(No Model.) 3 Sheets—Sheet 1.

J. W. THOMAS.

CORN PLANTER.

No. 370,664. Patented Sept. 27, 1887.

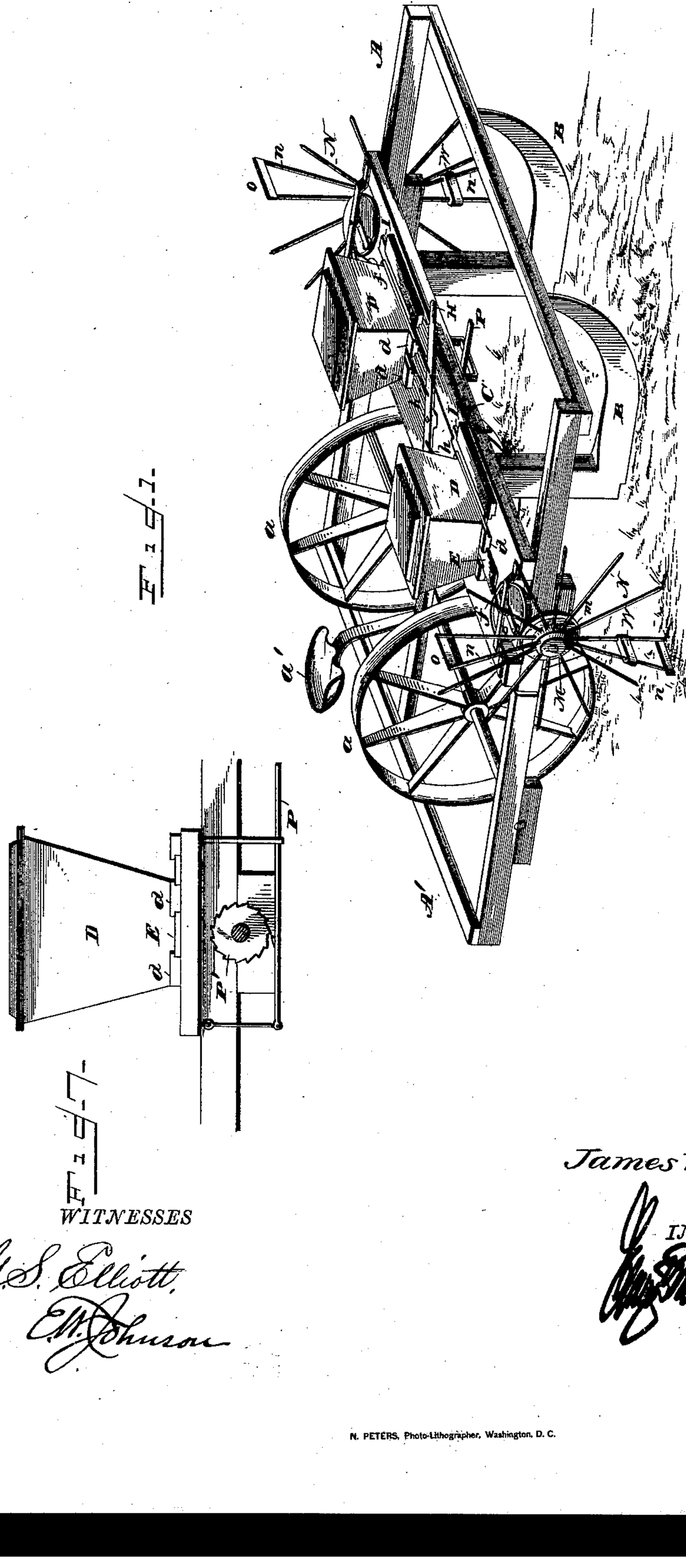

FIG. 1.

FIG. 2.

WITNESSES

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(No Model.) 3 Sheets—Sheet 2.

