

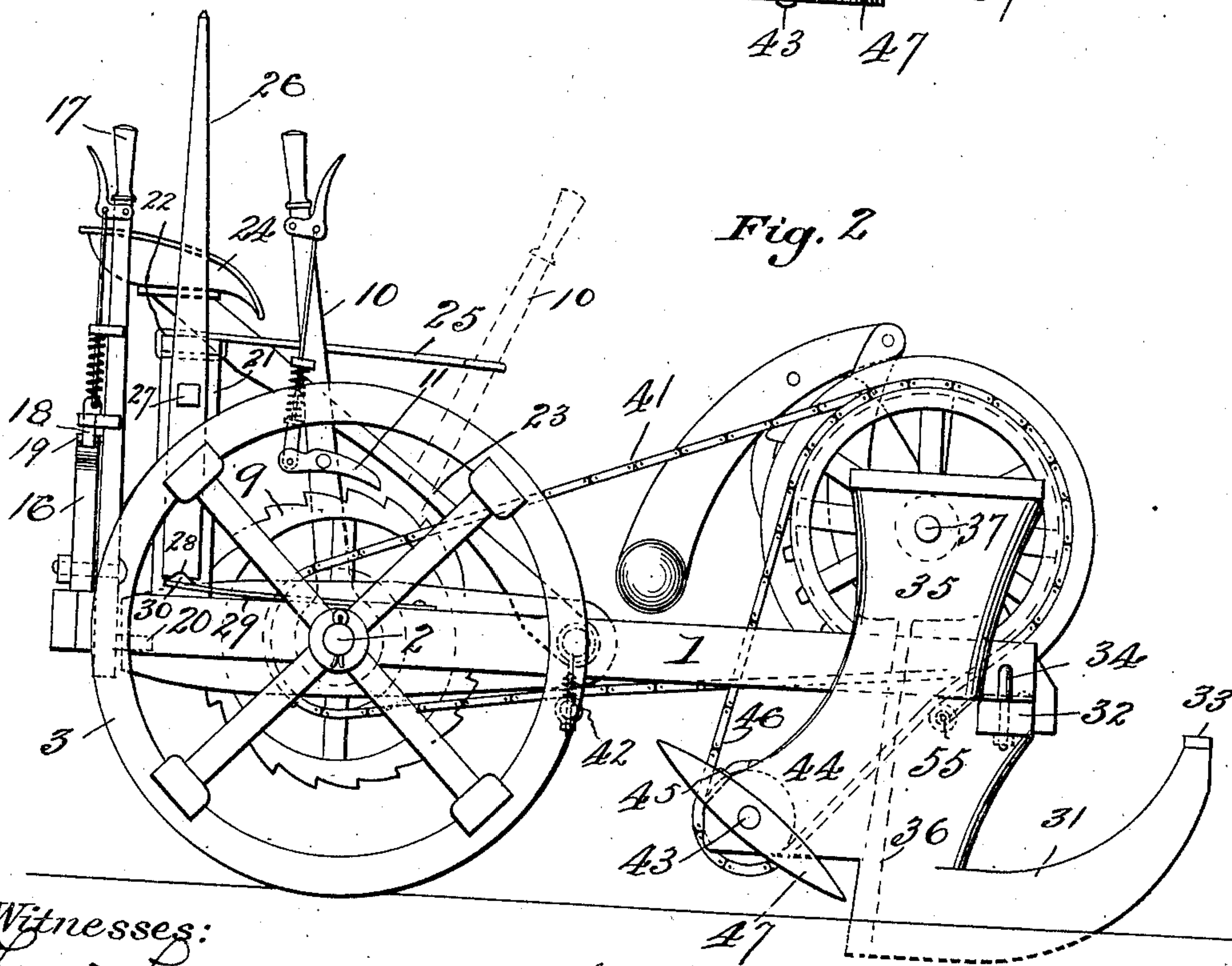
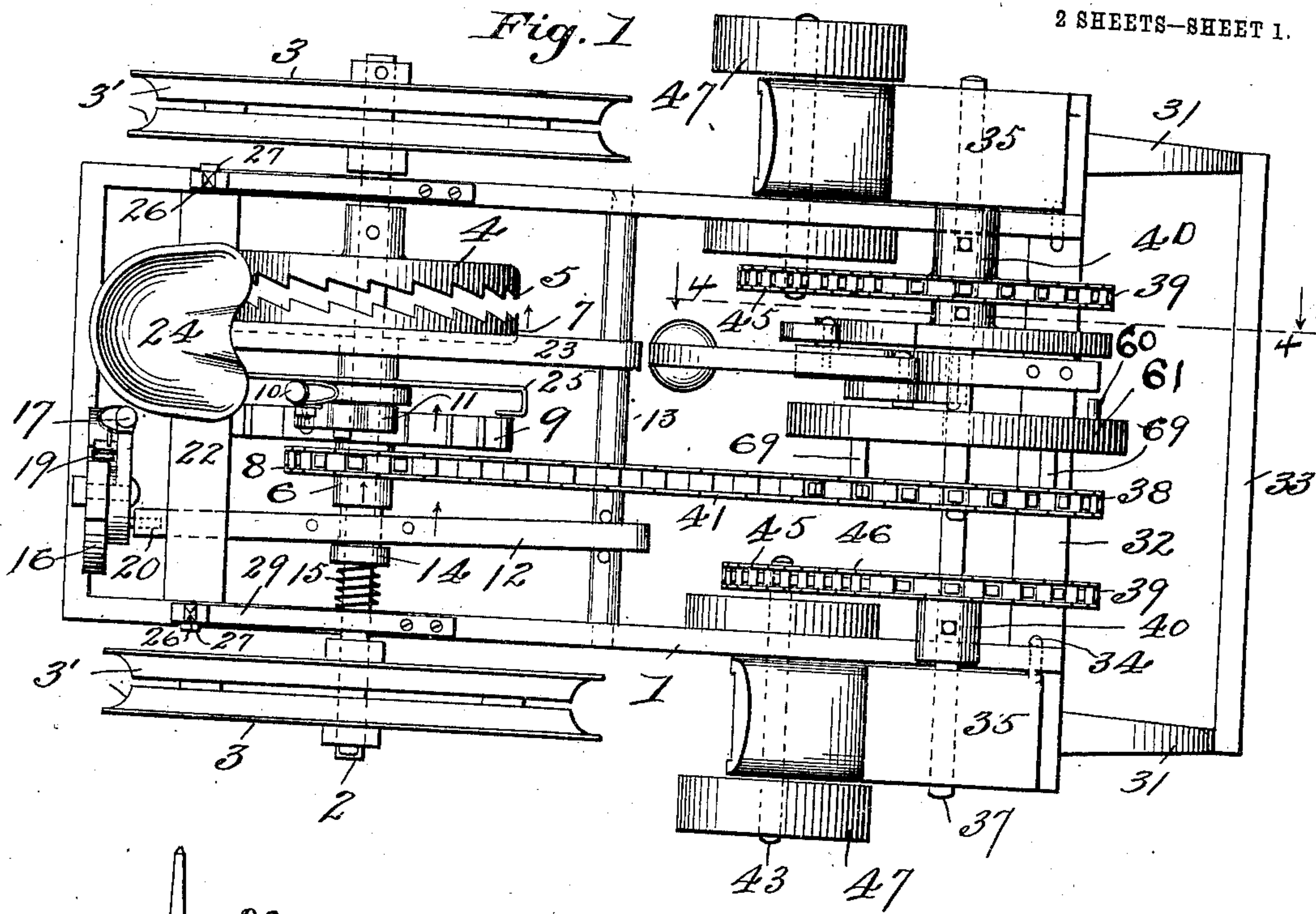
No. 830,517.

