

(No Model.)

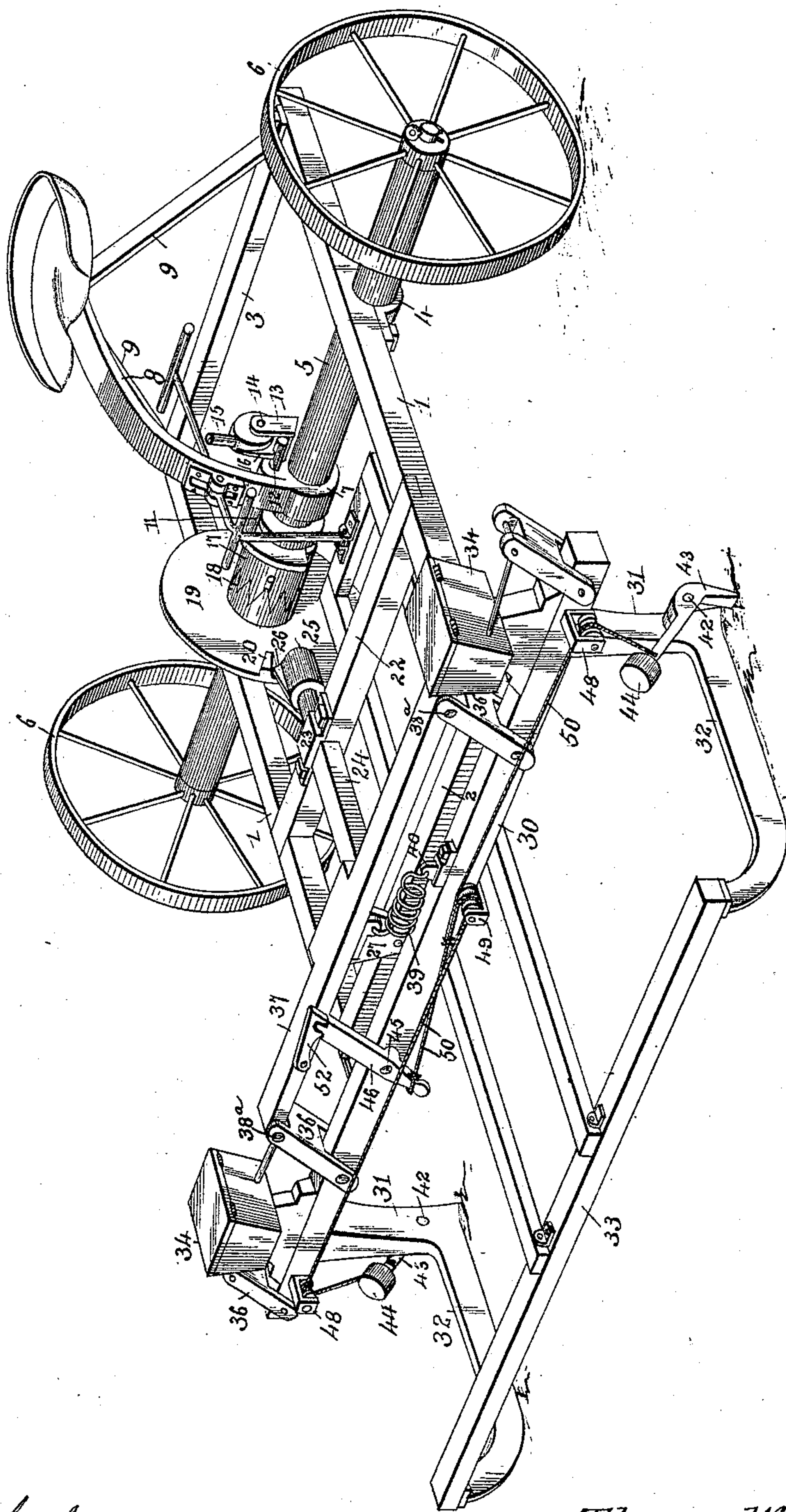
2 Sheets—Sheet 1.

T. W. OVERLIN.
CORN PLANTER.

No. 485,560.

Patented Nov. 1, 1892.

FIG. 1.



Witnesses

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J. B. Diggers.

