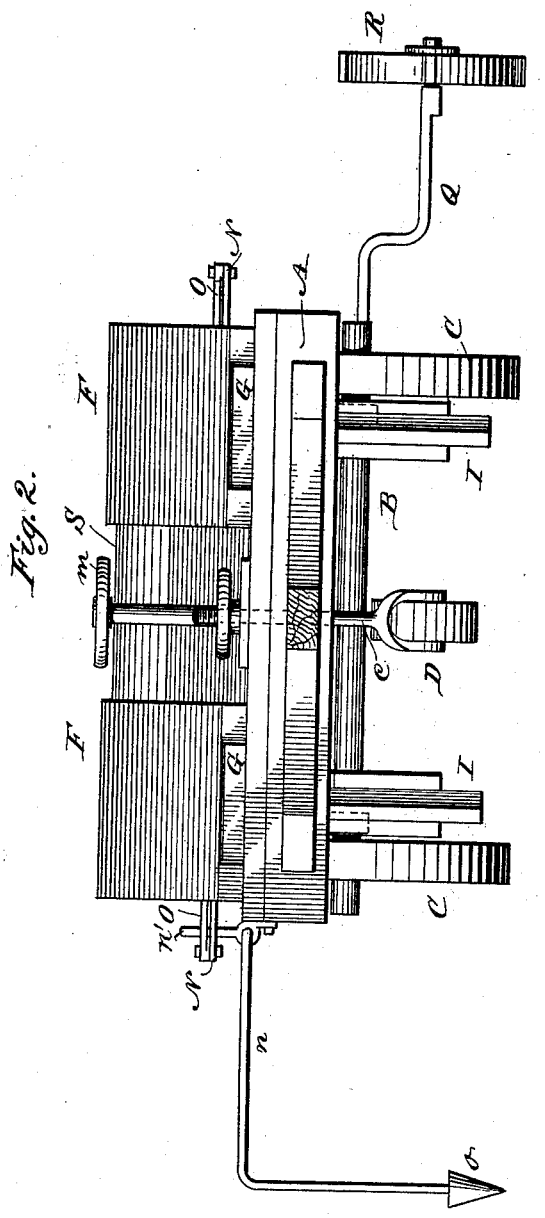
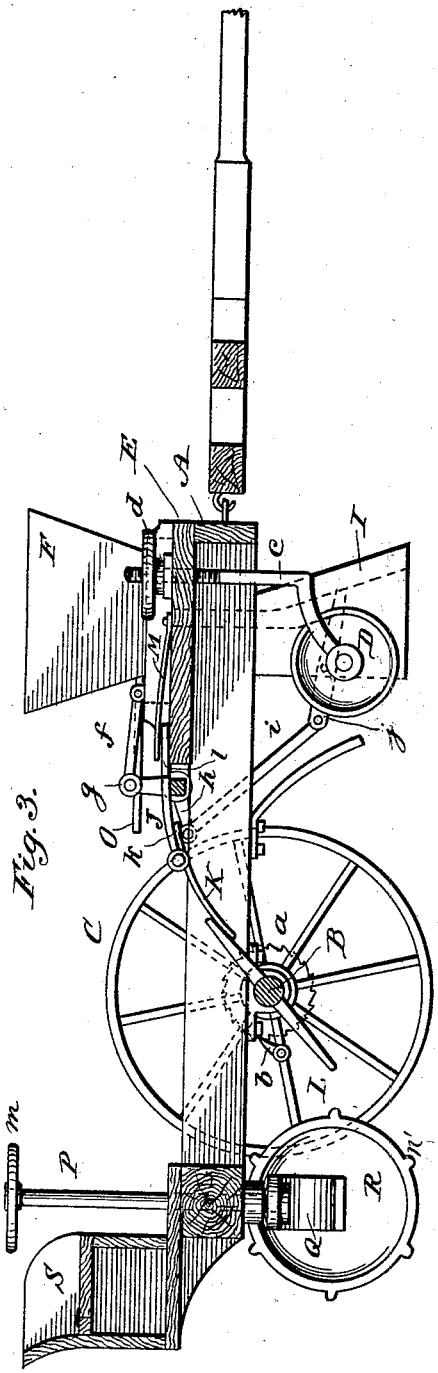


Fig. 3.



WITNESSES:

D. C. Reusch.

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UNITED STATES PATENT OFFICE.

WILLIAM SHORTLO, OF SPRINGFIELD, ILLINOIS.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 418,387, dated December 31, 1889.

