S. H. GARST.

MARKER FOR CORN PLANTERS.

APPLICATION FILED JUNE 30, 1916.

1,211,368.

Patented Jan. 2, 1917.

2 SHEETS—SHEET 1.

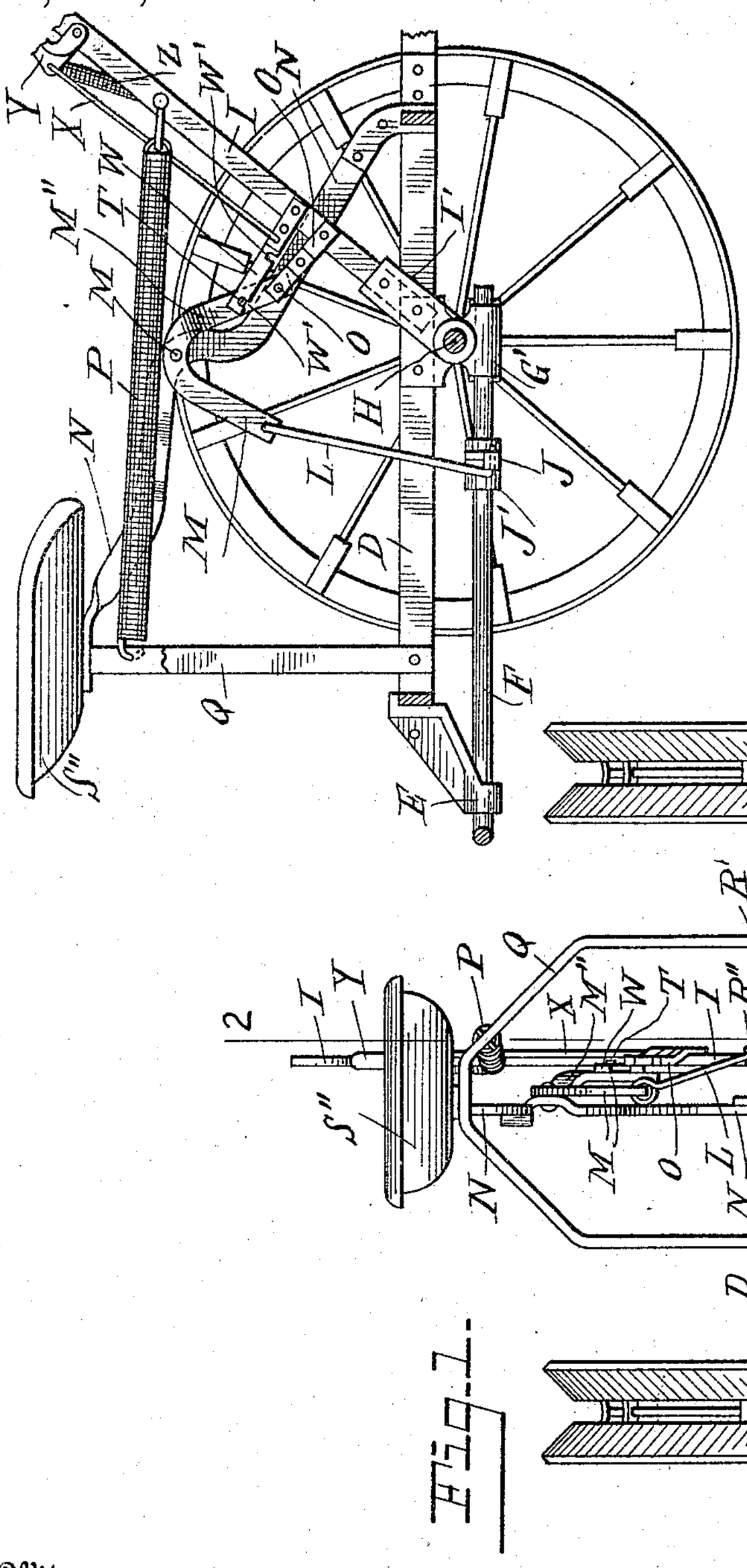


FIG. 1.

