

(No Model.)

J. H. BRUMBAUGH, J. M. RADCLIFF & F. C. HYDE.
CORN PLANTER.

No. 459,831.

Patented Sept. 22, 1891.

Fig. 1.

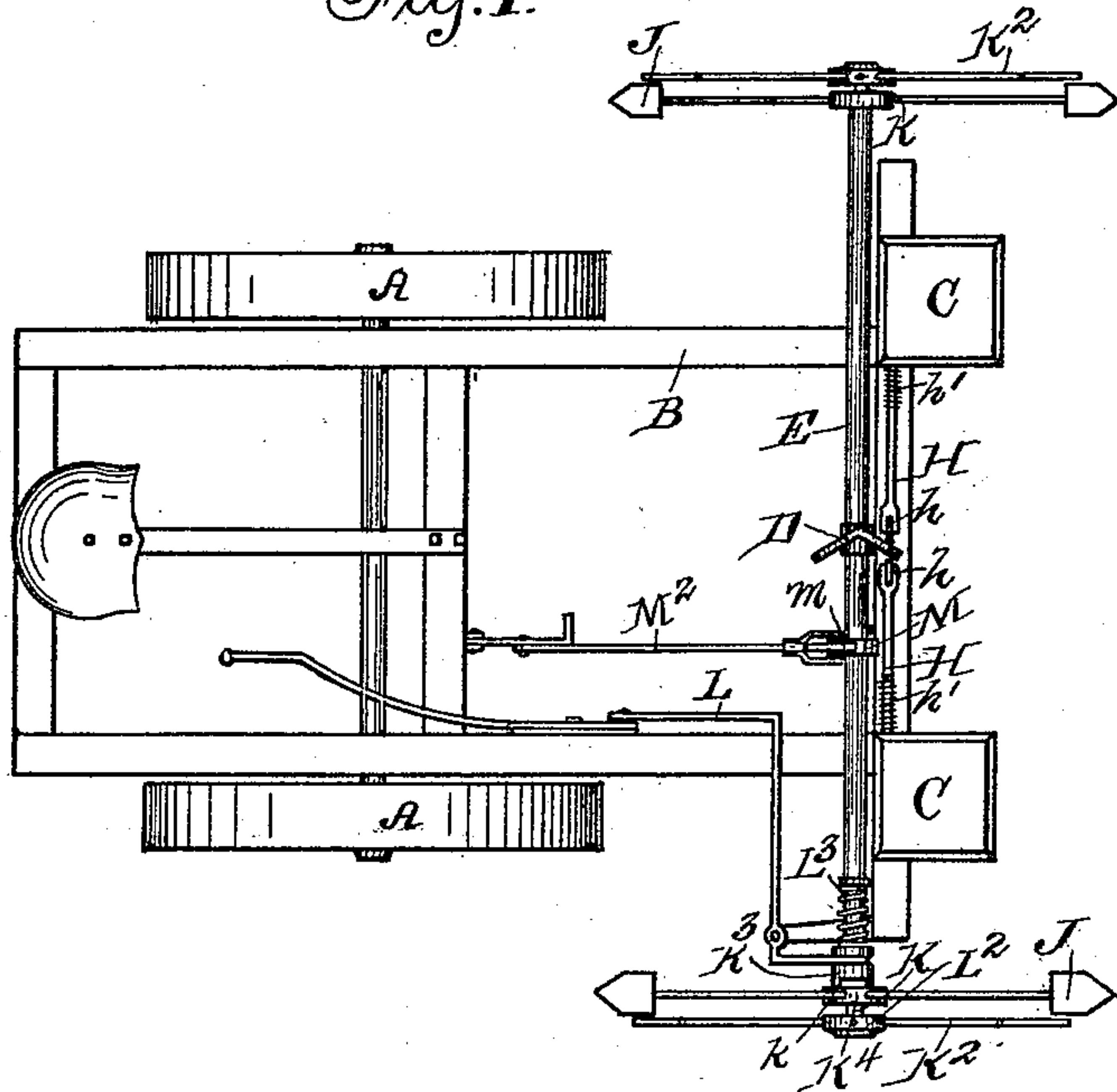


Fig. 2.