Inventor

Thomas W. Overlin

By his Attorneys,

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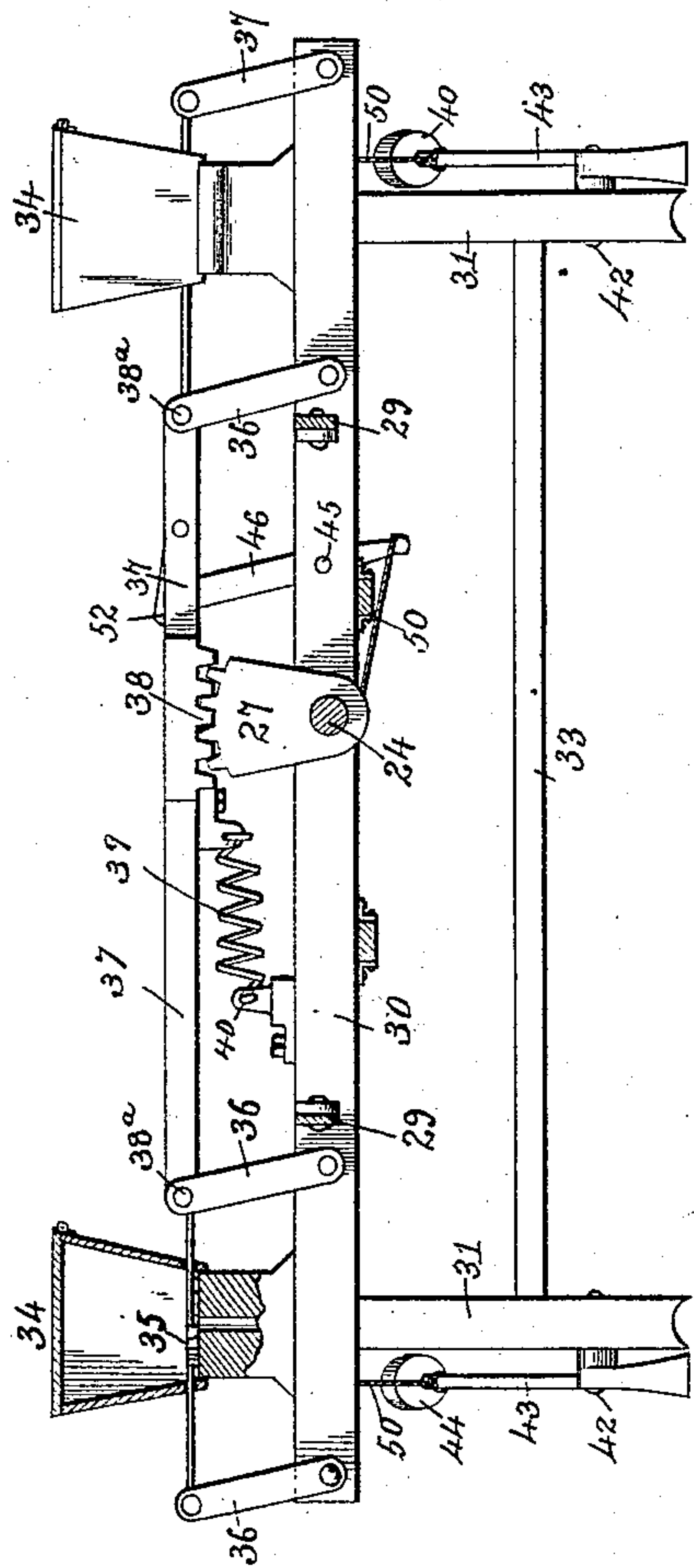
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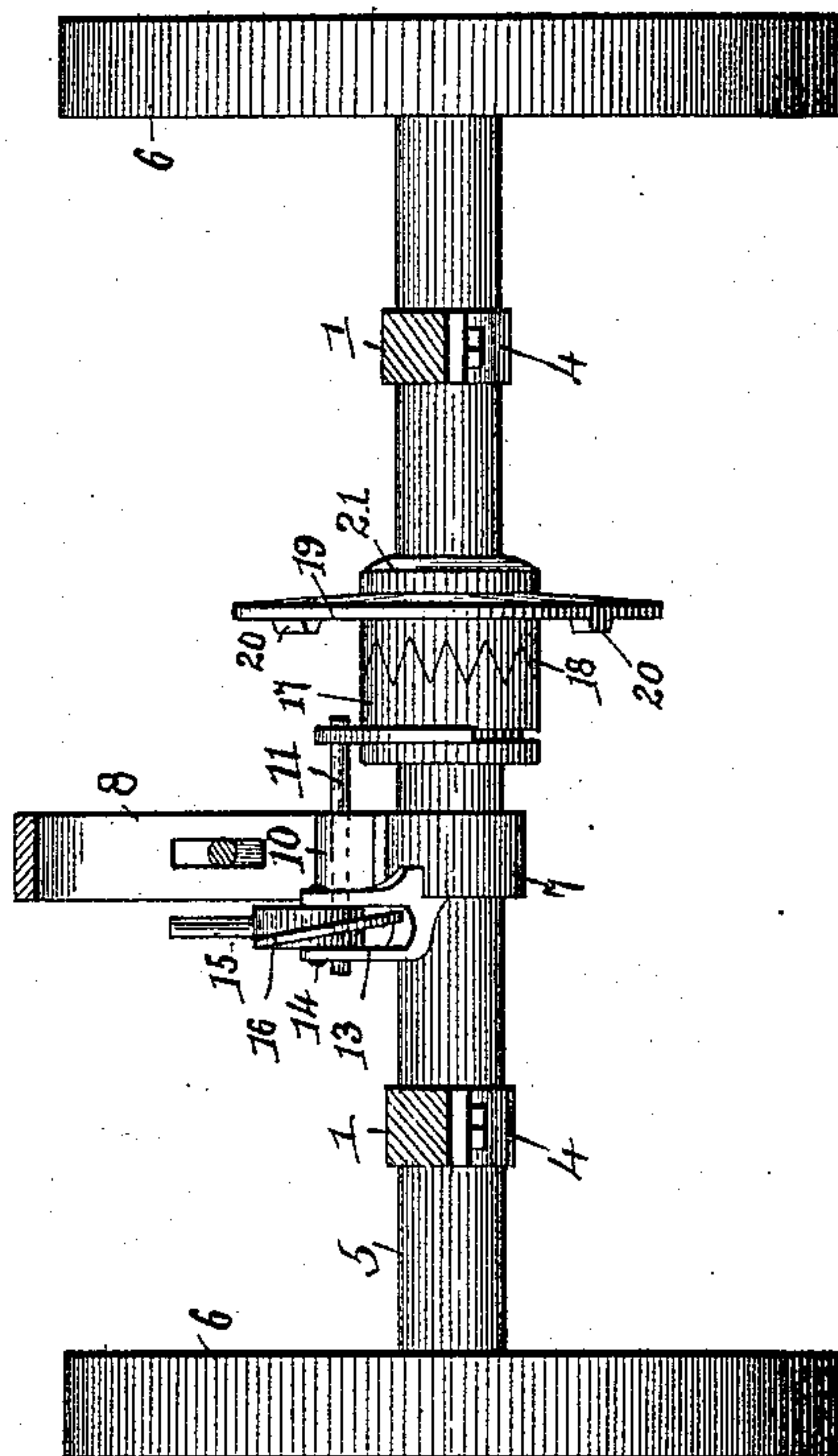


