

No. 638,799.

Patented Dec. 12, 1899.

H. S. CRAWFORD.
CORN PLANTER.

(Application filed June 3, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

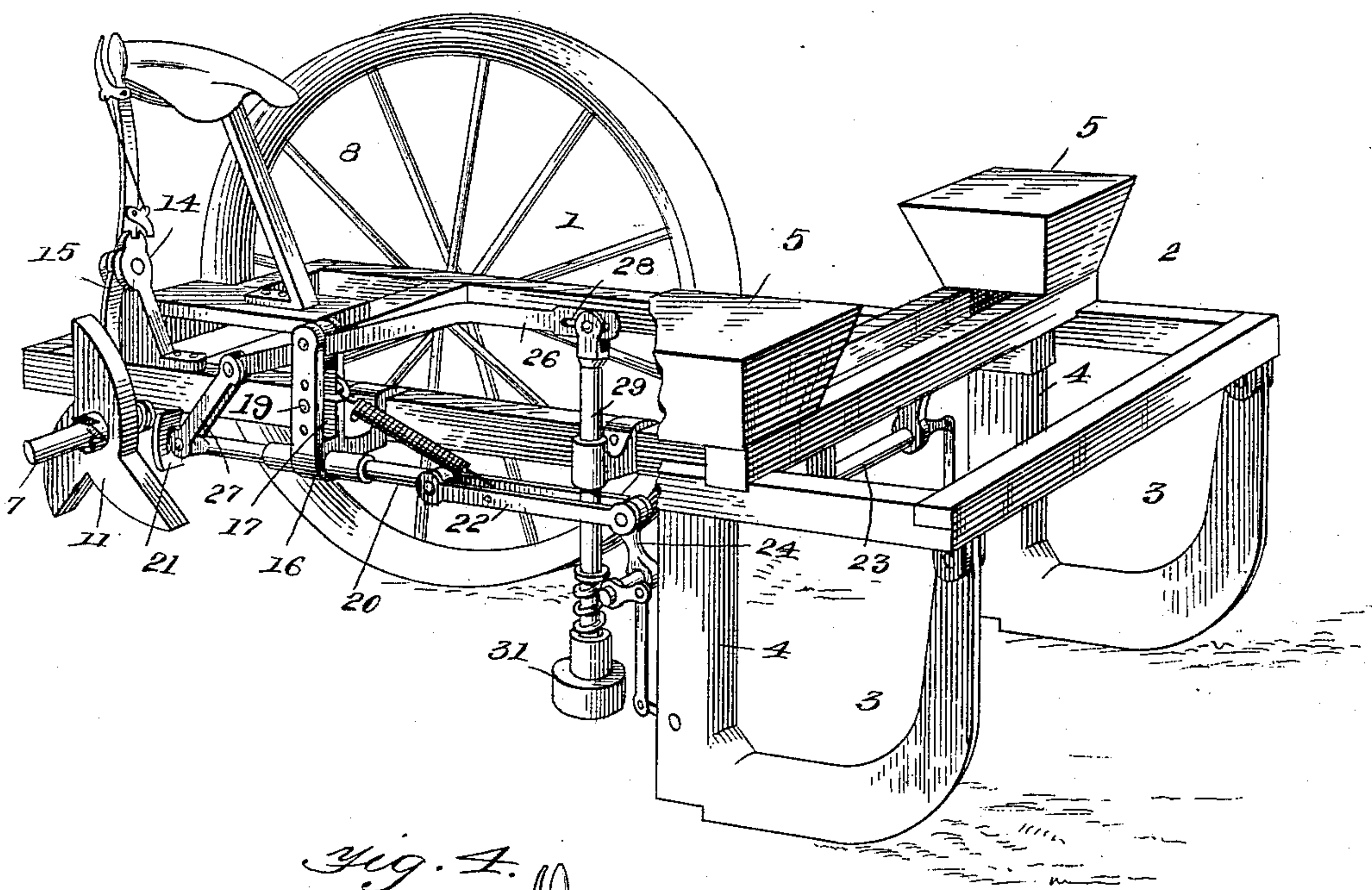


Fig. 4.