PATENTED SEPT. 11, 1906.

L. H. McCORMAC.
CORN PLANTER.

APPLICATION FILED JUNE 10, 1905.

2 SHEETS—SHEET 1.



Witnesses:
Louis Ramey
Leiman Rantz

Labayette H Inventor:
McLormac

No. 830,517.

PATENTED SEPT. 11, 1906.

L. H. McCORMAC.

CORN PLANTER.

APPLICATION FILED JUNE 10, 1905.

2 SHEETS—SHEET 2.

Fig. 3.

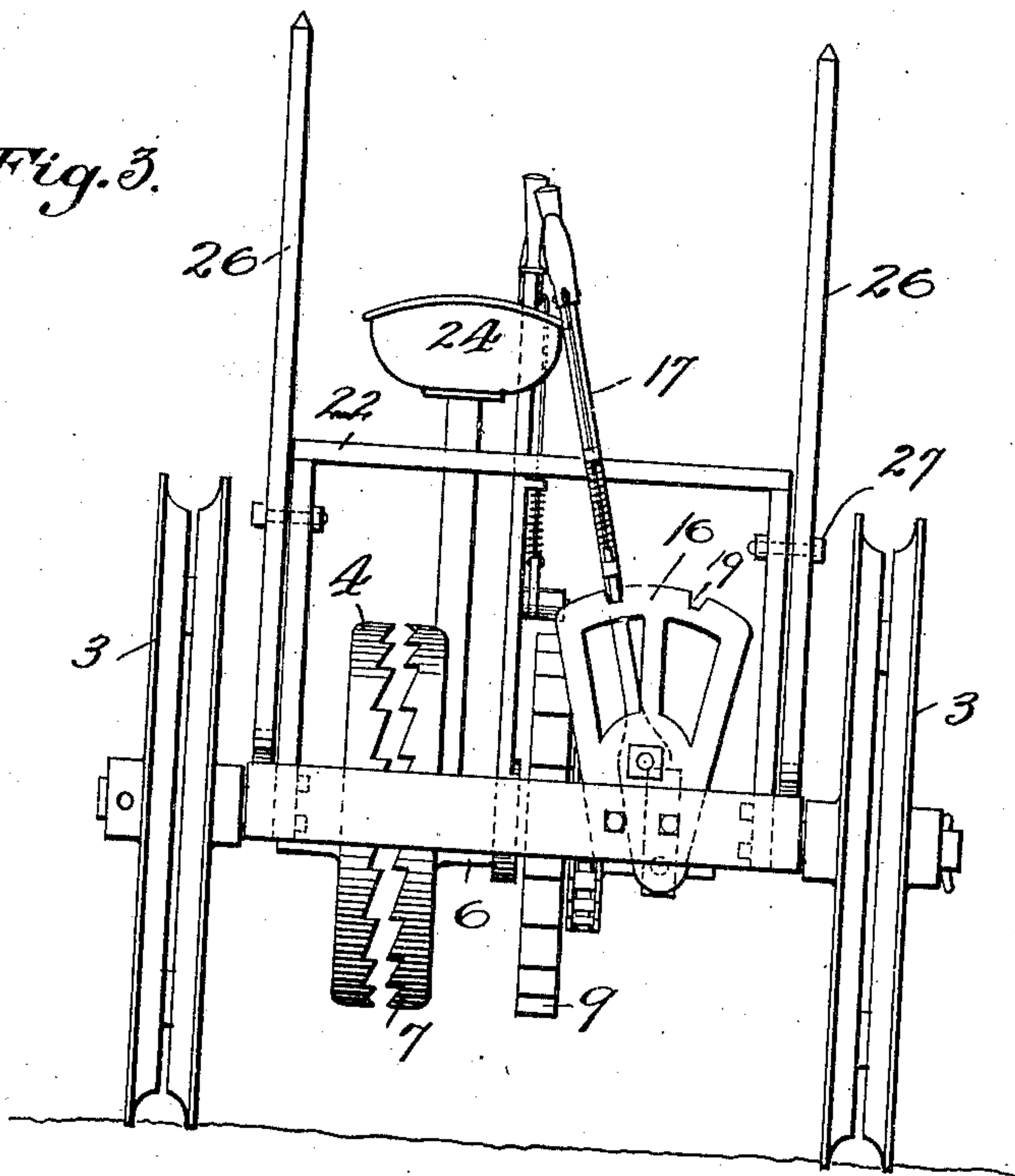


Fig. 4.