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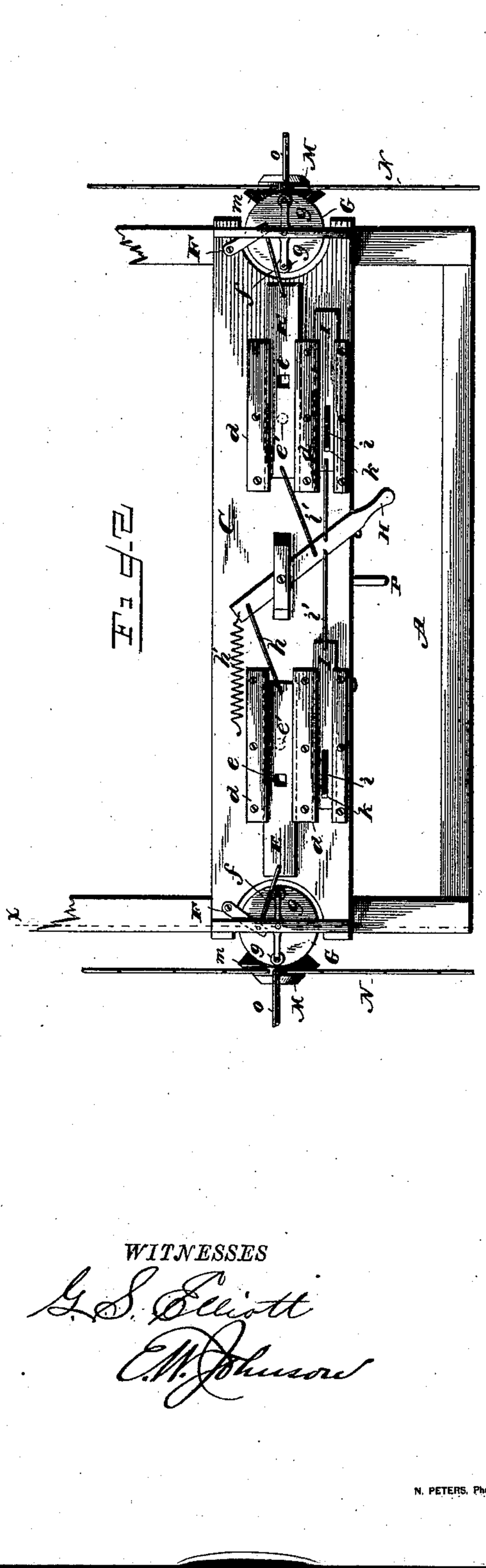

FIG. 2.

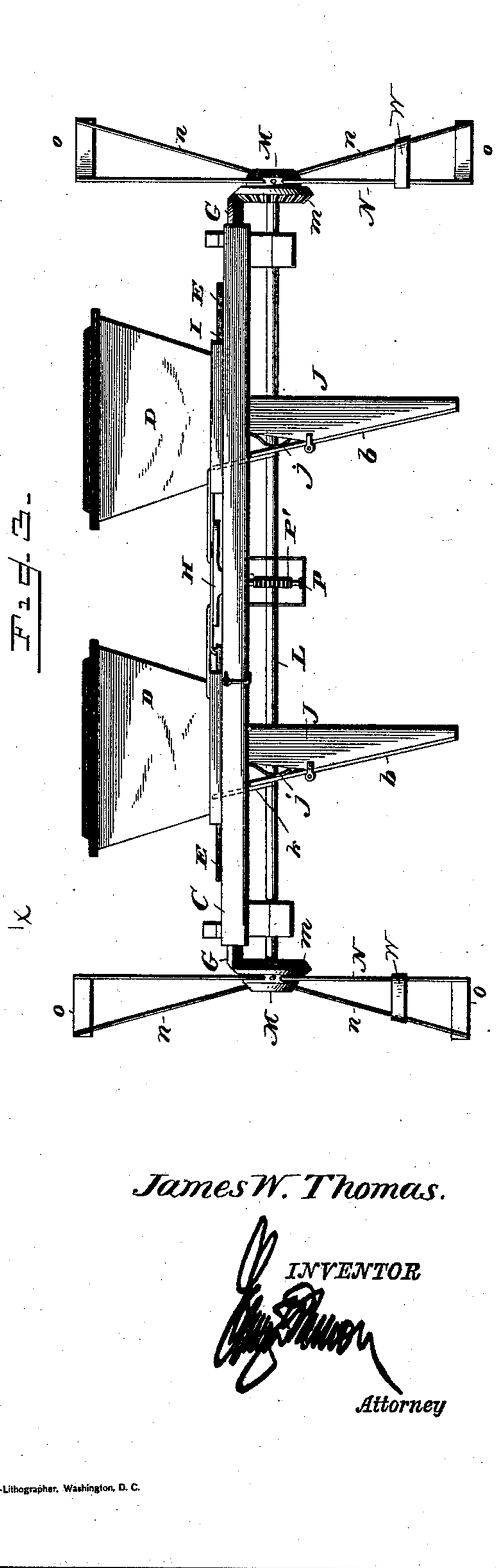

FIG. 3.