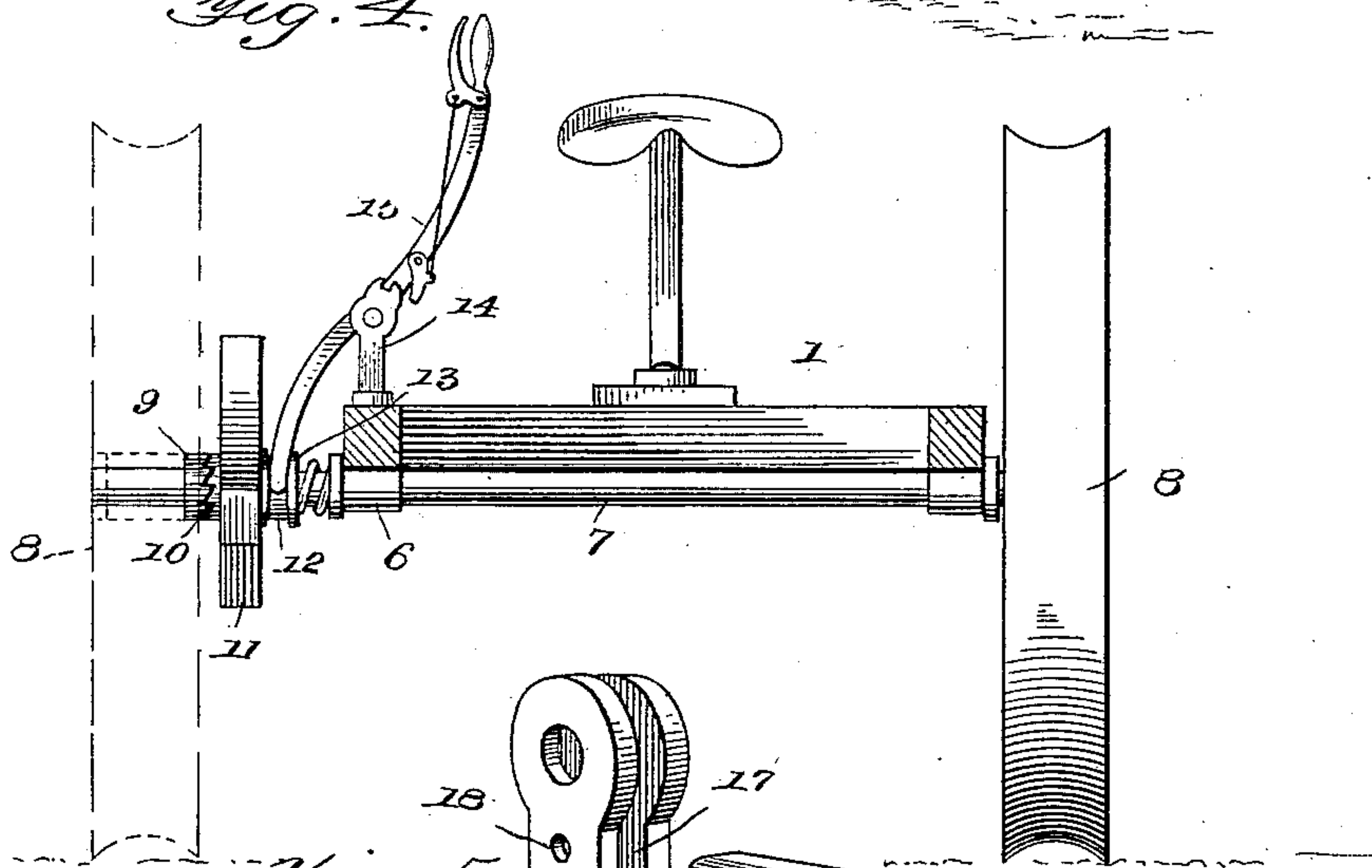
