

No. 723,960.

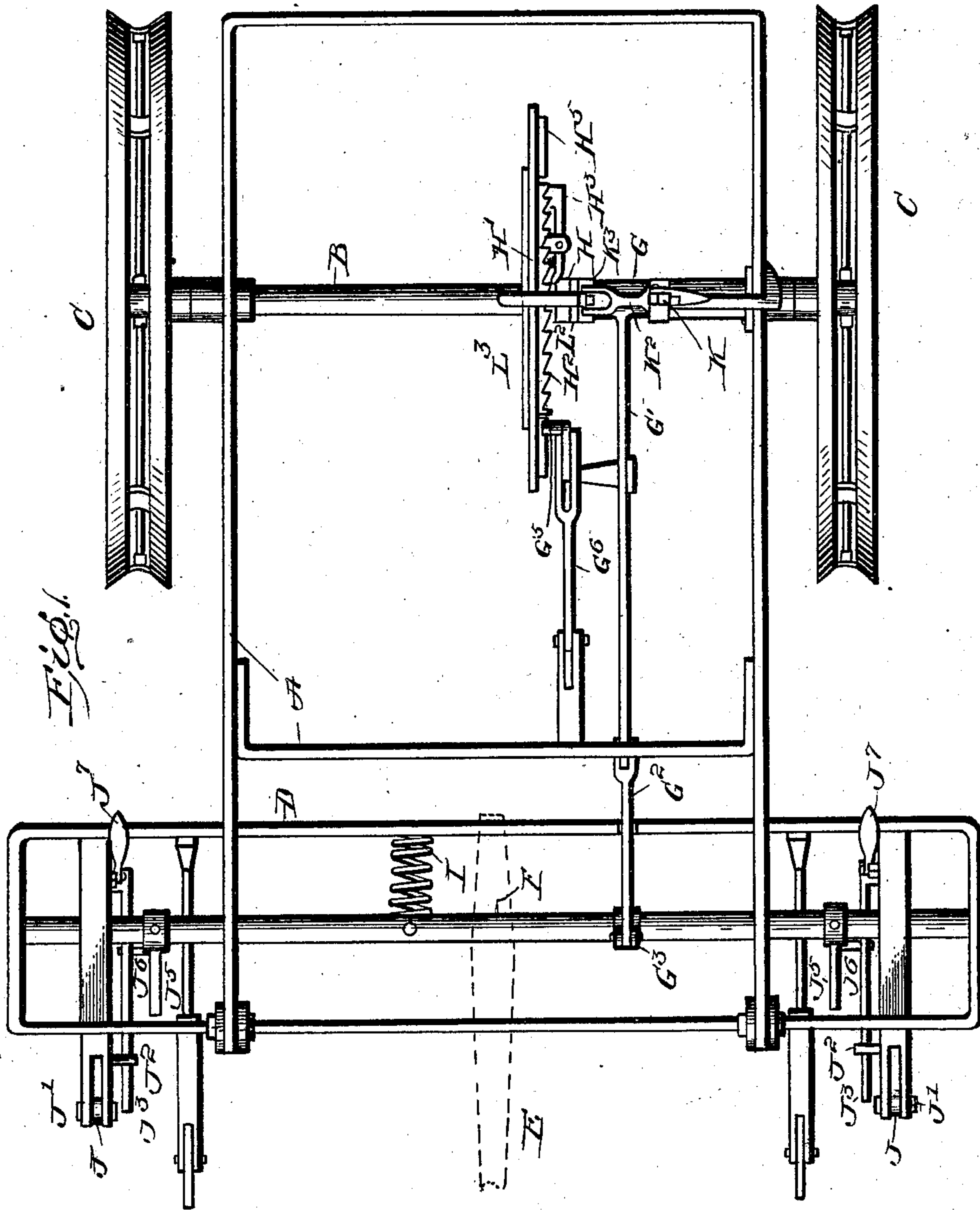
PATENTED MAR. 31, 1903.