WITNESSES

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J. W. THOMAS.

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Fig. 4.

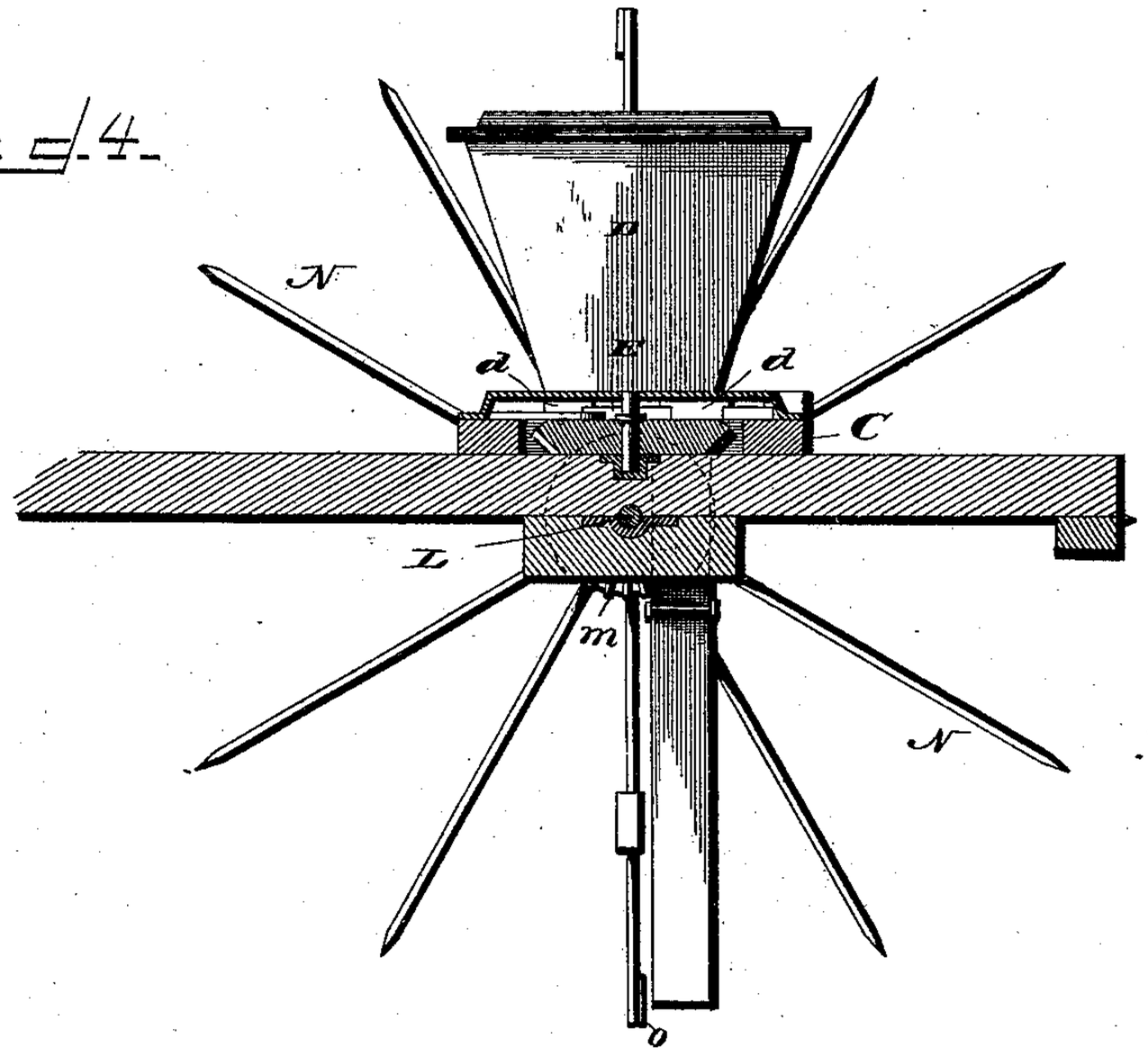

Fig. 5.