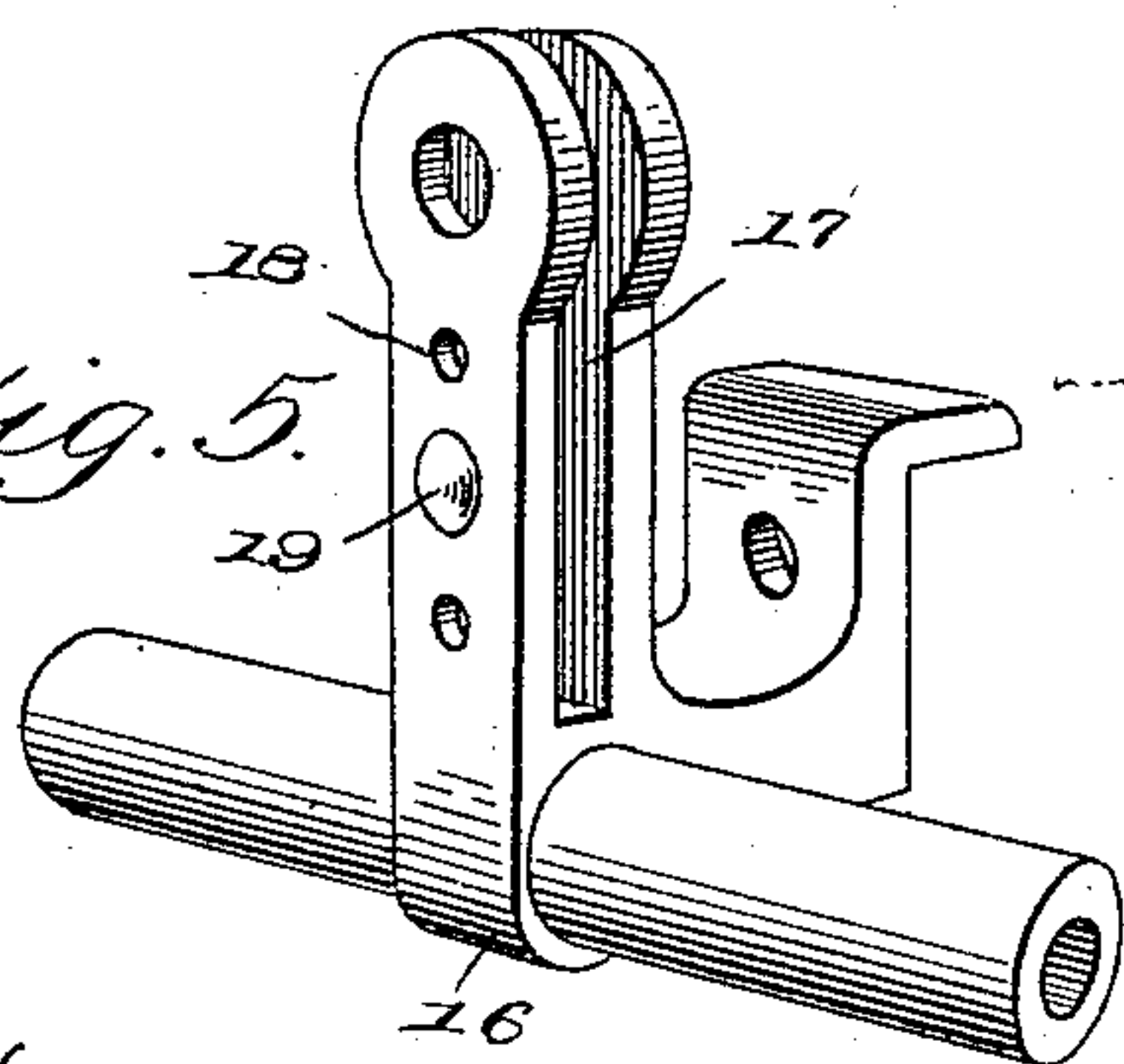