J. W. WHITE.
CORN PLANTER.

APPLICATION FILED JULY 12, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:

J. M. Fowler Jr.
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Inventor

Joseph W. White
by Wallace Crane,
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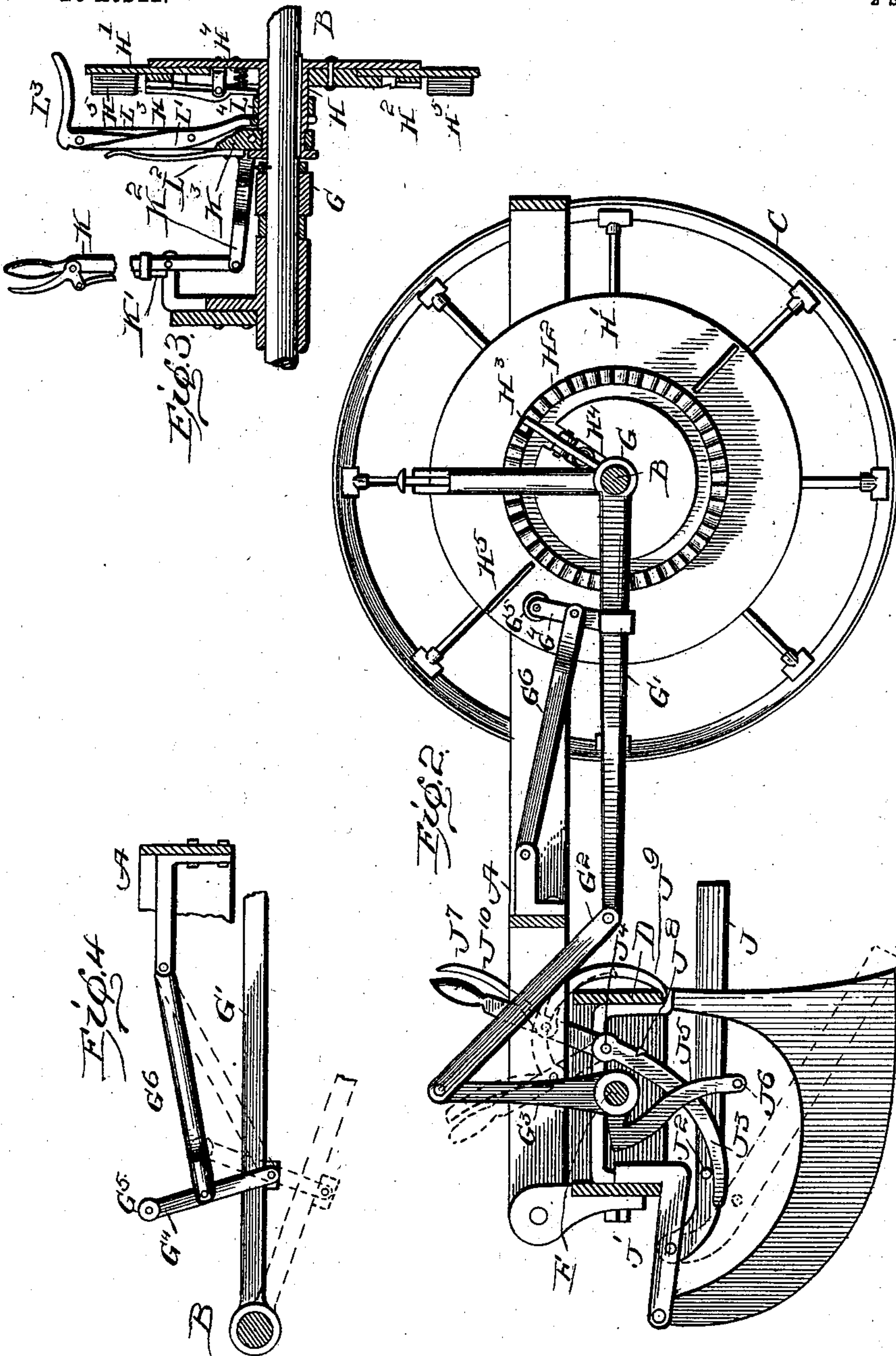
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J. M. Fowler
H. C. Loderer.

Inventor
Joseph W. White
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UNITED STATES PATENT OFFICE.

JOSEPH W. WHITE, OF BRIGHTON, IOWA.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 723,960, dated March 31, 1903.

Application filed July 12, 1902. Serial No. 115,286. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH W. WHITE, a citizen of the United States, residing at Brighton, in the county of Washington and State of Iowa, 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.

My invention relates to corn-planters which employ no check-row wire, yet plant the seed in rows transverse to the line of the planter's advance; and the general object is to provide a simple machine which may be readily made to accurately perform this work. To this end I provide dropping devices normally actuated automatically from the planter-wheels, hill-marking devices normally actuated synchronously with the dropping devices, means whereby both sets of devices may be thrown into and out of operation at will, means whereby the marker may be independently locked out of operative position, means whereby by both sets of devices may be delayed in operation at any time while the advance of the machine continues, and means whereby backing the planter has no effect upon either set of devices.