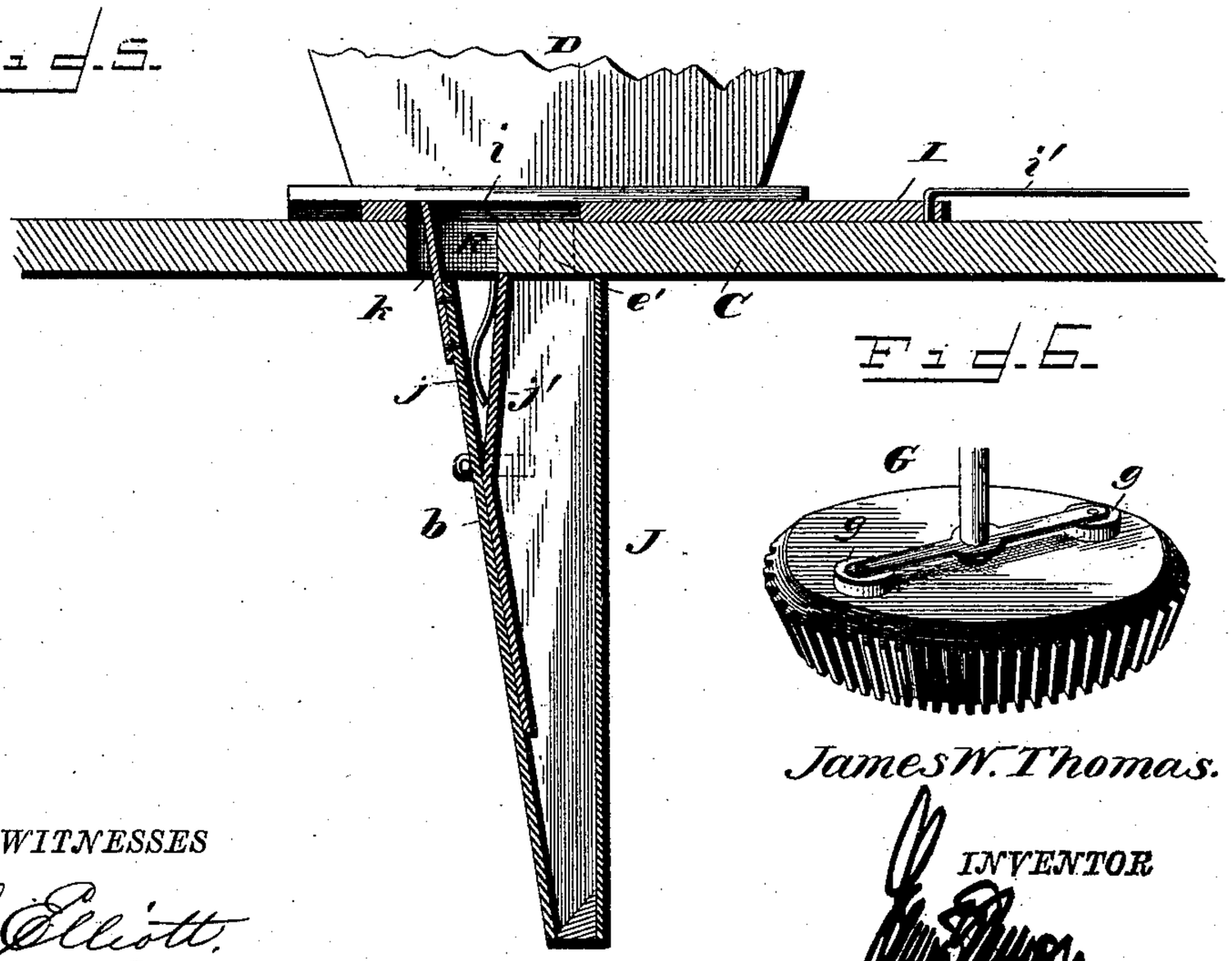

Fig. 6.

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UNITED STATES PATENT OFFICE.