Fig. 5.



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2 Sheets—Sheet 2.

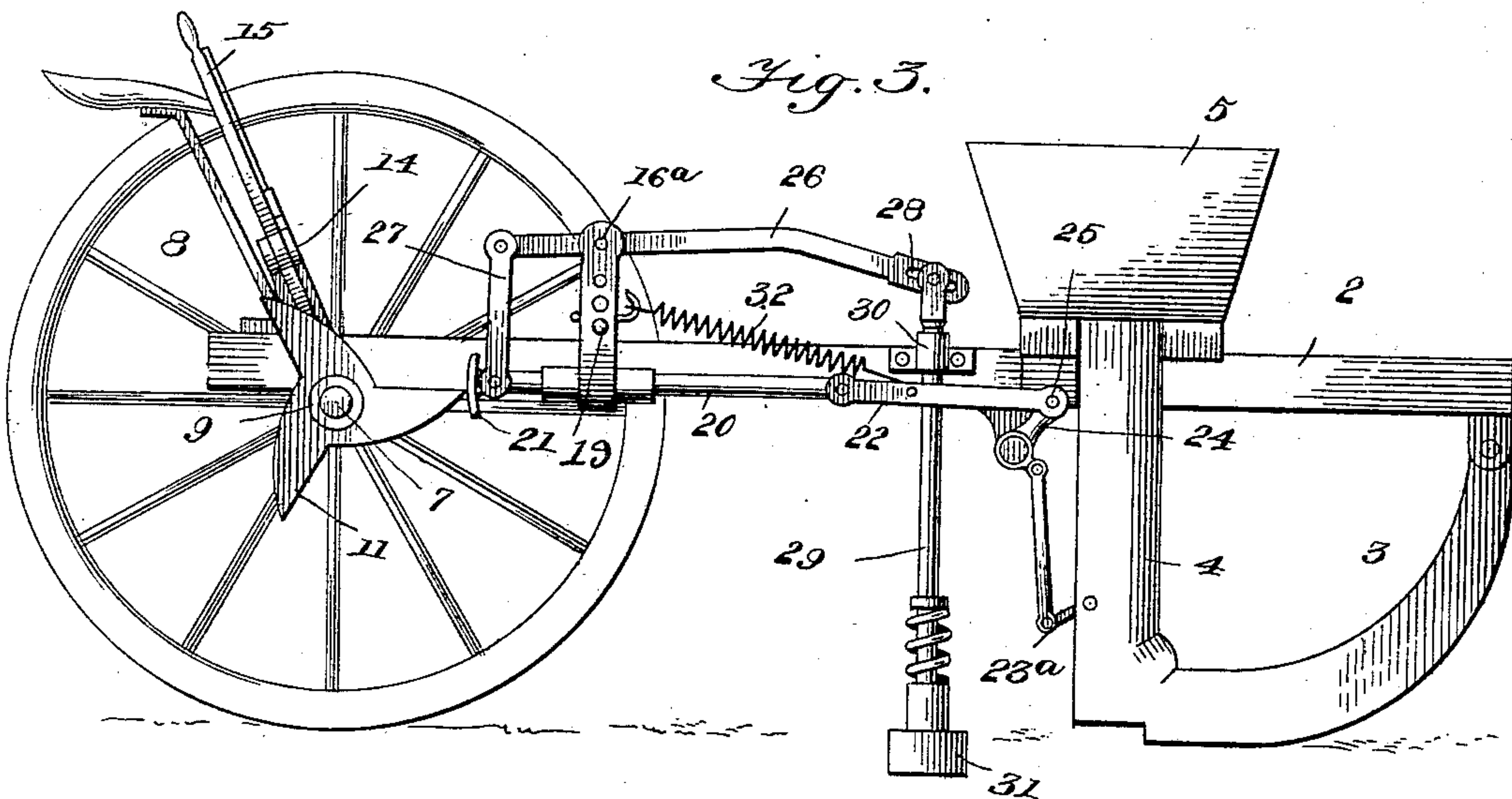