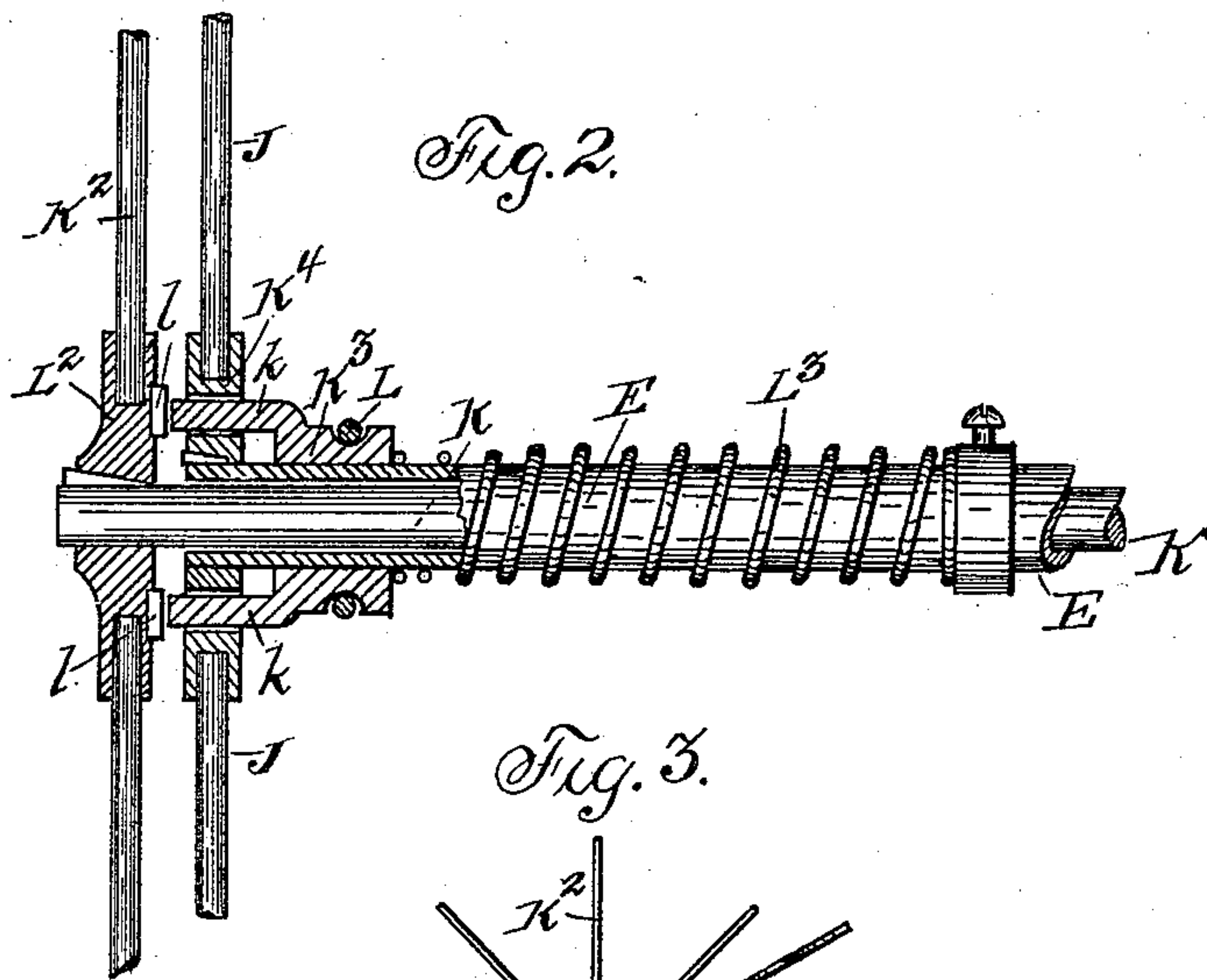
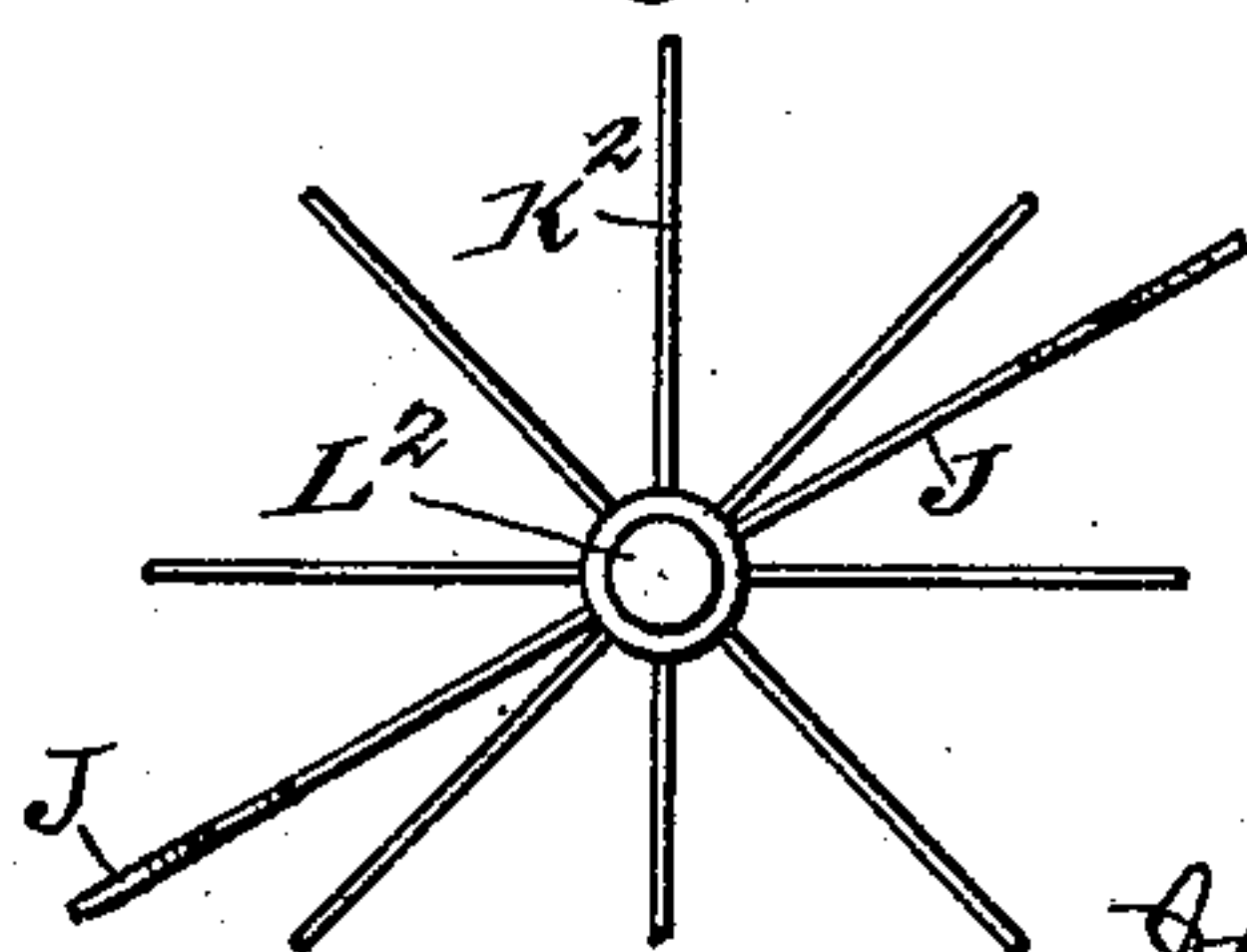