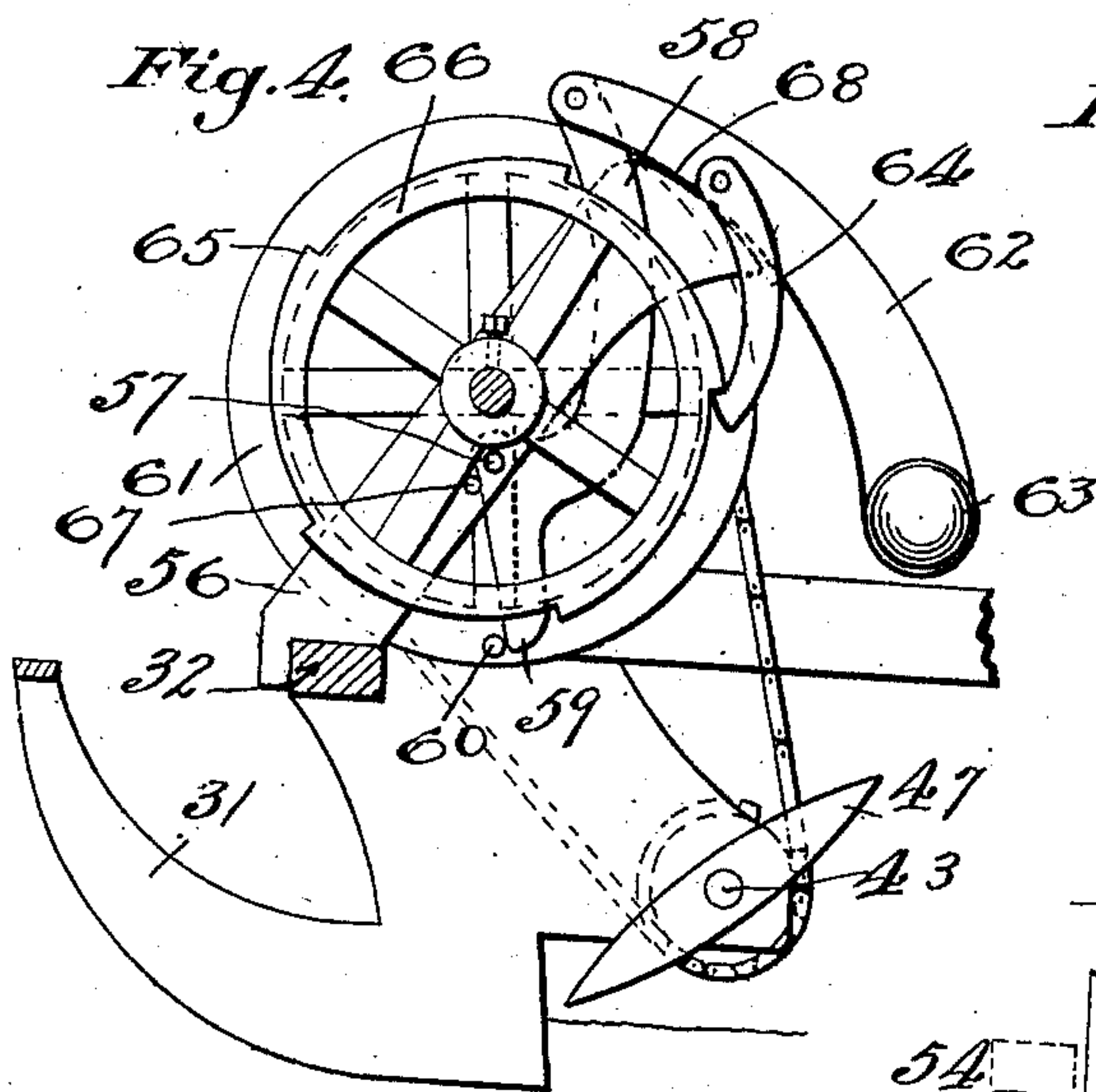


Fig. 5.

