(No Model.)

W. M. GRAZE.

CORN PLANTER.

No. 307,457. Patented Nov. 4, 1884.

Fig. 1.

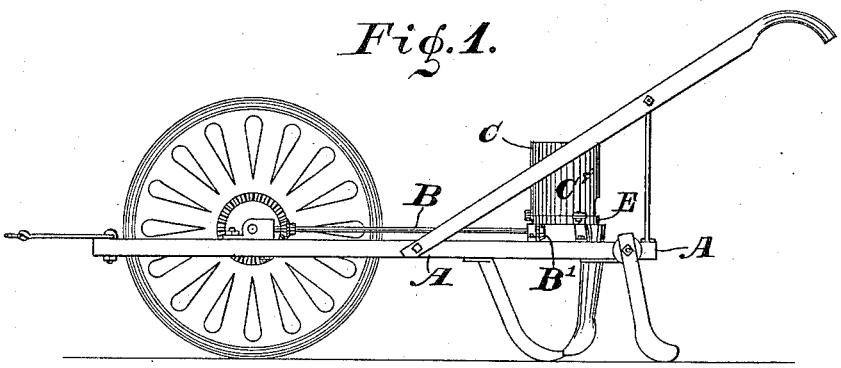


Fig. 2.

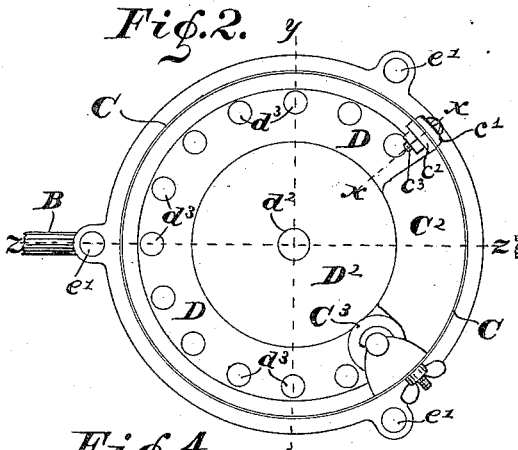


Fig. 3.

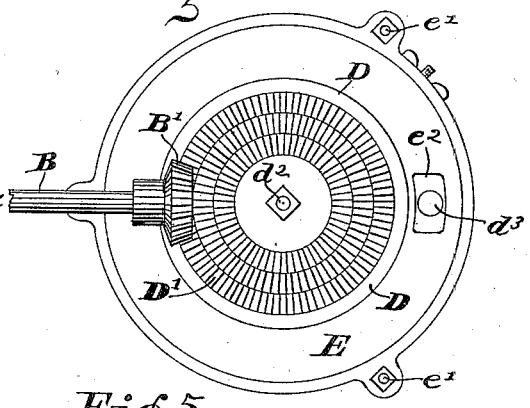


Fig. 4.

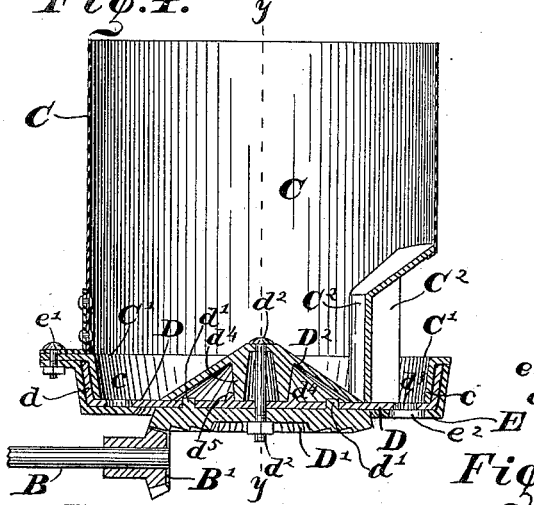


Fig. 5.

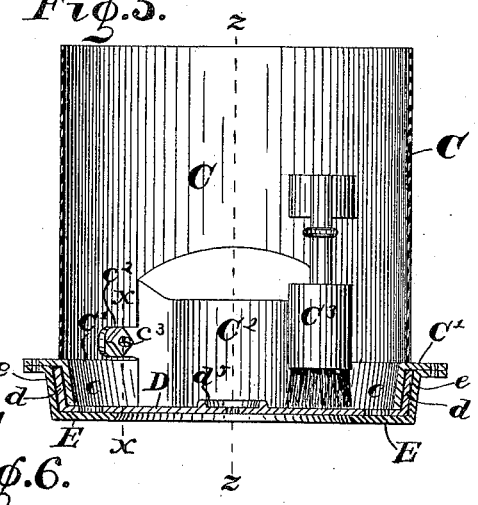
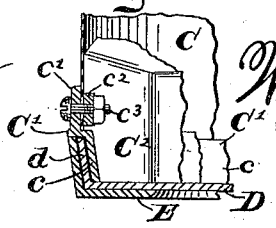


Fig. 6.



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WILLIAM M. GRAZE, OF LOGANSPORT, INDIANA.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 307,457, dated November 4, 1884.

Application filed June 6, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. GRAZE, of the city of Logansport, county of Cass, and State of Indiana, have invented certain new and useful Improvements in Corn-Planters, of which the following is a specification.

My said invention consists, principally, in certain improvements in the construction of the hopper and feeding mechanism, whereby the several parts are more easily and quickly fitted and the cost of the machine thus lessened, as will be hereinafter more fully described.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a side elevation of a corn-planter embodying my said invention; Fig. 2, a top or plan view of the hopper separately; Fig. 3, an under side plan of said hopper; Fig. 4, a vertical sectional view of the same looking toward the left from the dotted line *z z* in Fig. 5 and upwardly from the same line in Fig. 2; Fig. 5, a vertical sectional view looking to the right from the dotted line *y y*, the cone and gearing being omitted; and Fig. 6, a detail section on the dotted line *x x*.