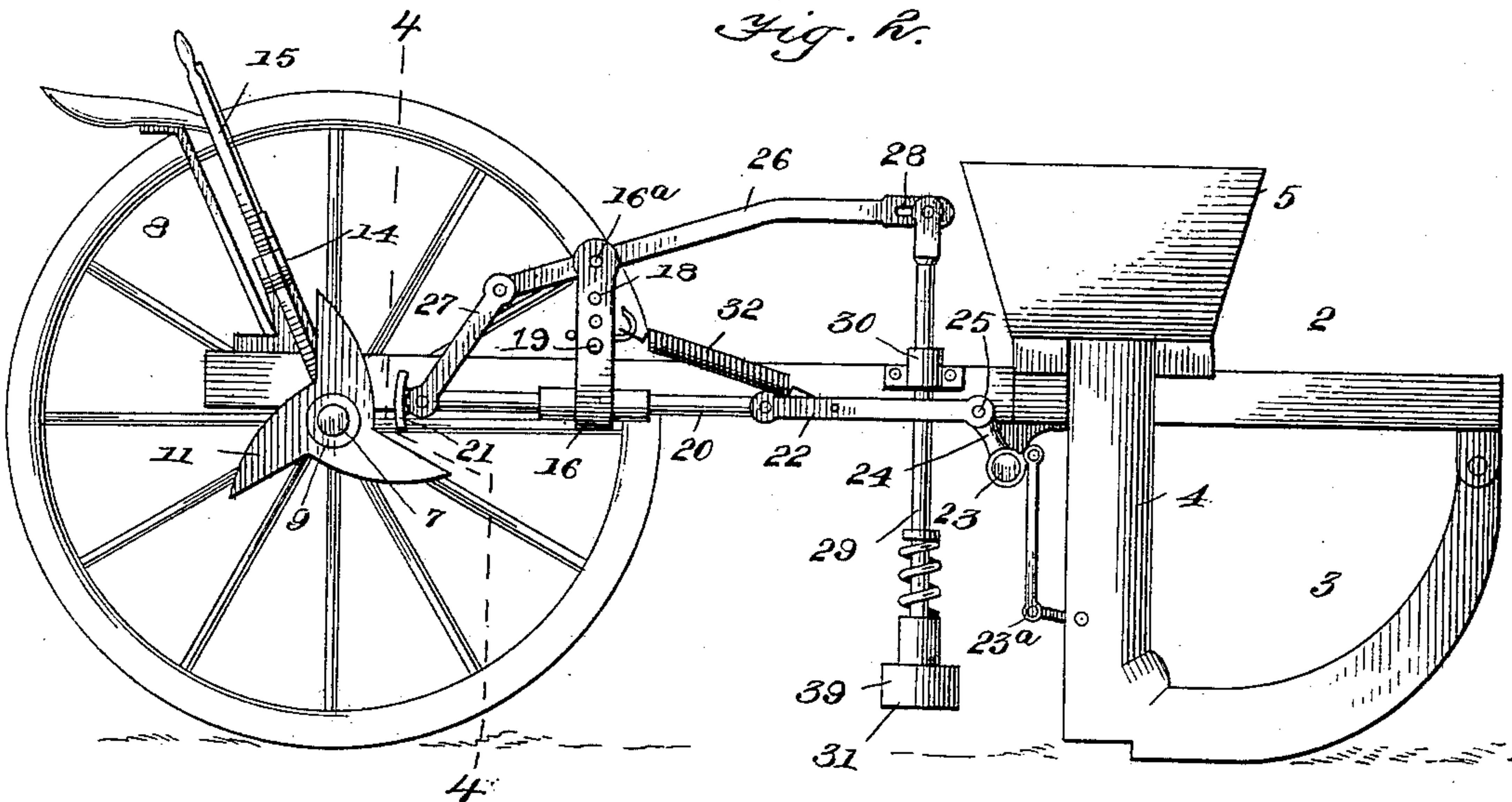
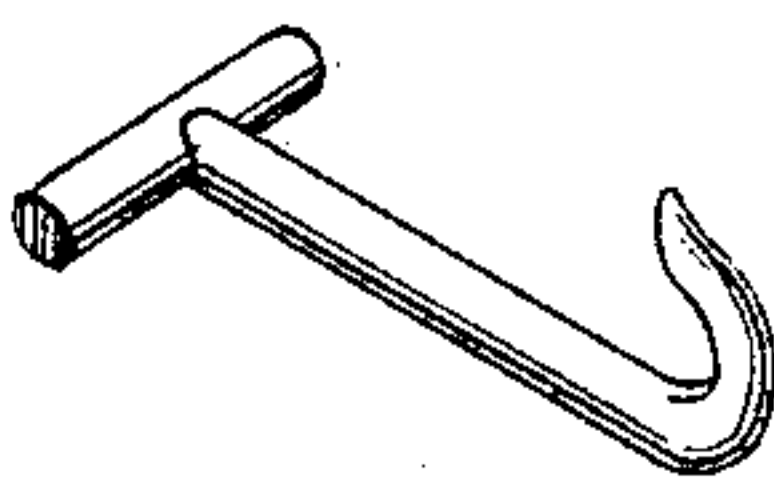