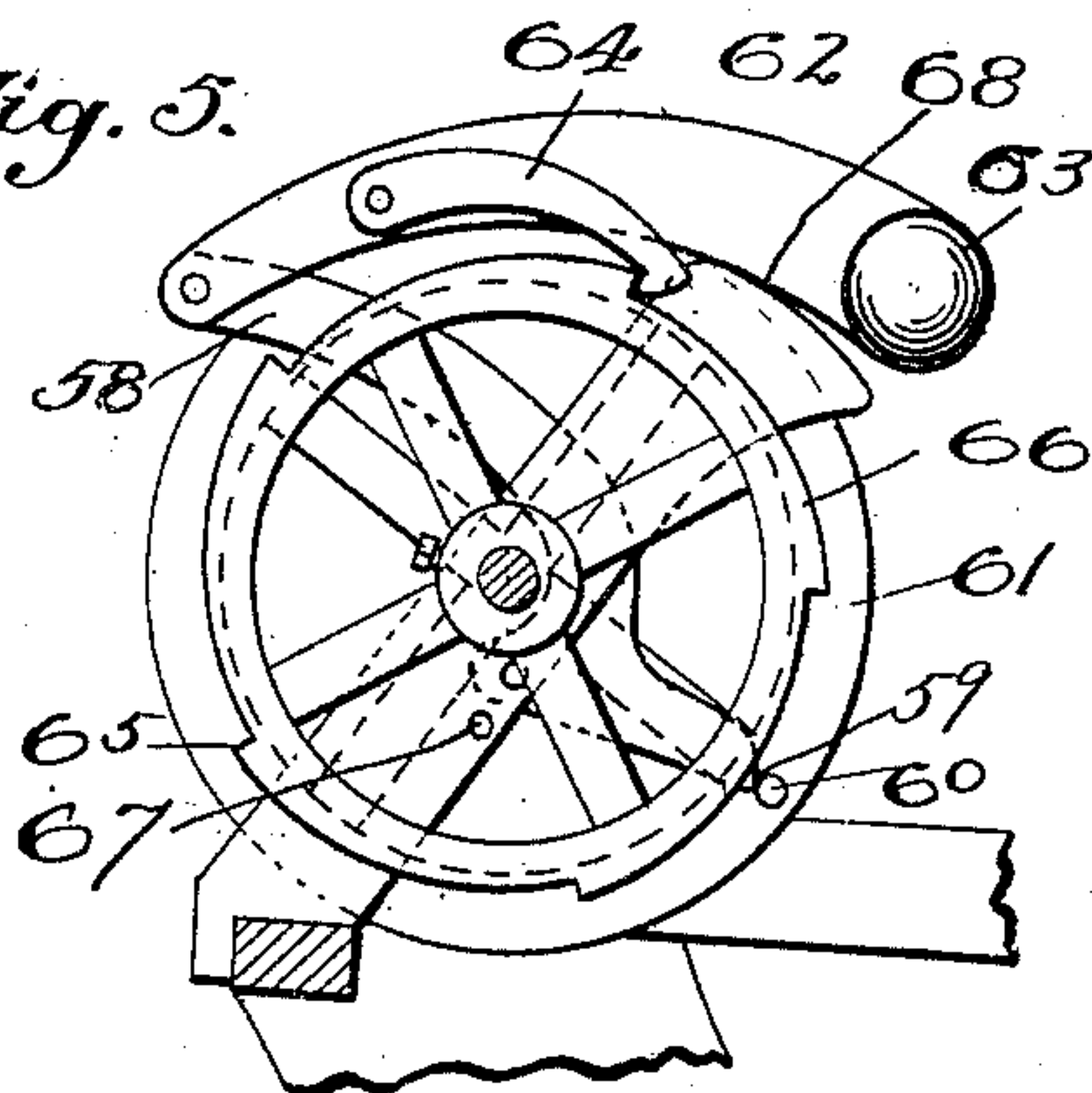