In said drawings the portions marked A represent the frame-work of the planter; B, the driving-shaft; C, the hopper; D, the revolving feed-plate, and E a base-plate or outside rim in which the hopper is mounted.

The frame-work A, drive-shaft B, and other parts other than the hopper and feeding mechanism, are, or may be, of any suitable construction, and, as they form no part of this present invention, will not be particularly described herein.

The hopper C is preferably a cylindrical sheet-metal case, and has a cast rim, C′, secured to its lower edge. Said rim has a downwardly-projecting flange, *c*, which sets down into the base-plate, as will be presently described. A cast shield-piece, C^2, is secured to the inside of the hopper directly over the hole in the base-plate, through which the corn drops, and the kernels are thus prevented from dropping into said hole, except as they are fed in by the feeding mechanism. Said shield-piece extends down to the bottom of the hopper, except on one side, where an opening is formed (under the brush, not shown) between its lower edge and the top surface of the feed-plate of sufficient size to allow the corn to pass under as the feeding mechanism carries it toward the hole. A brush, C^3, is also secured in the cylinder in front of the opening under the shield-piece to keep back all the kernels except the one contained in the hole in the feed-plate, as is common in other planters. The ears c^2, through which the bolt c^3 passes to secure said shield-piece in position, are arranged, as shown, (see Fig. 6,) to come opposite the ears *c′* on the rim C′, and thus the bolts serve to hold both pieces in place.

The feed-plate D is in most particulars of substantially an ordinary construction, the flange *d*, extending up and adapted to fit around the flange *c* of the rim C′, being the principal novel feature. It is fitted onto the rim C′ upon the lower end of the hopper, as before indicated, and thus forms the bottom of said hopper. A gear-wheel, D′, is provided upon its under side which meshes with a gear-wheel, B′, upon the end of the drive-shaft B, whereby said feed-plate is driven. Said gear-wheel is preferably secured in place by lugs *d′*, which fit into holes formed in the plate on each side of the bolt d^2. Said bolt extends down through the cone D^2 and also through said gear-wheel, and thus holds them both tightly in position against the opposite faces of the plate D. Said cone D^2 is mounted in the center of the plate and causes the seed to slide toward the row of holes d^3, which are formed in the edge of said plate. It is provided with a downwardly-projecting flange, d^4, which extends down to the plate, where it engages with a corresponding circular flange, d^5, and is thus more securely held in position. The base plate or rim E is also provided with an upwardly-projecting flange, *e*, the upper edge of which is secured to the rim C′ by the bolts *e′*, as shown. Said flange *e* is made somewhat larger than the flange *c* in order to leave sufficient space between them for the flange *d* of the feed-plate D to operate. Said plate or rim extends out under the feed-plate a sufficient distance to cover the holes d^3 therein and afford a suitable bearing therefor. It is provided with a feed-hole, e^2, directly under said row of holes d^3, through which the corn is dropped into the ground.

The operation of my said invention is as follows: The several parts are secured in position as before described. The corn being then placed in the hopper the machine is set in operation. The holes in the feed-plate are preferably of a size a little larger than one seed, and thus one seed is carried around in them under the brush and shield-piece to the feed-hole e^2 in the base-plate, where they are dropped one by one into the ground, as will be readily understood.

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

1. The combination, in a corn-planter, of the hopper C, having a cast rim, C′, upon its lower edge, the feed-plate D, having an upwardly-projecting flange, *d*, and the base-plate or rim E, also provided with an upwardly-projecting flange, *e*, which fits around said flange *d* of the feed-plate, and is secured to the rim C′, substantially as set forth.

2. The combination, in a corn-planter, of the hopper C, having a cast rim, C′, upon its lower edge, said cast rim having a flange, *c*, extending down therefrom, the feed-plate D, having a flange, *d*, which fits around said flange *c*, and the base-plate E, provided with the flange *e*, which fits around the flange upon the feed-plate and is secured to the rim C′, said base-plate extending under the feed-plate a sufficient distance to cover the holes, and being provided with a feed-hole, e^2, substantially as set forth.

3. In a corn-planter, the combination of the hopper C, having a cast rim, C′, upon its lower edge, the feed-plate D, mounted thereon, said feed-plate being provided with a gear-wheel, D′, upon its under side and a cone, D^2, upon its top, said gear-wheel and said cone being secured to the opposite faces of said feed-plate by a bolt, d^2, and the base plate or rim E, secured to the rim C′ outside of the edge of the feed-plate D, substantially as set forth.

4. In a corn-planter, the combination of the hopper C, the rim C′, secured to its lower end, said rim having a downwardly-projecting flange, *c*, the feed-plate D, having a gear-wheel, D′, on its under side, and an upwardly-projecting flange, *d*, around its outer edge, said flange *d* being formed to fit around the flange *c*, and the base plate or rim E, said base-plate being provided with a flange, *e*, which surrounds the feed-plate and is secured at its upper edge to the rim C′, the feed-plate D being thus provided with a suitable way between the rim C′ and base-plate E in which to run, substantially as shown and specified.

5. The combination of the feed-plate D, gear-wheel D′, having studs *d*′, which enter holes in said feed-plate, the cone D^2, and the bolt d^2, by which said several parts are secured together, substantially as shown and specified.

6. The combination of the feed-plate D, having flanges *d* and d^5, and the cone D^2, having flange d^4, substantially as shown and specified.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 2d day of June, A. D, 1884.

WILLIAM M. GRAZE. [L. S.]

In presence of—
E. W. BRADFORD,
CHAS. L. THURBER.