Application filed March 9, 1889. Serial No. 302,606. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SHORTLO, of Springfield, in the county of Sangamon and State of Illinois, have invented a new and Improved Corn-Planter, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a plan view of my improved corn-planter. Fig. 2 is a front elevation with a portion of the tongue removed, and Fig. 3 is a longitudinal section taken on line *x x* in Fig. 1.

Similar letters of reference indicate corresponding parts in all the views.

The object of my invention is to construct a simple and effective machine for planting corn and for check-rowing.

The invention consists in the construction and arrangement of parts, as will be hereinafter described and claimed.

The frame A, forming the body of the machine, is supported upon the axle B, upon which are loosely placed drive-wheels C, the connection between the drive-wheels and the axle being made through ratchet-wheels *a*, secured to the axle, and spring-actuated pawls *b*, carried by the drive-wheels. The forward end of the frame A is supported by a caster-wheel D, the shank *c* of which extends upward through a nut *d*, journaled on the frame A.

Upon the forward end of the frame A is secured a plank E, which supports the hoppers F, the said hoppers being supported upon cleats *e*. Between the cleats are inserted slide-valves G, which are connected by rods *f* with arms *g*, carried by the rock-shaft H, and to the said shaft H are also attached arms *h*, which are connected by rods *i* with the drop-levers *j*, pivoted in the drill-points I, and arranged to drop the corn at the proper instant.

To the center of the rock-shaft H is attached an arm J, to which is hinged an extension K, the said extension being provided with a toe *k*, which strikes the under surface of the arm J and renders the said extension and arm J rigid when the extension is pressed downward, as will presently be described, but allows the extension K to lift freely without moving the arm J.

In the center of the axle B is inserted a cross-arm L, which is capable of striking the extension K whenever the said axle is turned by the forward movement of the planter, thus causing the shaft H to rock and operate the valves G and drop-levers *j*. A spring M, secured to the plank E, bears upon a toe *l*, projecting forward from the shaft H, and returns the shaft H and parts connected therewith to the point of starting.

The hoppers F are provided with auxiliary valves N, operated by levers O, which are employed in shutting off communication between the hoppers F and the valves G.

In the rear part of the frame A is journaled a shaft P, to which is attached an arm Q, upon the end of which is journaled a marking-wheel R, the said marking-wheel R being placed the width of a row from the adjacent drill-point I. The arm Q can be turned by means of the wheel *m* on the shaft P, so that it will project from one side or the other of the planter, as may be required.

To the rear of the frame A is attached the driver's seat S, within convenient reach of the wheel *m*. To opposite sides of the frame A are pivoted rods *n*, which are bent outwardly and downwardly at right angles, and provided at their extremities with wooden cones *o*, which are supported from the drills I a distance equal to the width of a row, the said cones *o* being arranged with reference to the said drills so as to make an impression on the ground when the end of a row is reached, so as to indicate the starting-point for the next pair of rows. The rods *n* (one rod only being shown) are bent up at their rear ends to form handles *n'*, by which the operator can raise and lower the cones.

If, when the machine is backed, the pawl-and-ratchet mechanism fails to work, the retrograde motion of the tappet-arm L will simply lift the extension K without producing any effect on the dropping mechanism.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a corn-planter, the combination, with the axle having an arm L, of the rock-shaft H, in front thereof, provided with arm *g*, the transverse arm J, secured to said rock-shaft and having a toe *l* projecting in front of it,

and a rearwardly-extending hinged extension K, provided with a projection extending under its rear end, and the plate-spring M, bearing on said toe, the hoppers F, and valves therefor connected with the arms g, substantially as set forth.

2. In a corn-planter, the combination, with the axle B, provided with the arm L, of the shaft H, provided with the arms g, the arm J, carried by the shaft H and provided with the extension K, the toe l, the spring M, adapted to engage the said toe, the hoppers F, the valves G, connected with the arms g, the valves N, and the levers O, substantially as specified.

3. The combination, in a corn-planter, with the frame and dropping mechanism, of a rod n, extending along one of the side bars of the frame in front and rear bearings thereon and bent outwardly and downwardly at its front end and upwardly at its rear end, as at n', and the marker o on the lower end of the downwardly-bent end, substantially as set forth.

4. In a corn-planter, the combination, with the vertical shaft P, mounted in front of the driver's seat, of the reversible arm Q, extending outward from the lower end of said shaft and provided at its outer end with a marking-wheel R, and the operating-wheel m on the upper end of the shaft P within reach of the driver, substantially as set forth.

his
WILLIAM × SHORTLO.
mark

Witnesses:
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C. J. CULLOM.