JAMES W. THOMAS, OF WEEPING WATER, NEBRASKA.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 370,664, dated September 27, 1887.

Application filed July 7, 1887. Serial No. 243,650. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. THOMAS, a citizen of the United States of America, residing at Weeping Water, in the county of Cass and State of Nebraska, 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in corn-planters, the object of my invention being to provide a planter of improved construction, whereby the drop of the seed can be regulated and the devices thrown in and out of gear when desired.

My invention consists in providing an improved means for operating the valved seed-spouts from the same mechanism which operates the seed-slides; also, in providing the marking-wheels with means whereby they will rotate automatically, so as to bring them in a proper position, as will be hereinafter fully set forth, and specifically pointed out in the claims.

My invention also consists in the construction and combination of the parts, as will be hereinafter specified.

In the accompanying drawings, which illustrate my invention, Figure 1 is a perspective view of a corn-planter embodying my improvements. Fig. 2 is a top or plan view of a portion of a corn-planter embodying my invention. Fig. 3 is a front view of a portion of a corn-planter constructed in accordance with my invention, the runners being removed. Fig. 4 is a sectional view taken through the line *x x* of Fig. 2. Fig. 5 is a sectional view of one of the droppers and a portion of the frame. Fig. 6 is a detail perspective view of one of the gear-wheels for operating the seed-slides, and Fig. 7 is a detail view of a ratchet-wheel and mechanism for adjusting the operating-shaft.

In the accompanying drawings, A refers to the front portion of the frame upon which my improvements are carried, A′ being the rear frame, which is suitably connected by hinges to the front frame, this rear portion having a transverse axle, upon which are mounted covering-wheels *a a* and the driver's seat *a′*. The rear portion of the planter is of ordinary construction.

The front portion of the frame A has attached thereto runners B B, the rear portion thereof extending upwardly, so as to form seed-spouts, the rear portions of said seed-spouts having a pivoted portion, *b*, suitably attached thereto.

C refers to a transverse board or support, which is rigidly attached to the rear upper portion of the frame A, and upon said board C are mounted the seed-boxes D D, said seed-boxes resting immediately above grooved strips *d d*, between which the seed-slides E E reciprocate. These slides have an opening, *e*, formed therein, said opening being adapted to reciprocate in line with the opening *e′*, formed in the support C, said opening *e′* leading directly into the discharge-spouts.

The seed-slides E are connected at their outer ends by links *f* to a pivoted bar, F, which is suitably attached to the support C, so as to project over the recessed or grooved ends thereof and lie above the cog-wheels G, which are suitably supported horizontally in bearings, the lower bearing being let into the side bars of the front frame, while the upper bearing is formed in a recessed bar which extends across the recessed or grooved ends of the support C. These pivoted bars F engage with rollers *g*, which are mounted upon the upper edge of the cog-wheel G, so as to oscillate the pivoted bars F when said cog-wheel is rotated, thereby reciprocating the seed-slides. The inner ends of the seed-slides are connected by links *h h* to a lever, H, which is pivotally attached to the center of the support C, the aforesaid links *h* being secured on each side of the pivot. The rear end of the lever H is provided with a spiral spring, *h′*, which will exert a spring-pressure upon said lever, so as to draw it normally to one side, as shown in Fig. 2, said spring acting upon the seed-slides so as to normally throw them to one side, said seed-slides being moved

in the opposite direction by the pivoted bars F, which are acted upon by the rollers *g* upon the cog-wheel G.

In front of the seed-slides are secured reciprocating bars I, which are provided with slots *i*, and these bars are connected by links *i'* to the lever H, so that when the seed-slides are reciprocated, as hereinbefore set forth, the bars I will also be reciprocated.

The lever H is provided near its front end with a suitable staple, with which a hook attached to the front end of the support C is adapted to engage to hold the lever H immovably to one side in order to bring the pivoted bars F beyond the line of movement of the rollers *g*, so that the parts will be thrown out of an operative position when desired.