FIG. 4.

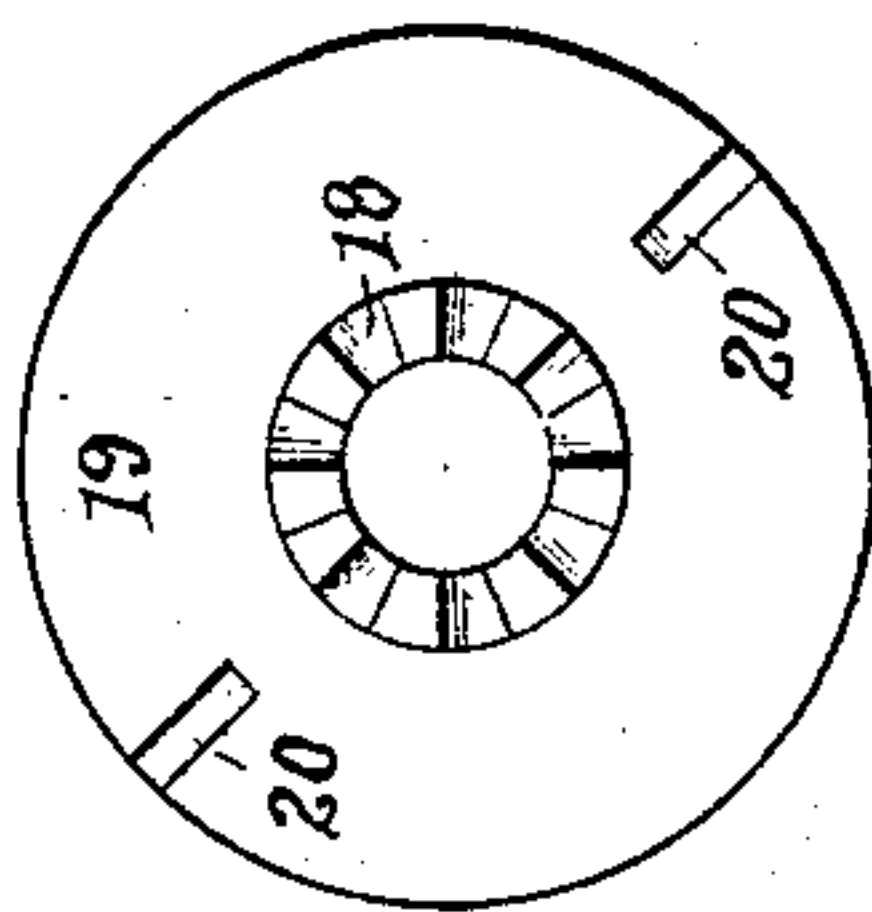
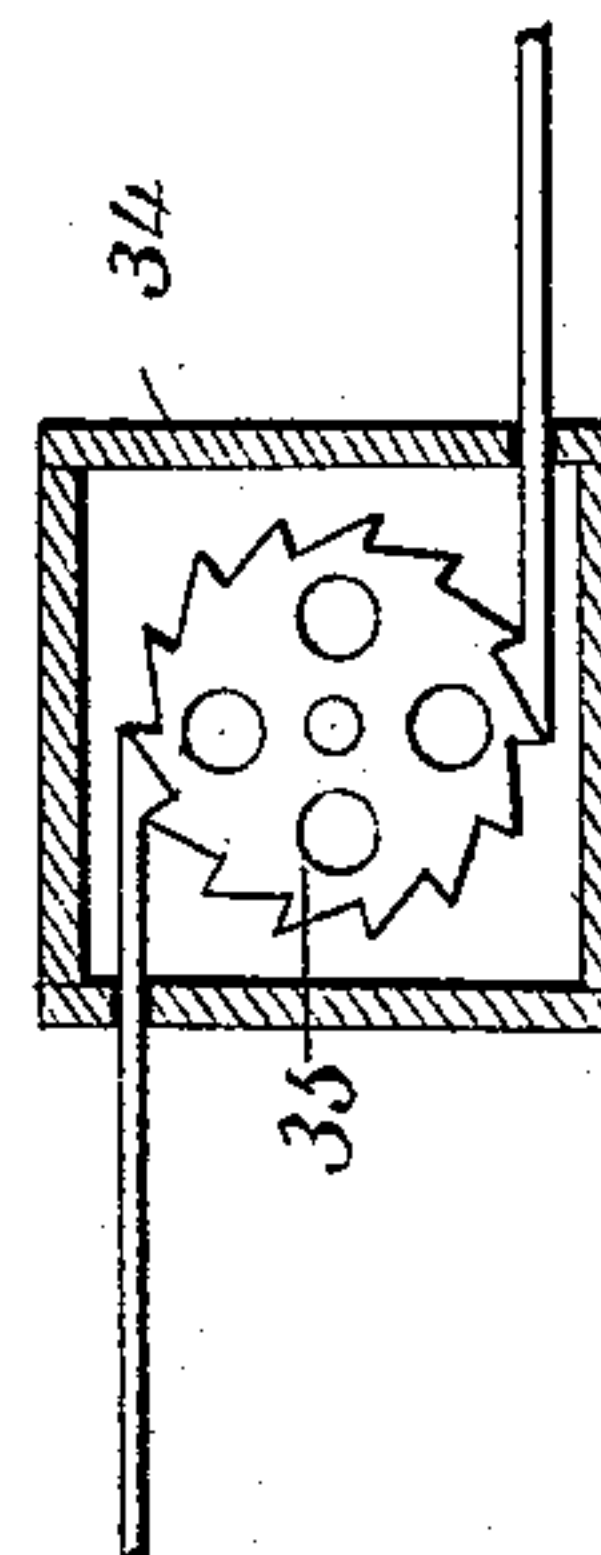


