

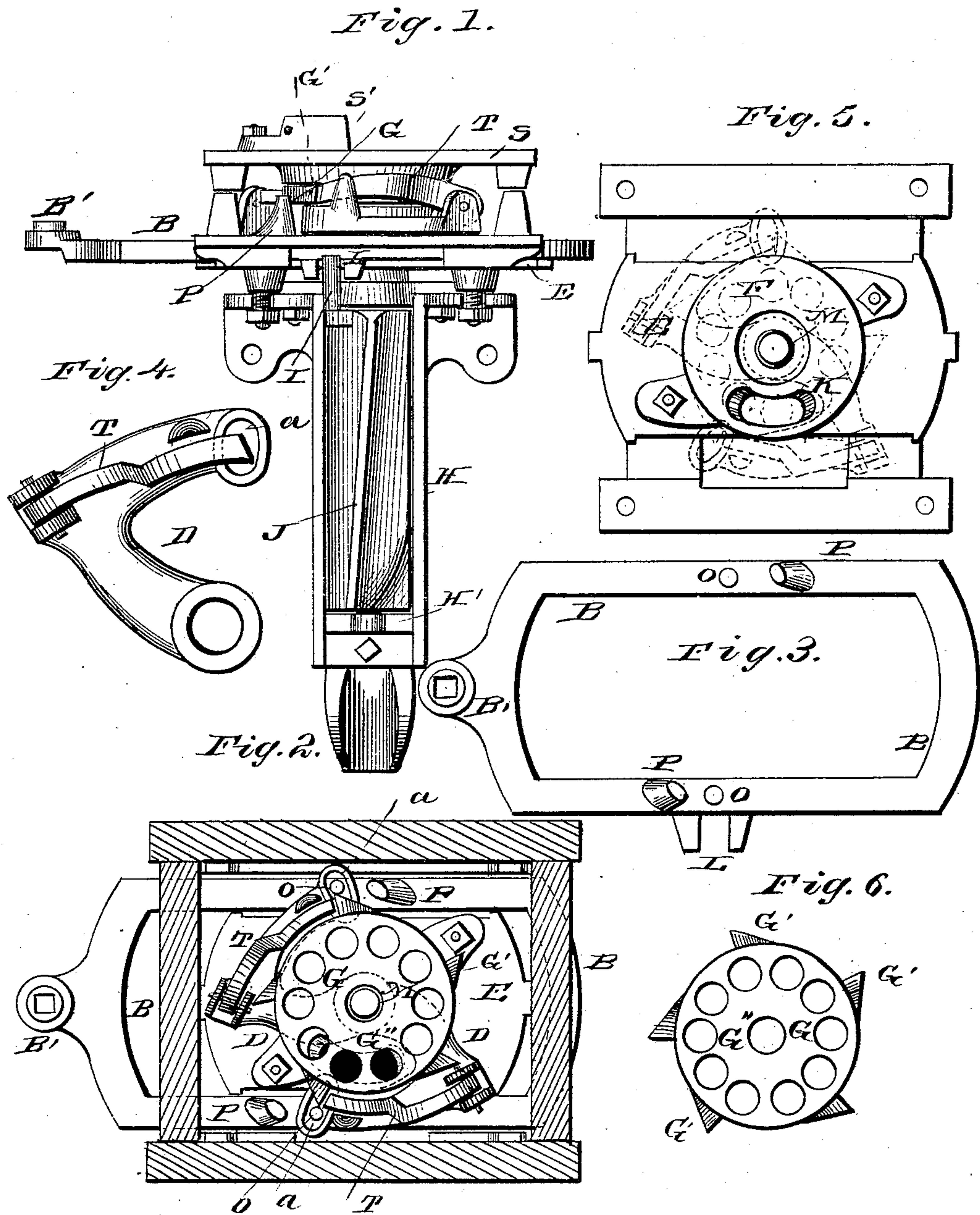
(No Model.)

W. H. JOHNSON.

CORN PLANTER.

No. 284,858.

Patented Sept. 11, 1883.



WITNESSES

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CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 284,858, dated September 11, 1883.

Application filed April 25, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. JOHNSON, a citizen of the United States, residing at Sterling, in the county of Whiteside and State of Illinois, have invented certain new and useful 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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention has reference to corn-planters, and pertains more particularly to improvements in the dropping mechanism thereof. As generally used, the dropping is done simultaneously from two seed-droppers drawn over the field in parallel lines. The dropping devices in and beneath each seed-hopper are alike, and are actuated by the usual reciprocating connecting-bar, extending from one hopper to the other. Therefore I do not deem it necessary to show or describe the dropping devices of more than one of such seed-hoppers.

In the drawings, Figure 1 is a rear elevation of the dropping devices in their relative positions with the seed-hopper removed. Fig. 2 is a plan view of such dropping devices in position with the cut-off plate S removed. Fig. 3 is a detached view of the reciprocating horizontal stirrup B, to the inner end, B', of which the ordinary transverse reciprocating bar which actuates the seeding devices is attached. Fig. 4 is a detached view of the pawl-arms D D and pawls T T. Fig. 5 is a plan view of the base-plate E, having affixed to its upper surface the circular seed-plate seat F. Fig. 6 is the circular seed-plate G, having the spurs or lugs G'.

