

(No Model.)

W. W. CURTIS.
PLANTER.

No. 305,673.

Patented Sept. 23, 1884.
Fig. 1.

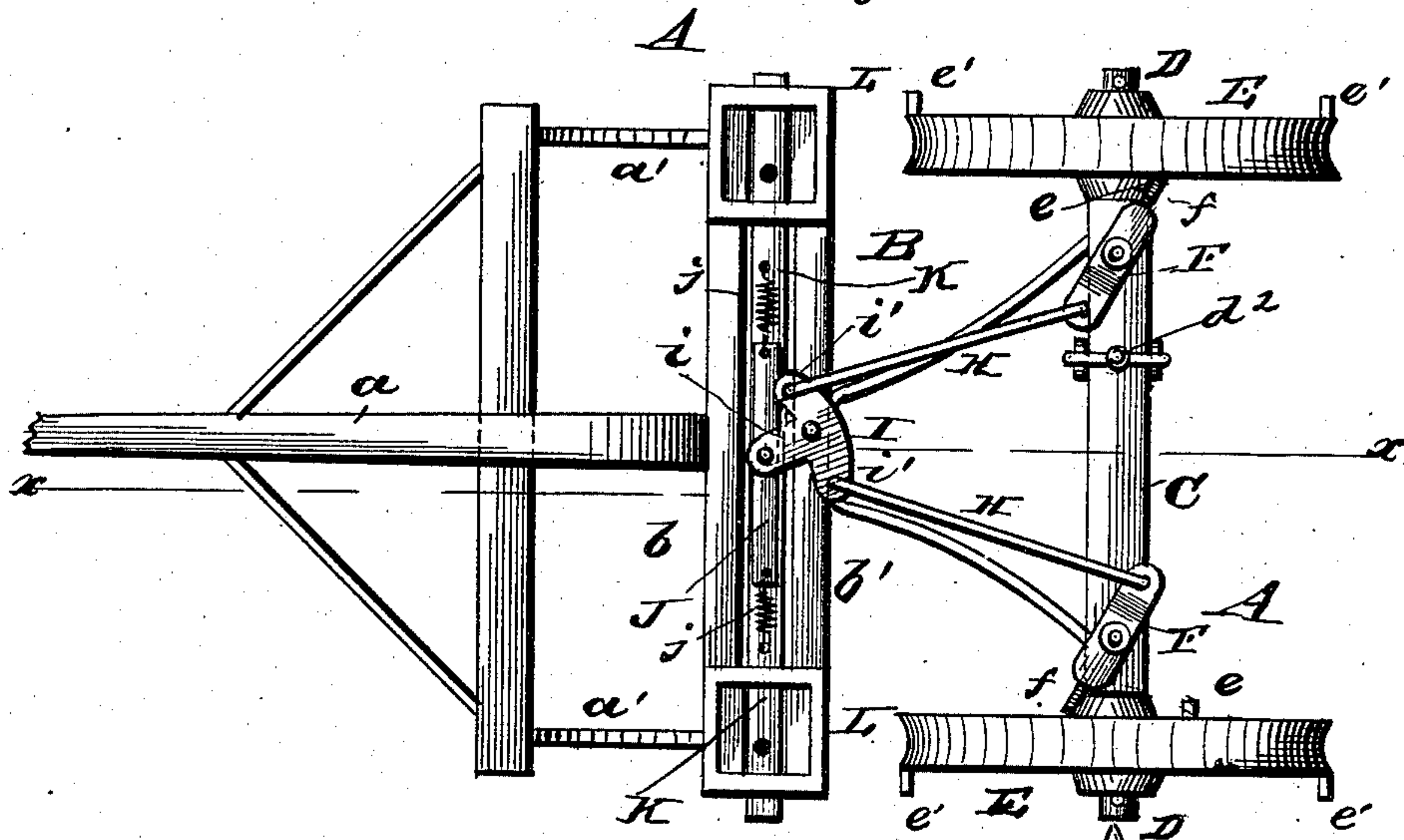


Fig. 2.