In the accompanying drawings, Figure 1 is a plan view of a planter involving my improvements, the dropping devices and parts not essential to an understanding of this invention being omitted. Fig. 2 is a side elevation of the machine, parts being broken away. Fig. 3 shows a portion of the mechanism looking from the rear of the machine. Fig. 4 is a detail view looking from the right side of the machine.

In the figures, A represents the main or wheel frame of a planter; B, an axle; C, the frame-supporting wheels, one only of which is fixed to the axle, and D a supplemental or runner frame hinged to the front side of the frame A and bearing the dropping and check-row devices. A guiding pole or tongue E is secured to the supplemental frame, and the latter also carries the ordinary rocking shaft F, which actuates the dropping devices. (Not shown.) Upon the axle is mounted a loose sleeve G, from which projects an arm G', and the end of this arm is connected by a link G² to the outer

end of an arm G³, fixed to the rock-shaft F. On the side of the arm G' is pivoted an upwardly-extending bar G⁴, which bears at its free end a roller G⁵ and has its middle portion connected to the frame A by a link G⁶. Upon the axle adjacent to the sleeve G is splined a sliding sleeve H, and upon this is revolubly mounted a disk H', bearing on one side an annular ratchet H², which is engaged by a pawl H³, supported from the sleeve H and normally held in engagement by a spring H⁴. The form of the ratchet and pawl is such that when the axle rotates forwardly, as when the planter advances, the pawl compels the disk to rotate with it; but when contrary rotation occurs the pawl slips over the ratchet-teeth. These devices, as will be seen, constitute a peculiar automatically-engaging clutch. The disk bears diametrically opposite lateral lugs H⁵, so located that as the disk rotates they strike in succession against the roller G⁵ and compel it to move onward with them. The arm G' is thus swung about the axle, and in so swinging it pulls the arm G³ rearwardly, rocking the dropper-shaft F. The roller G⁵ is normally at the same distance as the lug from the axle; but as it is pushed onward by the lug it is also drawn forward by the link G⁶, whose end swings in the arc of a circle about its pivotal support upon the frame A, and thus it passes out of the lug's path when the shaft F has been rocked through a small angle, and the shaft F, arm G', and roller are instantly returned to normal position by a spring I, acting upon the shaft. When, as shown, there are two diametrically opposite lugs upon the disk, the shaft F will obviously be thus rocked at each half-revolution of the planter-wheel; but I do not limit myself to two lugs, the number evidently depending upon the number of actions desired during one rotation of the wheel.

Near each end of the frame D is placed an indicator device or marker, which normally trails upon the ground, but is lifted momentarily by the rocking movement of the shaft F, already described and which may at will be locked in raised position, for example, when the dropping devices are thrown out of operative connection with the axle. The indicator mechanism involves a trailing marker J, pivoted at J' and having a laterally-pro-

jecting lug or roller J². A curved arm J³ is pivoted at J⁴ to swing upward, engage the roller, and lift the marker. The shaft F is provided with a rigid arm J⁵, also provided with a lateral lug or roller J⁶ in position to lift the arm J³ whenever the shaft is rocked rearwardly, as above described, and thus the marker is raised from the ground at the moment when seed is dropped, so that alongside the planted hill there is a break in the otherwise continuous mark. I have found that this indication is more certain and unmistakable on all kinds of ground than an ordinary imprint made or supposed to be made alongside the hill. There is also provided a hand-lever J⁷, having a lateral lug or roller J⁸ to engage and lift the arm J³ and the marker, and also a gravity-actuated pivoted hook J⁹ to engage the frame D automatically when the hand-lever raises the arm, and thus lock the marker in raised position. The hook is released by pressure upon its upper arm J¹⁰, which lies alongside the handle of the hand-lever. When the hand-lever is not in use, it is swung toward the front of the machine, where it is securely held by its own weight.