Fig. 6.



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UNITED STATES PATENT OFFICE.

HUGH SUMNER CRAWFORD, OF SUMNER, MISSOURI, ASSIGNOR OF ONE-HALF TO I. N. LONG, OF SAME PLACE.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 638,799, dated December 12, 1899.

Application filed June 3, 1899. Serial No. 719,287. (No model.)

To all whom it may concern:

Be it known that I, HUGH SUMNER CRAWFORD, a citizen of the United States, residing at Sumner, in the county of Chariton and State of Missouri, have invented a new and useful Corn-Planter, of which the following is a specification.

My invention relates to the general class of corn-planters, but more particularly to check-row planters, and has for its object to provide a planter of the kind described adapted to check off the rows without the necessity of employing a line of wire, anchors, and like appliances such as are now in use with this class of machines.

A further object is to so construct a machine that the mechanism will be operated as the machine moves forward through the medium of the axle on which the traction-wheels are secured.

A still further object is to provide means for throwing the mechanism in and out of operative engagement with the axle.

With these objects in view my invention consists of a transverse rock-shaft journaled on the forward portion of the machine and carrying valves or cut-offs at either end, whereby the feed of the hopper to the spouts can be regulated.

My invention further consists in a marker to be used in conjunction with the feed mechanism, whereby the position of the planted grain will be marked immediately after it has been dropped.

My invention further consists in providing means for operating the feed mechanism and marker alternately.

With these objects in view my invention consists in the parts and combination of parts, as will be more fully described, illustrated, and claimed.

In the drawings, Figure 1 is a perspective view of a planter, showing my invention applied. Fig. 2 is a side elevation showing the attachment in its normal position. Fig. 3 is a similar view showing the attachment in its extended position. Fig. 4 is a transverse section on the line 4 4, Fig. 2. Fig. 5 is a detail perspective view of the bracket, and Fig. 6 is a detail perspective view of the spring-securing means.

Referring to the drawings by numerals, 1 represents the main frame of a planter, to the forward end of which is secured the usual runner-frame 2, carrying any well-known construction of runners, such as 3, provided with suitable spouts or shanks 4, with which the openings in the bottoms of the hoppers 5 communicate.

Journaled to the frame 1 in the bearings 6 is a transverse shaft or axle 7, carrying the traction-wheels 8 on its respective ends, and a rigidly-secured sleeve 9 adjacent to the hub on the axle. It is obvious that should it be found convenient or desirable this sleeve could be secured directly to the hub of the wheel instead of applied to the axle.

10 are a series of serrations or teeth on the inner face of the sleeve 9, which are adapted to register with a similar ratcheted face on the outer face of the star or cam wheel 11. This cam-wheel 11 is loosely sleeved on the shaft 7 and is provided with a rearwardly-extending sleeve 12, which carries a circumferential flange 13. Pivotaly secured above the axle and to a suitable support 14 is a bifurcated clutch-lever 15, the bifurcated end of which is adapted to engage the rearwardly-extending sleeved portion of the cam-wheel or release the same from or in operative engagement with the axle 7, as will be more fully referred to hereinafter.

Secured to the side of the frame 1 is a bracket 16, projecting out to about the horizontal longitudinal center of the cam-wheel and thence upwardly at an approximate right angle and bifurcated, as shown at 17, and provided with a series of perforations 18, adapted to receive a bolt or pin 19, to be hereinafter referred to.

At the juncture of the right-angle extension with the bracket 16 is a longitudinally-extending sleeve projecting on either side thereof and in which is journaled a reciprocating rod 20, carrying on its rear end a shoe and pivotally connected at the other end to a bifurcated connecting-link 22.

23 is a transversely-extending rock-shaft secured on the runner-frame and carrying the cut-offs 23^a, (of any well-known construction,) which are positioned near the bottom of the shanks or spouts.

24 is an upwardly-extending lug or projection rigidly fastened to the rock-shaft 23 and pivotally connected to the connecting-link 22 at 25.

5 Journaled in the upper part of bifurcated arm 17 of the bracket 16 and intermediate its ends, as at 16^a, is a curved lever or rod 26, connected to the reciprocating rod 20 and provided with a slot 28 in its upper end.

10 29 is the marker-rod, slidably secured in the bracket 30 and passing down between the inner sides of the link to the ground immediately in rear of the spouts and carrying a spring-cushioned shoe 31, which will be of sufficient shape to mark the ground where the grain has been dropped.