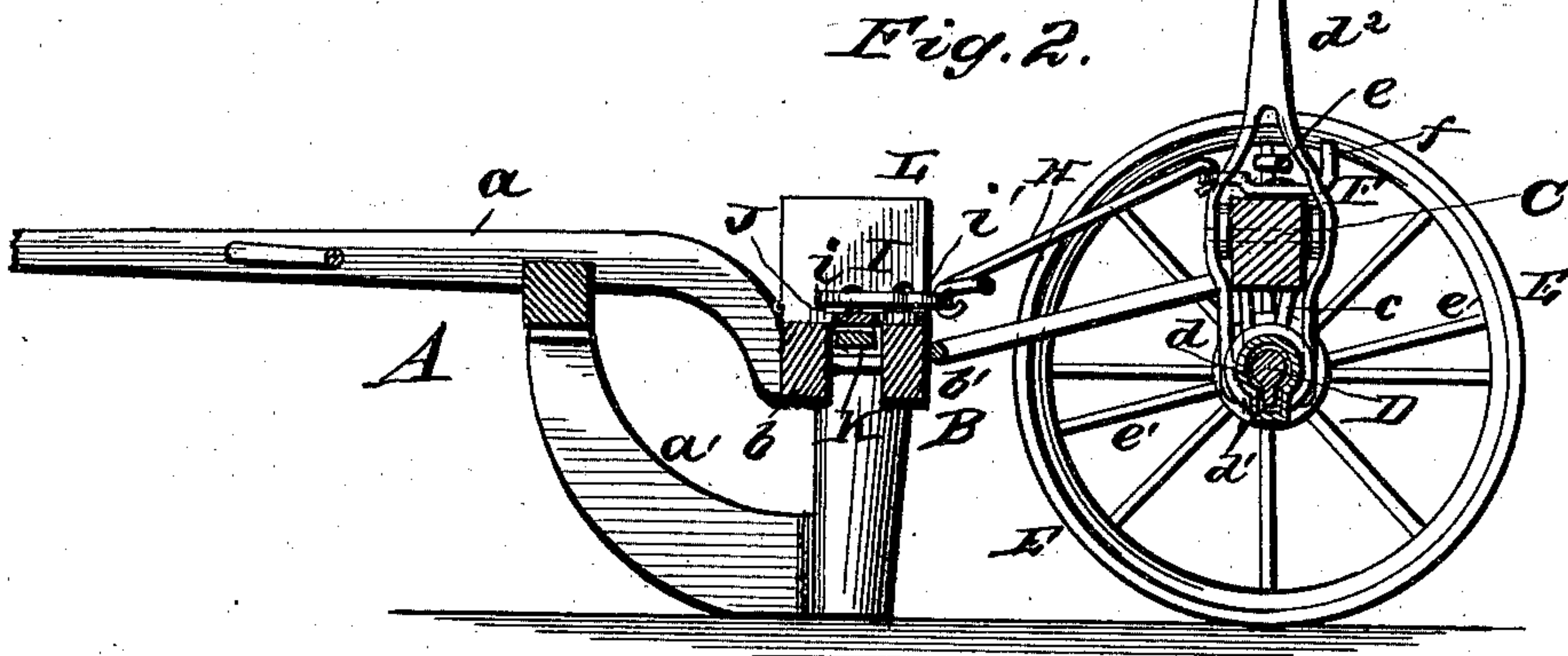
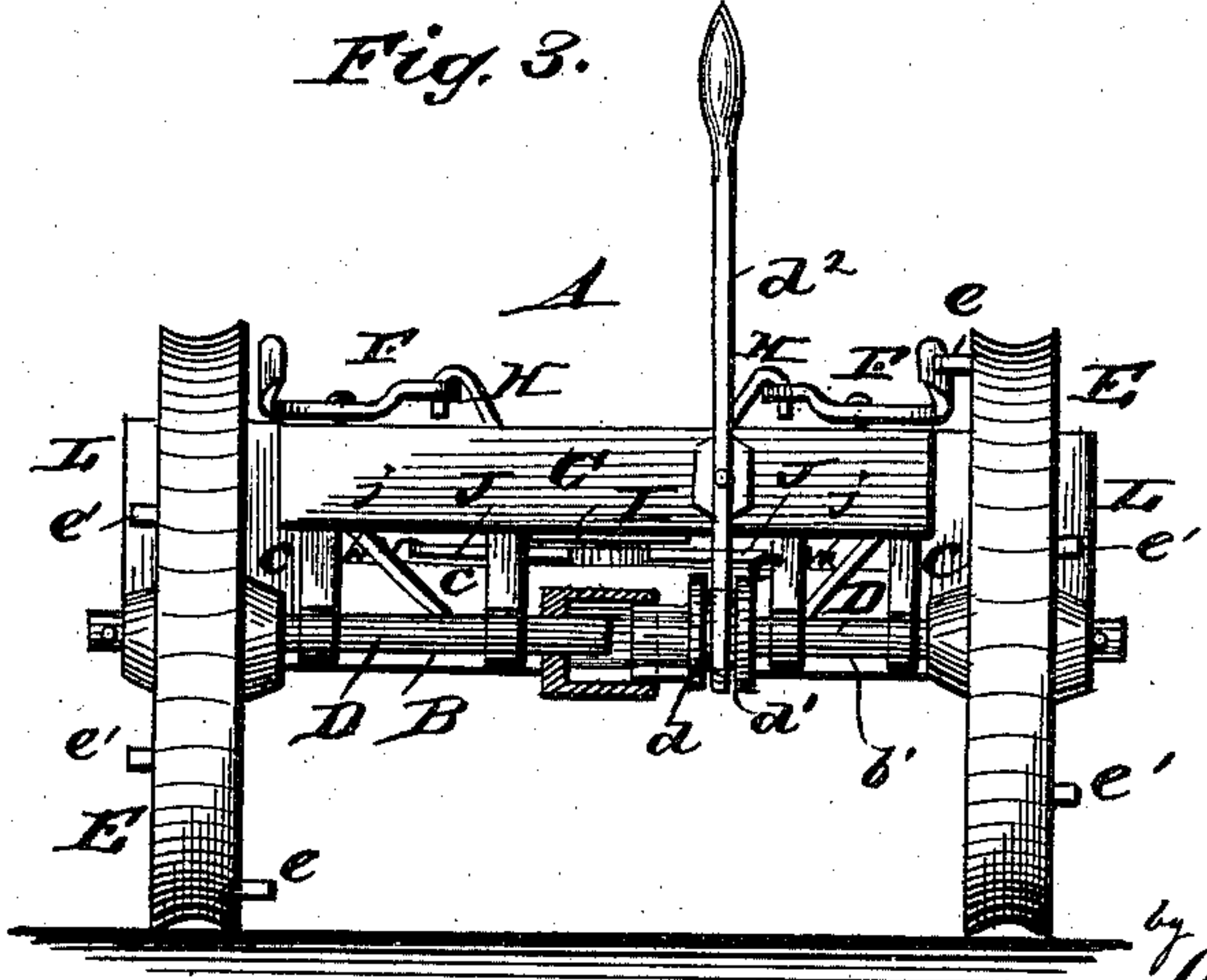