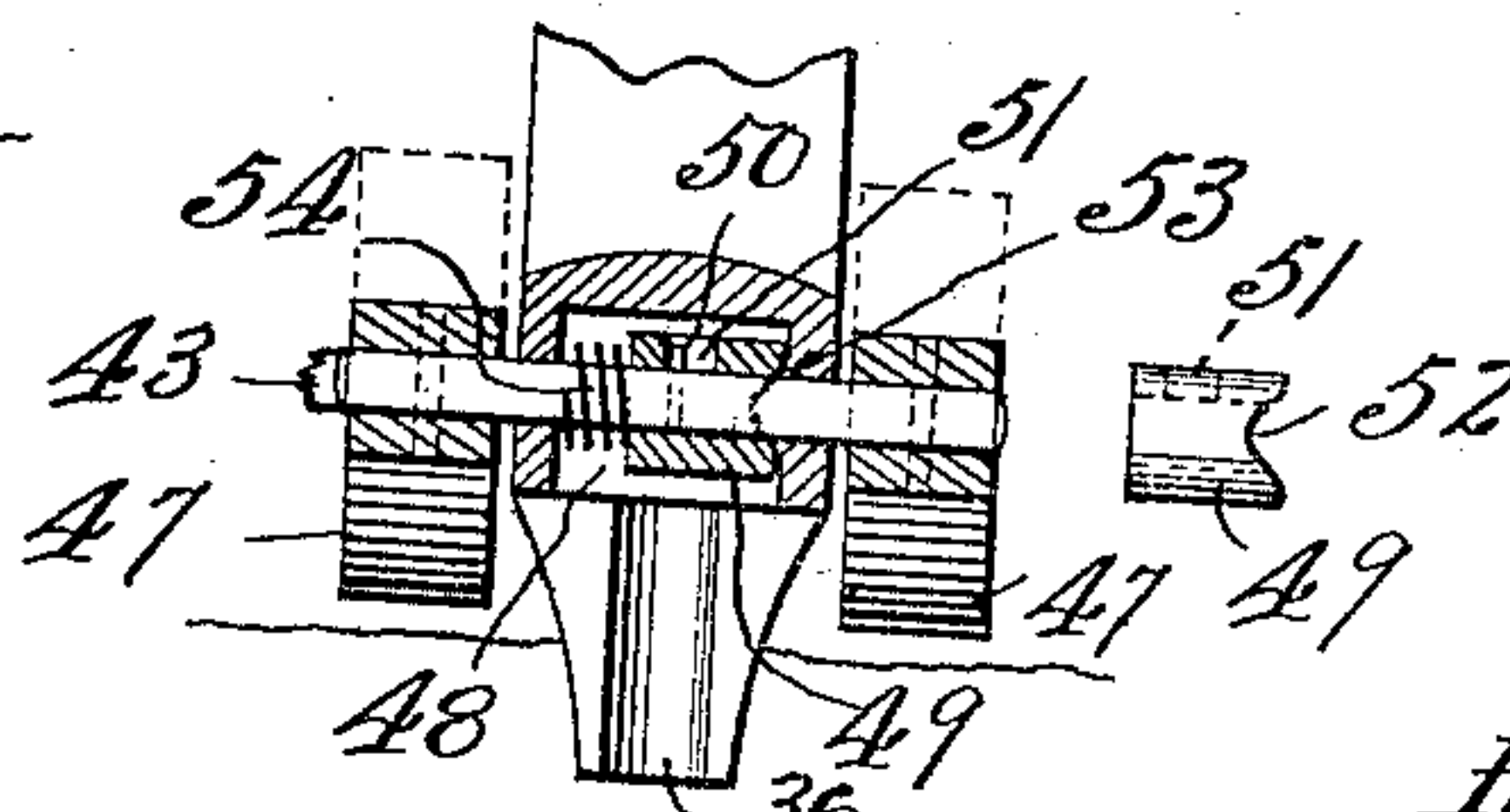