FIG. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS W. OVERLIN, OF BENJAMIN, MISSOURI.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 485,560, dated November 1, 1892.

Application filed April 22, 1892. Serial No. 430,238. (No model.)

To all whom it may concern:

Be it known that I, THOMAS W. OVERLIN, a citizen of the United States, residing at Benjamin, in the county of Lewis and State of Missouri, have invented a new and useful Corn-Planter, of which the following is a specification.

My invention relates to improvements in corn-planters; and the objects in view, together with the novel features thereof, will hereinafter appear, and be particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective of a corn-planter embodying my invention. Fig. 2 is a transverse section thereof in rear of the hoppers. Fig. 3 is a similar view in rear of the axle. Fig. 4 is a detail in elevation of the trip-disk. Fig. 5 is a detail of the seed-disk, hopper, and pawls.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates the opposite side bars, and 2 and 3 the front and rear transverse connecting-bars, composing the rear frame of the machine. The side bars 1 are provided upon their under sides with bearings 4, and in the same is journaled the transverse axle 5, provided at its ends with ground-wheels 6.

Upon the center of the axle a bearing-sleeve 7 is loosely mounted, and from the same there rises a rearwardly-curved seat-standard 8, the end of which is above the rear cross-bar 3 of the framework and is supported by inclined braces 9. A transversely-perforated lug 10 is also formed upon the sleeve 7 and receives a longitudinally-reciprocal pin or bolt 11, having a notch 12 formed in its side near one end. A bracket 13, of substantially U shape, is formed upon the sleeve 7 and is provided with opposite bearings to receive a transverse pin 14. Upon this bearing-pin there is pivoted a lever 15, provided with a spiral flange 16, which engages the recess or notch 12, formed in the pin or bolt. By reason of the spiral formation or disposition given the flange of the lever vibrations of the latter will cause a reciprocation of the pin or bolt 11 in the bearing-lugs 10, as will be obvious. One end of the bearing bolt or pin 11 is connected with a clutch-sleeve 17, and the same is designed to be thrown into and out of engagement with teeth 18, formed on the face

of disk 19, the latter also being provided at diametrically-opposite points with trip-lugs 20. The disk is loose upon the shaft and is supported in position by a collar or flange 21, formed upon the shaft. By reciprocating the pin or bolt in the manner before described—that is, through the medium of the lever 15—the clutch-sleeve 17 may be thrown into engagement with the teeth of the disk, so that motion will be communicated from the shaft through the clutch-sleeve and to the disk, the latter becoming thus locked upon the shaft and partaking of its rotation.

The bars 1 of the rear frame are connected between the cross-bar 2 and the axle with a cross-bar 22, bearings 23 being formed on the two bars. These bearings accommodate an oscillating or rocking shaft 24, longitudinally disposed and at its ends extending beyond the bearings. The rear end of the shaft 24 is provided with a head 25, and the same has formed at one side a beveled lug 26, arranged in the path of the lug 20 of the disk 19. The front end of the shaft is likewise provided with a toothed segmental head 27, adapted to rock with the shaft as the latter is operated by the lugs of the disk coming in contact therewith.