When the dropping devices are to be disconnected from the axle, the sleeve H is moved along the axle until the lugs H⁵ are without the vertical plane of the roller G⁵. This is done by means of an ordinary quadrant-lever K, pivoted to the frame A and having the usual locking-pawl K'. The lower end of this lever is connected by a link K² with a collar K³, in which the sleeve rotates without sliding. From the collar projects a rigid arm L, in which is centrally pivoted a forked lever L', resting, saddle-like, upon the sleeve and normally held against movement upon its pivot by a spring L². A bent foot-lever L³ is pivoted to the outer end of the arm L in such manner that when one lever-arm is pressed by the foot the other acts upon the upper end of the forked lever, overcoming the pressure of the spring L² and forcing the lower end of the forked lever toward the disk H'. Between this lower end and the inner arm or end of the pawl H³ is a loose collar L⁴, which the lever pushes along the sleeve H against the pawl, thereby releasing the latter and leaving the disk free upon the sleeve.

It is well-understood that inequalities of the ground prevent the planter from invariably advancing for each revolution of the wheel through a distance fully equal to the wheel's circumference, and hence that it will be found from time to time that dropping should be delayed until the advance of the planter has made up such loss. This might be accomplished by the hand-lever throwing the disk bodily to one side of the roller upon which its lugs act; but as accurate alinement requires frequent and slight delays (merely retarding the dropping for an instant) this is not satisfactory. The proper alinement cannot thus

be made without stopping the machine. With the ratchet-disk and spring-pawl devices, however, any desired correction may be made, for when one of the lugs meets the roller a slight pressure of the foot will cause the pawl to release the disk while one tooth or a hundred teeth pass, and the instant pressure ceases the lug again begins to advance. Thus without special skill and without interfering with the advance of the planter at any time perfect alinement may be secured.

It is obvious that the construction set forth need not be exactly followed, and I do not, therefore, wish to limit myself to such construction.

What I claim is—

1. In a corn-planter, the combination with the frame, its wheels and a member adapted to actuate dropping devices by its movement, of a marker normally resting upon the ground, and means whereby said marker is lifted from the ground simultaneously with the actuation of the dropping devices.

2. The combination with a planter-frame, its supporting-wheels, and dropping devices normally actuated from said wheels at predetermined intervals, of means operable during any such interval to increase that interval, and independent means for at will disconnecting said devices from the wheels.

3. The combination with a frame, supporting-wheels, a rotating axle, and dropper-actuating devices, of a member normally rotating with the axle in position to actuate said devices, means for at will sliding said member along the axle out of its operating plane, and independent means for at will disengaging it from the axle.

4. The combination with a frame, supporting-wheels, a rotating axle, and dropper-actuating devices, of a member normally rotating with the axle in position to actuate said devices, means for at will throwing said member out of action, independent means for at will disengaging it from the axle, and a spring arranged to instantly restore such engagement when the disengaging force ceases.

5. The combination with a corn-planter of a marker arranged to trail in close proximity to the dropping devices, means whereby said marker is temporarily raised when the seed is dropped, and means whereby the marker may at will be raised and locked in raised position.

6. The combination with a frame, supporting-wheels, a rotating axle, and dropper-actuating devices, a member normally rotating with the axle in position to operate said devices, means for at will retarding the operating effect of said member, and means for at will throwing said member out of operative position.

7. The combination with a frame, supporting-wheels, a rotating axle, and a dropper, of a lug-bearing member revolubly mounted upon the axle and provided with an annular

ratchet concentric therewith, a pawl moving with the axle and adapted to engage said ratchet during forward movement and to slip upon the same during reverse movement, a spring tending to hold the pawl in engagement, means whereby the operator may hold the pawl out of engagement, and dropper-actuating devices in the normal path of the lugs.

10 8. The combination with the planter-frame, wheels, and axle driven by one of the wheels, of the supplemental dropper-frame hinged to the main frame, the dropper-actuating rock-shaft having the rigid arm, the arm pivoted
15 upon the axle and carrying the roller-bearing, pivoted bar, the link connecting said arms, the link connecting said bar to the frame, and a member rotating with the axle and adapted to strike the roller upon said

bar at intervals and thereby swing the arm 20 pivoted upon the axle.

9. The combination with the planter-frame, wheels, and axle driven by one of the wheels, of the lug-bearing disk revoluble about the axle and having the annular ratchet upon one 25 face, the pawl moving with the axle and normally engaging said ratchet and compelling the disk to rotate with the axle, means for at will disengaging the pawl leaving the disk free, and dropper-actuating devices in the 30 normal path of the lugs upon the disk.

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

JOSEPH W. WHITE.

Witnesses:

A. HOLOPETER,
J. W. GRIFFITH.