Fig. 6.



Witnesses:

Louis Lanier

Leiman Prouty

Inventor:

Lafayette H. McCormac

UNITED STATES PATENT OFFICE.

LAFAYETTE H. McCORMAC, OF MALLARD, ILLINOIS.

CORN-PLANTER.

No. 830,517.

Specification of Letters Patent.

Patented Sept. 11, 1906.

Application filed June 10, 1905. Serial No. 264,732.

To all whom it may concern:

Be it known that I, LAFAYETTE H. McCORMAC, a citizen of the United States, residing at Mallard, in the county of Hancock and State of Illinois, have invented a new and useful Improvement in Corn-Planters, of which the following is a specification.

My invention relates to improvements in corn-planters, and refers more particularly to the markers for corn-planters.

The object of the invention is to provide a device which will dispense with the use of the check-row wires commonly used to give perfect alinement to the hills of corn and also to provide a marker attachment whereby as each hill is dropped a mark will be made in the ground, so that the driver may readily aline his rows.

With these and other objects in view my invention consists of a corn-planter having marker attachments carried by the runners or furrow-openers thereof, means operated from the driving-axle for operating said marker, means for causing the marker to engage the ground at definite intervals, means for throwing the planter mechanism into or out of gear, and means for operating the marker independent of the main axle.

My invention further consists in certain other novel features of construction, combination, and arrangement of parts, substantially as disclosed herein.