Fig. 3.



WITNESSES

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INVENTOR

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UNITED STATES PATENT OFFICE.

WILLIAM W. CURTIS, OF STANBERRY, MISSOURI, ASSIGNOR OF ONE-THIRD TO JAMES T. DUNN, OF SAME PLACE.

PLANTER.

SPECIFICATION forming part of Letters Patent No. 305,673, dated September 23, 1884.

Application filed June 5, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. CURTIS, a citizen of the United States, residing at Stanberry, in the county of Gentry and State of Missouri, have invented certain new and useful Improvements in 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 letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a plan view of my device. Fig. 2 is a vertical sectional view of the same, and Fig. 3 is a rear view.

The invention relates to that class of planters in which a device to mark the rows is combined with proper planting or drilling mechanism, and its object is, in addition to the construction of an improved form of such mechanism, to mark each successive planting immediately after it is made, both in its own row and in the row on the opposite side of the machine. In connection with the mechanism marking-bars extend horizontally outward from the runs of the wheels, and so placed thereon as to mark immediately opposite each planter as the machine advances.

In the accompanying drawings, A represents the frame of the machine, of which *a* is the tongue; *a' a'*, the runners; B, the transverse frame, carrying the seed-boxes at its ends, and C the transverse beam beneath which the axle is journaled, the frame B and beam C being joined by any proper means. The frame B is composed of the front and rear parallel beams, *b b'*, respectively, between which the slide-bar reciprocates transversely. The beam C has fixed to its under surface the downward-projecting bearings *c c*, &c., one at each of its ends and two equally distant from its center on each side. Between the last two considerable space is left, for a purpose hereinafter mentioned.