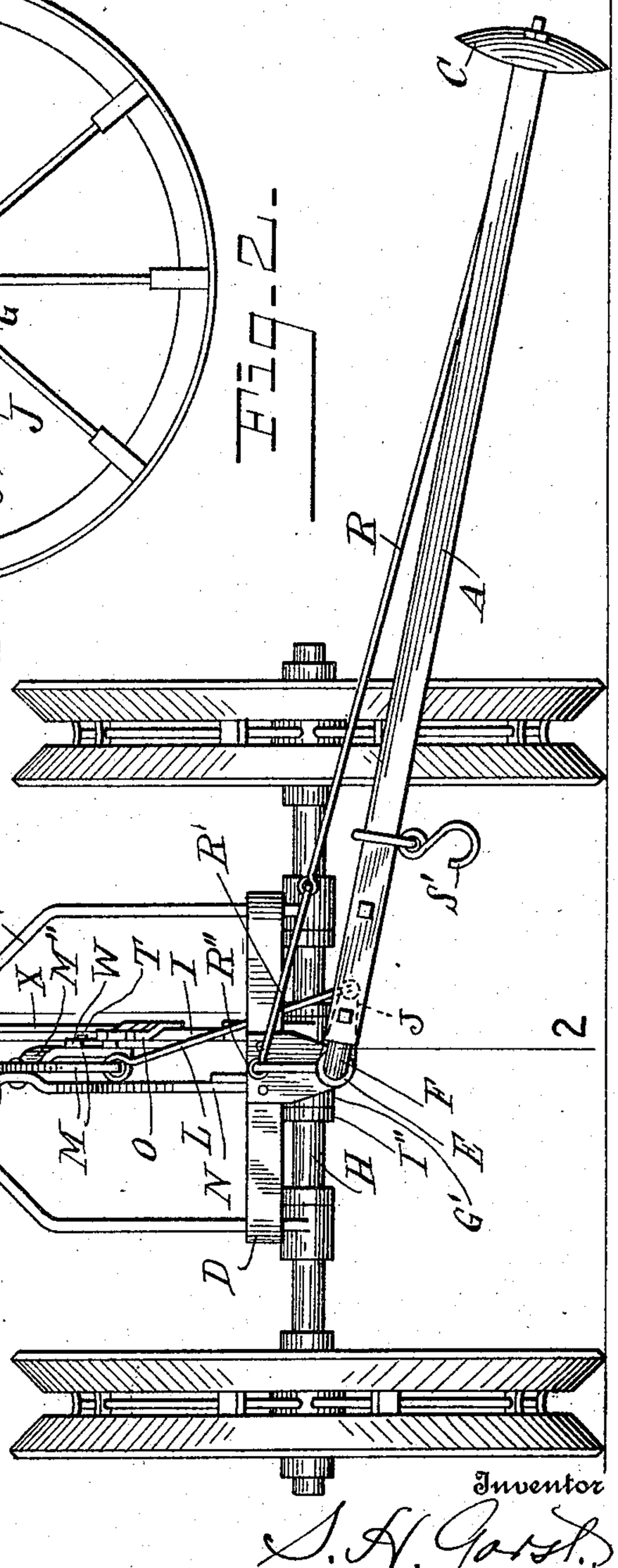


FIG. 2.

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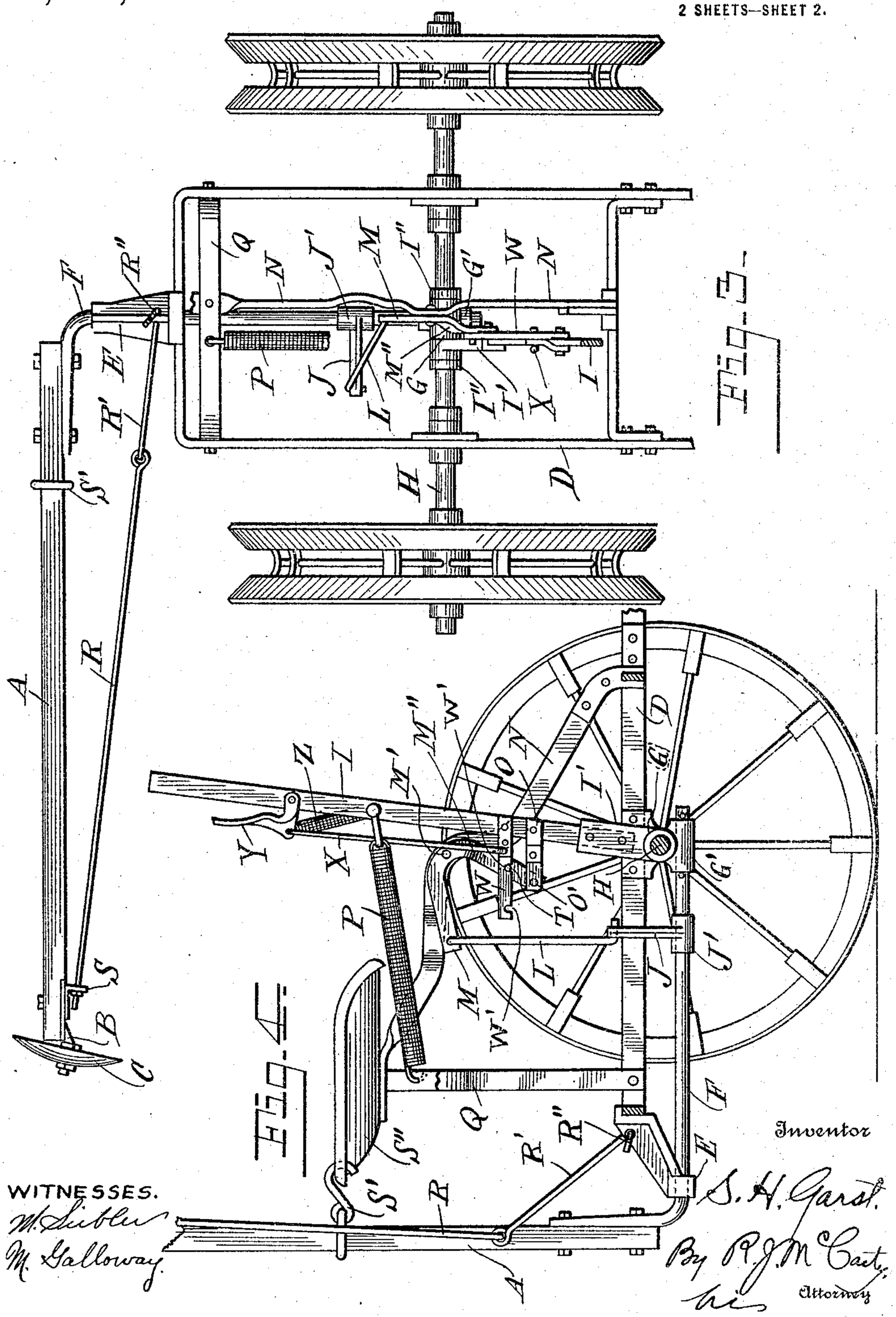
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UNITED STATES PATENT OFFICE.