To the front end of the rear framework eyes 29 are connected, and the same coincide with similar eyes extending from the rear cross-bar 30 of the front or hopper-carrying frame. In this manner the two frames are loosely connected. From the cross-bar 30 depend furrow-openers and seed-tubes 31, and from the same extend forwardly the usual runners 32, connected by a cross-bar 33. Hoppers 34 are supported opposite each of the seed-tubes upon the cross-bar 30 and may be provided with rotary seed-disks 35. Yokes 36 have their lower ends pivoted to the bar 30 at the inner side of each of the aforesaid hoppers, and the upper ends of these yokes are connected by a reciprocating bar 37, the connections being pivoted and made by means of bolts 38^a, as shown. The bar 37 is provided at one side of its center with a series of teeth 38, which teeth are directly above and engage with the teeth of the segment 27. A coiled spring 39 is connected to the bar at its under side and adjacent to its teeth and also to a lug 40 upon the rear bar 30 of the

front frame, so that as the bar 37 is moved in one direction through the influence of the toothed segmental head as oscillated by the shaft 24 the said bar, head, and shaft are re-
 5 tracted through the medium of the aforesaid spring 39, and thus after each stroke upon the lug 26 by means of one of the lugs 20 of the disk 19 the said shaft is returned and the lug 26 again thrown into position to receive
 10 a subsequent stroke from the next succeeding lug of the disk.

To each of the seed-tubes there is fulcrumed by a pin 42 a marking-lever 43, each of these levers terminating at its rear in mark-
 15 ing ends and provided at its front end with weights 44, whereby they are in a measure balanced or given the desired weight.

Pivoted, as at 45, to the front side of the bar 30 is a lever 46, adapted to oscillate, and
 20 near the ends of the bar 30 pulley-carrying brackets 48 are located, a similar bracket 49 being located between one of these end brackets and the lever 46. Flexible cords 50 lead from each of the marking-levers (that is, from
 25 the front ends thereof) and are passed over the pulleys 48, one of said cords being passed under the pulley 49 and over the same and connected to the remaining cord. From here on the cords lead to and are connected with
 30 the lower end of the lever 46, so that, as will be obvious, any vibrations of the lever 46 will be communicated to the marking-levers. Such vibrations are caused by means of a connection between the bar 37 and lever 46, and the
 35 connection in this instance consists of a lever 52, pivoted at one end to the bar 37 and having its remaining or free end loosely engaging the upper end of the bar 46. The bar 46, it will be understood, operates at each recip-
 40 rocation the seed-disk of one of the hoppers, and simultaneous with such operation and the consequent dropping of a kernel of corn the markers are operated, and so indicate the point at which the kernel is dropped. The
 45 remainder of the operation (that is, the operation of the runners and seed-tubes) constitutes no part of my invention, and hence need not be particularized. It is only necessary to employ the marking-levers the first four or
 50 five hills of each row, and after this has been done the lever 52 may be elevated by the toe of the boot of the operator, and thus being disengaged from the upper end of the lever 46 the marking-levers will become inoperative
 55 and need not be made operative until the beginning of the next row. In turning the machine to begin the new row the lever 15 is operated so as to ungear the planting mechanism and the discharge of seed is arrested.

60 Having described my invention, what I claim is—

1. In a corn-planter, the combination, with the framework, the opposite hoppers, and the intermediate reciprocating bar for operating
 65 the seed-disks of the hoppers and provided with teeth, of the axle carrying ground-wheels,

the rock-shaft arranged at right angles to the axle and carrying at its front end a segment to engage the teeth upon the reciprocating bar and at its rear end a head provided with a
 70 lug, a spring connected to the reciprocating bar to return it after each lateral movement, the disk loosely mounted upon the axle and having lateral lugs to successively engage the
 75 lug upon the head of the rock-shaft, and clutch mechanism to lock the disk to the axle, substantially as specified.

2. In a corn-planter, the combination, with the framework, the opposite hoppers, the in-
 80 termediate reciprocating bar for operating the disks of the hoppers and provided with teeth, and a spring for drawing the bar in one direction, of an axle, a disk mounted thereon and provided with lugs and teeth, a toothed
 85 clutch-sleeve mounted on the axle, a bearing-sleeve mounted loosely on the axle inside of the clutch-sleeve and provided with a perforated lug, a reciprocating pin mounted with the lug and connected with the clutch-sleeve
 90 and having a notch, bearings located in rear of the lug, a lever fulcrumed between the bearings and provided with a spiral flange engaging the notch of the pin, an interme-
 95 diate rock-shaft terminating at its rear end in a trip-lug arranged in the path of the lugs on the disk, and a toothed segment located on the front end of the rock-shaft and en-
 100 gaging the teeth of the reciprocating bar, substantially as specified.