The axle is rotating in the bearings *c c*, &c., and having the wheels firmly fixed to its outer ends. The axle D is made of two equal parts united at their meeting ends by the clutch *d*, situated between the inner bearings, *c c*. The end of one part of the axle is enlarged and

bored longitudinally, into which bore the end of the other part fits, being secured there by a longitudinal splice or feather. *d'* is a circumferential groove around an enlargement of the feathered part of the axle, and *d''* is a lever having an upright handle and a lower forked portion, the said fork fitted over and pivoted to the beam C vertically above the groove *d'*, into which its upward-bent ends enter, so that the clutch *d* may be disengaged, when necessary, by moving the handle.

E E are the wheels, each having a tappet, *e*, extending inward at right angles from one of its spokes at a proper point thereof. The tappets are on opposite spokes, but on different sides of the centers, so that when one is up the other is down. Several tappets may be put on each wheel, if desired.

e' e', &c., are marker-bars, standing outward at right angles from the rim of the wheels, the bars on each wheel being opposite to those on the other. For each tappet on a wheel there must be two marker-bars, one situated at a particular distance behind said tappet and the second diametrically opposite the first. The face of the tire of each wheel is slightly concaved, to allow the marker-bars to make a distinct impression in the soil.

F F are similar horizontal vibrating levers pivoted near their centers on the upper surface of the beam C—one near each end of the same. *f f* are the outer ends of said levers bent vertically upward, so that when one of the levers is in a certain position its end *f* will be struck and pushed forward by the tappet on the same side. The outer surface of each end inclines inward, and the end of the corresponding tappet is slightly rounded backward, so as to slip easily from the same when passing it. The inner end of each lever F is provided with a hole, into which is inserted the downward-bent end of a link, H, the front end of the latter engaging an arm of a horizontal vibrating piece, I, which is pivoted near its rear edge to the center of the upper surface of the beam *b'*. The piece I has an arm, *i*, extending forward and two equal lateral arms, *i' i'*, in the ends of which are holes for the insertion of the front ends of the links H H on each side. The arm *i* pivots to the center of a short transverse bar, J, which has attached to each

end a spiral spring, *j*. The outer end of each spring *j* is fixed to the slide-bar K, which enters into and drives the seed from the boxes L L on each end of the frame B.

5 The application of the invention is as follows: As the machine moves forward the tappet on one wheel will strike against the end *f* of the lever F on the same side, driving it forward, and consequently the inner end of said
10 lever backward. This action will draw the arm *i* of the piece I toward that side, which, by means of the bar J and connecting-spring *j*, will reciprocate the slide-bar K, so as to drive the seed from the box L on the side from
15 which the action originated, the springs *j j* being made stiff enough to communicate the motion. When the tappet has passed the end *f*, the spring *j* on the opposite side, which the former action has expanded, will contract sufficiently to draw the lever F on its side, far
20 enough forward to have the end *f* within striking distance of its corresponding tappet. One of the marker-bars is placed just at the proper distance behind its corresponding tappet to
25 mark the spot as the machine moves on where the seed was dropped by the action of that tappet, and an opposite point in the other row is marked by the corresponding bar on the opposite wheel.
30 When a field is planted or drilled in one direction, the machine is easily turned to work at right angles by releasing the links H from the levers F, (so as to stop the operation,) and by disengaging the clutch by means of the lever *d'* when each wheel will rotate separately

in its bearing *c c*. If it is desired to plant closer, the necessary number of tappets is added to each wheel, and a corresponding double number of marker-bars.

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

1. In a planting or drilling machine, the combination, with the boxes L L, slide-bar K, wheels E E, provided with tappets *e e*, and
45 beam C, of the levers F F, links H H, piece I, provided with the arms *i i'* and *i''*, transverse bar J, and springs *j j*, substantially as specified.

2. In a planting or drilling machine, the combination, with the slide-bar K, wheels E,
50 provided with tappets *e*, beam C, having attached the levers F, and links H, actuating the slide-bar by any proper connecting mechanism, of the two-part axle D, each part having
55 a wheel firmly fixed thereto, the clutch *d*, and lever *d'* actuating said clutch, substantially as specified.

3. The combination, with the wheels E, provided with the tappets *e* and marker-bars *e'*,
60 and the beam C, having the levers F attached, of the links H, piece I, transverse bar J, springs *j j*, slide-bar K, and boxes L, substantially as specified.

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

WILLIAM W. CURTIS.

Witnesses:

G. W. SHOEMAKER,
CHAS. E. BUTLER.