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MARKER FOR CORN-PLANTERS.

1,211,368. Specification of Letters Patent. Patented Jan. 2, 1917.

Application filed June 30, 1916. Serial No. 106,743.

To all whom it may concern:

Be it known that I, STEPHEN H. GARST, a citizen of the United States, residing at Moline, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Markers for Corn-Planters; and I do 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 the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in corn planters or any machine having a capacity for planting seeds in rows.

It is well known that a marker serves the purpose of marking the soil as the machine is driven to serve as a guide for the driver when he returns to make the next row. In planting back and forth across the field, it is well understood that the marker must be on opposite sides of the planter for each trip. It, therefore, is necessary to change the position of the marker at each end of the field from one side of the machine to the other. The usual practice has been, so far as I am aware, for the driver to dismount or get off of the machine and change the position of the marker by lifting it from one side of the machine to the other. This method of so changing the position of the marker, as it will be readily seen, is troublesome to the driver and requires more or less loss of time which it is desirable shall be avoided.

It is, therefore, the object of this invention to provide a marker so connected and arranged that it may be readily shifted by the driver without dismounting or getting off of the machine and whereby less time is required in turning at the end of a row.

Preceding a detail description of my invention, reference is made to the accompanying drawings, of which—

Figure 1 is a rear elevation of a well known type of corn planting machine with various parts omitted which do not relate to the improvements to be described; Fig. 2 is a sectional view on the line 2—2 of Fig. 1. In these two views the marker is shown in its operating position as well as the parts coöperating in the manipulation of the same. Fig. 3 is a top plan view with parts broken away; and Fig. 4 is a sectional elevation on the line 4—4 of Fig. 3 showing the marker elevated out of an operating position.

In a detail description of the invention, similar reference characters indicate corresponding parts in the several illustrations accompanying said description.

Referring more particularly to the drawings, D designates the well known parts of a planter frame the illustration of which is curtailed in order to facilitate clearness of illustration of the features embodied in the improvements proper which have to do with the marker and the means for operating or manipulating the same. At the rear of said frame is secured a bracket forming a bearing E, its position being approximately in the center of the frame and one of its purposes being to support the shaft F. This shaft F has its rearward end turned at substantially a right angle adjacent to the bearing E and to said end is rigidly attached the marker bar A, preferably of wood, and upon the outer end of which is mounted a suitable axle B and a rotating marker disk C on said axle. For this marker disk a drag-bar may be substituted, one being the equivalent of the other so far as results are concerned. A guy or brace rod R is flexibly connected to an eye R″ in the upper portion of the bearing E by means of a link R′, the other end of said guy rod being suitably connected or attached to the outer end of the marker bar A by means of a clip S, said end being screw-threaded beyond the clip to receive a nut by means of which an adjustment for the rod R is provided in order that it may have proper tension to support the marker bar A. The flexible connection between the rod R and the bracket E enables the rod to fold when the marker bar is elevated. The rearward thrust on the marker bar A has a tendency to tighten the brace rod R and to cause it to act as a guy or truss rod for said marker bar.