A spring 32 is attached at its forward end to the link 22 and at its rear end to a T-shaped bolt resting in the bifurcated portion of the bracket 16.

The operation of my device will be as follows, all parts being assembled: The forward movement of the planter will rotate the axle, and by throwing the clutch mechanism in operative engagement the cam-wheel will rotate and the radial arms will strike against the shoe on the end of the reciprocating rod, which will force it forward and operate the cut-offs on the ends of the rock-shaft and at the same time raise the rear end of the curved lever 26, which, being fulcrumed at 16^a, will force the marker-rod downward and the shoe thereon will come in contact with the ground, thereby marking the place where the grain has been planted immediately after the same has taken place. As the reciprocating rod is forced forward the coil-spring expands, and as soon as the force is removed the tendency of the spring to contract will cause the rod 20 to slide rearwardly to its fullest extent, which action will cut off the grain from the spouts and by raising the forward end of the curved lever 26 raise the marker-shoe off the ground.

The tension of the spring can be regulated by removing the pin in the openings of the bifurcated portion of the arm 17 and sliding the T-headed hook either up or down and then inserting the pin.

From the foregoing it will be seen that I have invented an improvement in check-row planters which while simple will be durable, easy to manufacture, and one which will be readily appreciated by farmers generally.

While I have illustrated what to me appears to be the best means to accomplish the results desired, I would have it understood that I reserve the right to make such changes and modifications as would properly come within the scope of my invention without departing from the spirit thereof.

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

1. In a check-row planter the combination with a main frame of a revoluble axle carried thereby, a reciprocating rod mounted on said frame and connected to a cut-off in the

spout in the supplemental frame, a marker secured to the main frame in rear of the cut-off, a connection between the rod and the marker and means carried by said axle for actuating the rod and cut-off, substantially as described.

2. In a check-row planter the combination with a main frame, of a revoluble axle carried by said frame a reciprocating rod secured to the side of said frame, a dropper in the spout on the supplemental frame and connected to the rod, a pivoted lever secured to the main frame and carrying a marker and means for operating the rod, substantially as described.

3. In a check-row planter the combination with the main frame, of a revoluble axle carried thereby, of a sleeved bracket secured to the side of the main frame, a reciprocating rod carried by said sleeve and connected to the feed mechanism of the planter, of a marker in operative engagement with the reciprocating rod, and a cam carried by the axle for operating the rod and marker, substantially as described.

4. In a check-row planter, the combination with the sleeved bracket secured to the side of the main frame, of a reciprocating rod carried in said sleeve, a pivoted lever secured in said bracket and carrying a marker at one end, a linked connection at the other end of said lever and rod, and means for operating the same substantially as described.

5. In a check-row planter the combination with a main frame, of a revoluble axle mounted thereon, carrying a cam, a longitudinally-arranged reciprocating rod on said main frame engaging a cut-off in the seed-tube at one end and carrying a shoe at the other end adapted to be engaged by the cam, a marker connected to the rod and operated thereby and a spring returning the rod rearwardly after it has been projected forward by the cam.

6. In a check-row corn-planter, the combination with the frame, of a reciprocating dropper-rod on the frame, a sleeved bracket in which the rod is mounted having upwardly-extending arms, a lever carried by the said arms, for operating a marker and connected to the rod by a link, means for projecting the rod forward and a coiled spring adjustably secured in the arms of the bracket for returning the rod to its normal position, substantially as described.

7. In a check-row corn-planter, the combination with a main frame and a supplemental frame, a reciprocating rod carried by the side of the main frame, of a revoluble axle carried by the main frame, a dropper in the spout on the supplemental frame and connected to the rod, a bracket having two upright arms, a spring for holding the rod in its normal position, an adjusting-hook positioned between the arms and adjustably held therein and engaged by one end of the spring, and means for operating the rod, substantially as described.

8. In a check-row corn-planter, the combination with the main frame and revoluble axle carried thereby, of the sleeved bracket secured to the side of the main frame, a reciprocating rod carried by said sleeve and connected to the feed mechanism of the planter of a marker in operative engagement with the reciprocating rod, a spring connected to the rod and adjustably secured in the bracket,

whereby the tension of the spring can be regulated, a cam carried by the axle for operating the rod and marker and a clutch mechanism for disengaging the cam with the rod, substantially as described.

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Witnesses:

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