3. In a corn-planter, the combination, with
 100 the framework, the dropping mechanism, the axle, a loose disk thereon provided with teeth, and means for communicating motion from the disk to the planting or dropping mechanism, of the collar loosely mounted on the
 105 axle, a clutch-sleeve at one side of the collar, a perforated lug on the collar, a pin mounted in the lug and engaging the clutch-sleeve and provided with a notch, bearing-lugs in rear
 110 of the pin formed upon the collar, a spirally-flanged lever pivoted in the bearing-lugs and engaging the notch of the pin, and an upwardly and rearwardly disposed seat-supporting standard projecting over the rear end of
 115 the framework and oppositely-inclined braces between the free end of the standard and the frame-work, substantially as specified.

4. In a corn-planter, the combination, with the hopper-carrying frame and rear hinged
 120 frame, the opposite hoppers, and the axle mounted upon said rear frame and provided with ground-wheels, of a laterally-reciprocatory seed-disk-operating bar arranged between said hoppers, the links mounted upon
 125 the frame and connected to said bar, a longitudinal rock-shaft carrying at its front end a segment engaging teeth upon said bar and provided at its rear end with a lateral lug, the disk mounted upon and rotatable with the
 130 axle and provided with lugs to engage successively the lug upon the rock-shaft to move the seed-bar laterally at intervals, and a

spring connected to said bar to return it to its normal position after each lateral movement, substantially as specified.

5 In a corn-planter, the combination, with the supporting-framework, the opposite hoppers, and the depending seed-tubes, of a reciprocating seed-disk-operating bar, means for reciprocating said bar, the weighted marking-arms pivotally connected to the frame, 10 and cords traveling over guide-pulleys and connecting said marking-arms to the seed-bar, substantially as specified.

6. In a corn-planter, the combination, with the seed-tubes and the framework supported 15 thereby, of the centrally-located lever fulcrumed on the framework, means for vibrating the same, pulleys, cords passing over the pulleys, and marking-levers fulcrumed at the sides of the tubes and in front of their pivots 20 connected to the cords, substantially as specified.

7. In a corn-planter, the combination, with the seed-tubes, the opposite L-shaped pivoted marking-levers at the side of each tube, the 25 hoppers, seed-slides, and mechanism for operating the same, of devices between the slide-operating mechanism and the pivoted markers for operating the slides and simultaneously vibrating the markers, substantially as 30 specified.

8. In a corn-planter, the combination, with the framework, the seed-tubes, the opposite hoppers, and the intermediate reciprocating 35 bar for operating the disks of the hoppers, of a lever pivoted on the framework, pulleys located at the opposite ends of the framework

and at one side of the lever, cords leading from the outer ends of the framework over the outer pulleys and one being passed under the intermediate pulley, beyond which the 40 cords are connected with the lever, a lever pivoted to the reciprocating bar and connected to the upper end of the oscillating lever for oscillating the cords, and marking-levers pivoted to the seed-tubes and having their outer 45 ends connected with cords, substantially as specified.

9. In a corn-planter, the combination, with the framework, the seed-tubes, the opposite hoppers, and the intermediate reciprocating 50 bar for operating the disks of the hoppers, of a lever pivoted on the framework, pulleys located at the opposite ends of the framework and at one side of the lever, cords leading from the outer ends of the framework over the outer 55 pulleys and one being passed under the intermediate pulley, beyond which the cords are connected with the lever, a lever pivoted to the reciprocating bar and removably connected to the upper end of the oscillating lever 60 for oscillating the cords, and marking-levers pivoted to the seed-tubes and having their outer ends connected with cords, substantially as specified.

In testimony that I claim the foregoing as 65 my own I have hereto affixed my signature in the presence of two witnesses.

THOMAS W. OVERLIN.

Witnesses:

JAMES W. ALDERTON,
S. ORR GAILEY.