The usual method of supporting the outer end of the marker bar is to fasten a rope or wire at some point near the outer end thereof and to tie the other end of said bar to some convenient part of the planter. In the use of the truss or guy rod R such rope or wire is necessarily dispensed with and the

inconvenience hitherto experienced, in changing the marker from one side of the machine to the other and due to such rope or wire often coming in contact with the operator, is wholly obviated. The forward end of the shaft F is journaled in a portion of a bearing G which is provided with two openings which lie at right angles to each other. One of these openings receives the main axle H of the planter and the other opening is in a lower right angle portion G′ in which the shaft F is journaled, the portion G′ being below the axle H and in proper alinement with the opening in the bearing E so that the shaft F will turn easily in both the bearings E and G′. The portion of the bearing G in which the axle H lies is offset at one end or is smaller than the main body of said bearing. The lower member I′ to which the hand lever I is attached is journaled on this offset portion of said bearing G. The portion of the lever member I′ which fits over the offset portion of the bearing G is about as thick as the length of the said offset portion so that when the lever I is in position one side of it rests against the shoulder on the bearing G formed by the offset portion. The said bearing may be held in position to rotate on the axle H by means of pins or slip-collars I″ one of which presses against the side of the lever member I′ which incloses the offset portion of the bearing G. The lever I projects upwardly within convenient reach of the operator and terminates in a suitable hand-hold. The shaft F has fixed to it between the bearings E and G′ a sleeve J′ from which projects a crank arm J which in turn is connected by a link L to the upper end of a bell-crank-lever M. This lever M is formed with an edge bent substantially greater than a right angle and the lower portion of which is given an outward side bend as at M″. The bell-crank lever M is pivoted at M′ to the seat brace N which is a part of the frame structure of the planter. The lower end of the bell-crank lever M is connected to the hand lever I by means of a strap or link O to which it is pivoted at O′. In the particular construction of the seat brace N it is provided with a short bend edgewise in order to bring the bell-crank lever M in proper position or enable it to rise high enough without interference from other parts. Also said seat brace is provided with an edge bend for the purpose of allowing the end of the link L, which connects with the upper arm of the bell-crank lever, to pass said seat brace N.

W is a pawl pivoted to the hand operating lever I and connected to a hand latch Y at the upper end of said lever I by a latch rod X. The latch Y is opened by the spring Z and is operated by the hand to lift the pawl W. The pawl W has, in the present case, two notches W′ and W″, the latter being nearest the lever I. Projecting from the lower arm of the bell-crank lever M is a pin T which is adapted to lock with either of the notches W′ and W″. When the notch W″ engages the pin T the marker bar stands in a vertical position as in Fig. 4 and when the notch W′ of said pawl engages the pin T the said marker bar is in the horizontal or operating position. When in the elevated position, the marker bar may be conveniently held in such position and the strain taken off of the lever I and connections, by means of a hook S′ which is suitably connected to the marker bar A and may connect into a hole in the rear part of the seat S″. This enables the planter to be moved any great distances, such for example, as in moving on the road or from one field to another. The lever I and connecting parts are made of steel which is given the necessary irregular bends. If such parts were made of castings their structure might, of course, vary. To the upper portion of the hand lever I is attached one end of a coil spring P, the other end of which is attached to a convenient part of the arch Q which is a part of the frame work of the planter and supports the seat S″. The purpose of this spring P is to influence the movement of the lever I to its upright position from the forward position shown in Fig. 2. Through an operation of the lever I the marker bar can be elevated and swung from one side of the planter to the other or it may be held in the vertical position free from the ground as shown in Fig. 4. In shifting the marker bar from one side to the other, the coil spring P assists very materially owing to the fact that the spring is expanded when the marker is lowered, and contracts when the marker is elevated, hence the said spring lifts when the marker is raised and counter balances when the weight is lowered.

Having described my invention and the construction and manner of operation thereof, I claim:

1. In a machine of the character specified, the combination with a hand-operative lever, a lever connected to said hand-operative lever, means on said hand-operative lever for locking the lever connected thereto in any position to which said hand operative lever has moved it, a rock shaft, a marker bar attached to said rock shaft, and connections between said rock shaft and the lever connected to the hand-operative lever whereby said marker bar may be raised or lowered from said hand operated lever, substantially as specified.

2. In a machine of the character specified, the combination with a hand-operative lever, a rock shaft, a bell-crank lever connected to said hand-operative lever and to said rock shaft, a marker bar attached to

said rock shaft, and adapted to be raised or lowered from said hand-operative lever, and co-acting means on the hand-operative lever and the bell-crank lever respectively for maintaining said marker bar in either position, substantially as specified.

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

STEPHEN H. GARST.

Witnesses:

A. T. McElvain,

O. M. Stowe.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."