Figure 1 is a top plan view of my improved corn-planter, showing the markers and connections. Fig. 2 is a side elevation of the complete machine. Fig. 3 is a rear end elevation of the same. Fig. 4 is a detail view of the drop and marker mechanism, taken on line 4 4 of Fig. 1. Fig. 5 is a detail view of the operating-head, and Fig. 6 is a detail view of the marker and runner taken from the rear and a detached view of the marker-sleeve.

Referring to the drawings, the numeral 1 designates the main frame of the machine, in which is journaled the axle 2. Ground-wheels 3 are mounted upon the ends of the axle, one being rigid with respect thereto and the other loosely mounted on said axle. These ground-wheels are formed with the separated concaved fellies 3', which by their shape are adapted to close the furrow and pack the earth after the corn has been deposited therein.

A clutch-disk 4, having ratchet-teeth 5, is

fixedly secured on the axle, and a sleeve 6 is loosely mounted on the axle and carries on one end the clutch-disk 7, adapted to cooperate with the fixed clutch-disk. Near the other end of the sleeve is secured the sprocket-wheel 8, and adjacent said sprocket-wheel is the ratchet-wheel 9. A lever 10 is loosely mounted on the sleeve between the two wheels and carries a dog 11, adapted to engage the teeth of the ratchet-wheel. A shifting rod 12, pivotally secured at its front end to the cross-bar 13, engages the shouldered end 14 of the sleeve. A spiral spring 15 is mounted on the axle engaging the shouldered end of the sleeve and tends to normally hold the clutch-disks in operative engagement. A segment-plate 16 is secured to the rear end of the frame, and pivotally secured to said plate is the operating-lever 17, provided with a spring-actuated dog 18 to engage notches 19 in the segment-plate. A right-angled pin or extension 20 is secured to the lower end of the lever 17 and engages the rear end of the shifting-lever, so that by means of the lever 17 the mechanism may be thrown into or out of gear.

A pair of vertical standards 21 are mounted upon the frame and support a seat-bar 22. A seat-post 23 is secured to the cross-bar 13 and carries on its upper end the driver's seat 24. Secured to the bar 22 is the guide-rod 25, which is adapted to form a keeper for the lever 10. Stakes 26 are pivotally secured to the standards by bolts 27 and are formed with notches or recesses 28 in their lower ends. Flat springs 29, secured to the frame, are provided on their free ends with the lugs 30, adapted to engage the notches in the lower ends of the stakes and hold said stakes in an upright position. These stakes are for the purpose of assisting the driver to plant a straight row, as by sighting over the stake and runner or frame to a stationary point he is materially helped in the proper alinement.

I provide a runner-frame comprising front or furrow openers or shoes 31, secured together by the yoke 32 and the cross-bar 33, mounted on the forward ends of the runners. The runner-frame is pivotally secured to the side bars of the main frame by the staple-bolts 34, secured in the yoke, or by other suitable means. The runners are preferably formed in one piece and are provided with hoppers 35 on their upper ends or portions. A chute or passage 36 leads from the hopper

to the foot of the runner, through which the corn travels and is deposited in the furrow opened by the runner.

A counter-shaft 37 has its ends journaled
5 in the hoppers and operates suitable dropping means therein. (Not shown.) Loosely mounted upon said shaft is the main or driven sprocket-wheel 38 and the fixed or rigid driving sprocket-wheels 39. The
10 sprocket-wheels 39 are provided with hubs 40, which abut against the inner walls of the hoppers to hold the shaft against lateral movement. A sprocket-chain 41 connects the sprocket-wheel 8 on the axle with the
15 driven sprocket-wheel 38 on the counter-shaft, and the chain-guard idler or bracket 42, carried by the frame, embraces the lower side of the chain and keeps it at the proper tension.