H is the vertical tube or boot in the rear of the seed-runner, in which, near the lower end thereof, is placed the horizontal shelf H'.

J is a rock-shaft, journaled at its lower end in the shelf H'', and at its upper end in the base-plate of the seed-hopper. The back of the rock-shaft J forms the back of the tube H, and such shaft is oscillated laterally by means of a

crank projection, I, at its upper end, placed in a clutch, L, formed on the rear edge of the reciprocating stirrup B. A vertical partition is formed on the front side of the rock-shaft J, which has the effect of dividing the tube H vertically into two chambers.

E is the base-plate of the seed-hopper, to the upper side of which is rigidly affixed the circular seed-plate seat F. A hole, K, in the latter two plates communicates with the upper end of the seed-tube H. The short post M extends upward from the plate F, and furnishes the pivot for the arms D D and seed-plate G.

T T are pawls having their respective stems pivotally attached in a vertical plane to radial pawl-arms D D, which latter are bent inwardly at right angles, and the inner ends thereof pivoted on the center post, M, under the seed-plate seat F, the latter being placed sufficiently above the base-plate E to permit the inner ends of the arms D D to oscillate horizontally between such plates E and F. The pawls T T are hinged, as aforesaid, so as to rise in receding over the spurs G' on the seed-plate G. The outer end of each arm D D is pivoted horizontally to the short posts O, formed on the upper side of the stirrup B, which connection is formed by means of a transverse horizontal slot, a, in the outer ends of the arms D, in which the posts O play, and which slots permit the outer ends of the arms D to move in an arc, as hereinafter explained. The pawls T T operate of course in opposite directions and at opposite sides of the seed-plate G. The latter is the usual annular seed-plate, pivoted on the central post, M, and having the spurs G' on its periphery and the annular series of seed-cups G''.

B is a horizontal stirrup reciprocated by the usual connecting-bar, attached to such stirrup at B'. The stirrup B is provided with the stops P, which engage the spurs G' when the seed-plate G has been sufficiently revolved for one action, and hold such plate until the next action.

S is the ordinary cut-off plate, placed over the seed-plate G in the bottom of the seed-hopper, and provided with the cut-off S'.

The purpose of my invention is to secure at each movement of the reciprocating stirrup B

a full action of the seed-plate G—that is, that the seed-plate shall be so far rotated at each of such actions that one of the seed-cups G" shall pass under the cut-off S' and discharge its contents through the hole K into the seed-tube H.

In former modes of rotating the seed-plate G the devices actuating the same moved in straight lines, while the periphery of such plate traversed a circle. This rendered it possible for the actuating device to slip past the end of the spur or lug on the seed-plate before the latter was sufficiently rotated, particularly after the ends of such lugs had been worn by the repeated passages of the actuating pawls or projections.

In my invention, by pivoting the fixed ends of the radial arms D, which carry the pawls T, on a center common with that of the seed-plate G, the free end of the pawl moves in the same circle with the spurs or lugs G' on the periphery of such seed-plate, and thus follow such spurs in their orbit to the limit of each action. There is therefore no possibility of such pawls failing in any instance to actuate the seed-plate to the full extent of their stroke.

The operation of my invention is obvious. At each action of the stirrup B the free end of one of the pawls T engages one of the spurs G' of the seed-plate G, and rotates the latter one-tenth of a revolution. On the reverse action of the stirrup B the opposite pawl engages the opposite side of such seed-plate with like effect, the first-named pawl being meanwhile withdrawn to its original position. Each of such actions passes one seed-cup filled with seed under the cut-off S', and discharges such seed through the hole K down one of the chambers of the tube H upon the shelf H'. Each action of the stirrup B gives an oscillation to the rock-shaft J, and the latter at each oscillation, by means of its vertical partition aforesaid, presents a new chamber under the hole K, and

sweeps from the shelf H' the seed deposited thereon at the next previous drop. The diameter of the hole K is equal to the width of two of the seed-cups G", so that if the first jar should fail to dislodge the seed from the latter a second action will secure such discharge.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. In a corn-planter, the alternately-acting pawls T T, borne, respectively, on radial arms D D, the inner ends of which latter are pivoted to a center common to that of the rotating seed-plate G, substantially as shown, and for the purpose described.

2. In a corn-planter, the pawls T T, having the movement of their outer or engaging ends in an arc, in combination with the seed-plate G, having the spurs G', substantially as shown, and for the purpose mentioned.

3. In a corn-planter, pawls T T, borne on radial arms D D, pivoted at the center of motion of the seed-plate G, in combination with such seed-plate, substantially as shown, and for the purpose specified.

4. The combination, in a corn-planter, of the pawls T T, radial arms D D, stirrup B, and seed-plate G, substantially as shown, and for the purpose described.

5. The combination of the alternately-acting pawls T T, having a pivoted connection on the center post, M, seed-plate G, pivoted on such post, stirrup B, post M, tube H, rock-shaft J, and cut-off S', substantially as shown, and for the purpose herein named.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. JOHNSON.

Witnesses:

B. HUBBARD,
WALTER STAGER.