The seed-spouts J are suitably secured within the vertical portion of the runners and to the under side of the support C, and these seed-spouts J have pivoted sides *b*, which are held normally closed by a spring, *j*, which bears against the upper portion, *j'*, of the seed-spout J. The seed-spout J is secured to the support C, so that the seed which falls through the opening *e'* will pass directly into the seed-spout, and the upper end of the pivoted side *b* is provided with a portion, *k*, which passes through a slot, K, in the support C to engage with a slot, *i*, in the reciprocating slide I, so that when said slide is moved the lower part of the pivoted side will be moved away from the rigid portions of the spout and the seed be permitted to drop at the proper time in the groove formed in the ground by the runner.

Beneath the support C, in suitable bearings, is mounted a shaft, L, to the ends of which are secured hubs M, which have formed thereon cog-wheels *m*, that mesh with the cog-wheels G. The hubs M are rigidly keyed to the shaft L, so that they will rotate therewith, and to the hubs are secured a series of radial arms, N, which are adapted to enter the ground when the planter is in operation, so as to cause the rotation of the shaft. These hubs are provided at opposite points with diverging arms *n*, that are connected to the radial arms or spokes by strips *o*, which serve as markers and indicate the points on a line where the seeds have been dropped. To one of the arms carrying the markers is attached a weight, W, which is sufficient to cause the rotation of the shaft when the front frame is elevated, so that the seed-slides may be properly set in starting or resetting when desired.

When it is desired to turn the shaft independent of the weights upon the marking-wheel, it can be done by drawing the bar P forward, said bar being provided with a pawl which engages with a ratchet-wheel, P', that is rigidly connected to the shaft. This bar P is supported at its rear end by a suitable link, while its front end rests upon a bail, so as to be normally out of engagement with the ratchet-wheel. When the lever P is drawn forward, it will rotate the shaft rearwardly.

By means of the devices hereinbefore described I provide a seed-planter by means of which the seed can be dropped regularly in hills, and with which the position of the seed-slides and dropping mechanism can be readily and quickly reset without backing or moving the planter, and with which the seed-dropping mechanism can be readily thrown out of gear, so as to be inoperative.

If desirable, the rear frame may be provided with levers for elevating the front frame, so that in transporting the same the marking-wheels will be out of engagement with the ground.

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

1. In a corn-planter, a marking-wheel consisting of a series of radiating laterally-diverging spokes attached on diametrically-opposite sides of the hub and provided at their ends with markers which connect the same, and a weight attached to one pair of said diverging spokes of the marking-wheel, substantially as shown, and for the purpose set forth.

2. In a corn-planter, a marking-wheel consisting of a series of radial arms and a pair of diverging markers attached thereto, and a weight carried by one of the pairs of arms to which the markers are secured, whereby the marking-wheel may be automatically set, in combination with the seed-dropping mechanism, constructed substantially as shown, and for the purpose set forth.

3. In a corn-planter, a transverse shaft carrying at its outer ends marking-wheels, the inner sides of the hubs of said marking-wheels being provided with gear-teeth, a cog-wheel mounted on the frame and provided with rollers, pivoted arms adapted to engage with said rollers, the pivoted arms being connected to the seed-slides, so as to reciprocate the same, and links connecting said seed-slides to a lever, said lever having a spring, the parts being organized substantially as shown, and for the purpose set forth.

4. In combination with a shaft, L, having marking-wheels mounted thereon, a hub having gear-teeth, which are adapted to mesh with the teeth of the cog-wheel G, mounted upon the support C, said cog-wheel having rollers *g*, pivoted arms F, attached to the supports to engage with the rollers *g*, links connecting said pivoted arms to the seed-slides, said seed-slides being connected at their inner ends to a pivoted lever, H, having a spring, *h'*, and slides I, also connected to the lever and provided with slots, with which the pivoted sides of the seed-spouts engage, said seed-spouts having springs for holding the same normally closed, the parts being organized substantially as shown, and for the purpose set forth.

5. In a corn-planter constructed substantially as shown and provided with a shaft, L, which carries the mechanism for operating the seed-slides for opening and closing the spouts, a ratchet-wheel mounted upon said

shaft, a lever, P, having a pawl which is adapted to engage with said ratchet-wheel, said lever being connected to the supporting-frame by a link, the front end of said lever being adapted to rest within a bail, so as to be normally out of engagement with the ratchet-wheel, substantially as shown.

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

JAMES W. THOMAS.

Witnesses:
H. D. BARR,
J. H. HALDEMAN.