20 Marker-shafts 43 are journaled in rearward extensions 44 of the runners and carry on their inner ends sprocket-wheels 45, operated by chains 46 from the driving sprocket-wheels 39 on the counter-shaft. On the
25 marker-shaft adjacent the sprocket-wheel and on the opposite end of said shaft are mounted the markers 47. I have shown these markers as formed with flat pointed ends; but they may be of any other suitable
30 or desirable form. The portion of the runner through which the marker-shaft extends is recessed, as shown at 48, and upon said shaft within the recess is mounted the collar 49. A pin or key 50 is secured to the shaft and
35 engages the longitudinal slot 51 in the collar, so that the collar may have a sliding rotary motion on the shaft. One end of the collar is of irregular shape and provided with a seat or recess 52, and a complementary wedge-
40 shaped projection 53 is formed in the wall of the hopper adjacent the distorted end of said collar. A spiral spring 54 on the shaft exerts its tension upon the collar and causes the distorted end of the collar to engage the wall
45 of the hopper. Thus as the marker is rotated it is also given a lateral movement, which causes it to make a readily-distinguishable mark in the earth. Guard rollers or idlers 55 are secured to the yoke of the
50 runner-frame and keep the sprocket-chains 46 at the proper tension.

A standard 56 is mounted upon the yoke, through which the counter-shaft passes, and on said standard below the shaft at 57 is piv-
55 oted the irregular-shaped lever-arm 58, formed with the lower extension 59, which is adapted to be contacted by the pin or extension 60 on the rim of the trip-wheel 61, said wheel being loosely mounted on the shaft,
60 but rigidly secured to the driven sprocket 38 by the lugs or pins 69. Pivotaly secured to the upper end of the lever 58 is the weight-arm 62, provided on the end with a ball or other weight 63. To the weight-arm below
65 the point of connection with the lever-arm is

pivoted the pawl 64, which is adapted to engage the teeth or lugs 65, formed in the periphery of the wheel 66, said wheel being rigidly secured to the shaft. An extension 67
on the standard prevents the lever-arm 58 70 from falling too far back, and the upper end of the standard is rounded, as at 68, to normally form a support for the weight-arm.

The clutch members being thrown into engagement, the operation of the planter is as
75 follows: The driven sprocket on the counter-shaft revolves directly with the driving-sprocket on the axle and carries with it the trip-wheel 61. The pin or extension 60 on the trip-wheel engages the lower end of the
80 lever-arm, which is raised, carrying with it the weighted arm. The pawl on the weight-arm engages the teeth of the fixed wheel 66, thereby causing a partial rotation of the counter-shaft. The counter-shaft by this
85 partial rotation causes the dropper mechanism to operate and causes a complete revolution of the markers, thereby marking the hills of corn just dropped. After the lever-arm has been lifted sufficiently to allow the
90 pin on the trip-wheel to clear the lower end of the arm the weighted arm causes the lever to fall back into the first position, and the same operation is repeated. Upon starting the machine or at any other time the posi-
95 tion of the markers may be advanced by partially rotating the ratchet-wheel on the axle by means of the operating-lever 10. A tongue may be attached to the runner-frame in the ordinary manner, or the planter may
100 be operated by mechanical power.

From this description, taken in connection with the drawings, it will be evident that I have accomplished all the objects herein set forth and provided a corn-planter which is
105 entirely practical and efficient and greatly to be desired.

I claim—

1. In a corn-planter, the combination with the runner-frame and dropper mechanism
110 therein, of markers mounted on journals in the runners and connected by chain and sprocket to the dropper mechanism, and adapted to be operated at regular intervals.

2. In a corn-planter, the combination with
115 a runner-frame, markers journaled therein, of a counter-shaft carried by the frame, and chain-and-sprocket connections between the counter-shaft and markers.

3. In a corn-planter, the combination with
120 a runner-frame, markers journaled therein, of a counter-shaft carried by the frame, chain-and-sprocket connections between the counter-shaft and markers, and means on the shaft for partially rotating the markers at
125 stated intervals.

4. In a corn-planter, the combination with a runner-frame and dropper mechanism, a counter-shaft in the frame having a trip-wheel thereon operated by the main axle,
130

markers mounted on journals in the frame, chain-and-sprocket connections between the shaft and markers, and a trip-lever operated by the trip-wheel to cause a partial rotation
5 of the counter-shaft.

5. In a corn-planter, the combination with a runner-frame and a counter-shaft mounted therein, a trip-wheel loosely mounted on the shaft and connected with the main axle,
10 markers carried by journals mounted in the

frame, connected by chain and sprocket to the shaft, a ratchet on the shaft, and a trip-lever operated by the trip-wheel to engage the ratchet-wheel and cause a partial rotation of the shaft.

LAFAYETTE H. McCORMAC.

Witnesses:

LOUIS LANSET,
TRUMAN REANTZ.