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN H. BRUMBAUGH, JAMES M. RADCLIFF, AND FRED C. HYDE, OF
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CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 459,831, dated September 22, 1891.

Application filed December 15, 1890. Serial No. 374,668. (No model.)

To all whom it may concern:

Be it known that we, JOHN H. BRUMBAUGH, JAMES M. RADCLIFF, and FRED C. HYDE, citizens of the United States of America, residing at Lexington, in the county of Dawson and State of Nebraska, have invented a new and useful Corn-Planter, of which the following is a specification.

Our object is to provide means by which the seed-dropping valves may be actuated, which at the same time shall actuate the markers to check the seed in equal distances apart, means by which the markers may be disconnected from their actuating mechanism, so as to remain inoperative, causing, also, a cessation in the operation of the seed-dropping valves, together with means by which the gain may be compensated.

Our object is to accomplish the foregoing result by the employment of a minimum of parts and by positively-acting mechanism conveniently within the control of the operator.

Our invention consists in a pair of spider-wheels located on each side of the machine-frame, said wheels being adapted to engage the ground in the forward travel of the planter, and thus rotate a transverse solid actuating-shaft to which said wheels are rigidly fixed, a tubular hollow shaft loosely surrounding the solid shaft and having markers secured to each of its ends, mechanism for gearing the said hollow shaft into fixed relation with the solid shaft, a ratchet-wheel fixed to the hollow shaft, a pawl actuated by the operator engaging the ratchet-wheel to compensate for gain of the markers, and a scalloped or zigzag wheel for operating the seed-dropping valves.

Our invention consists, further, in certain details of construction, hereinafter more particularly described, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of the complete planter, showing our attachments. Fig. 2 is an enlarged detail view of the actuating solid shaft and the hollow shaft and the means of adjustable connection between them. Fig. 3 is a face view of the actuating spider-wheel.

A A are the traction-wheels supporting the frame B, which latter has the seed-boxes C C

secured at its outer front end on each side of the machine.

D is a zigzag cam or scalloped wheel fixed to a shaft E, about to be described, and H H are transversely-located valve-rods, which are adapted to actuate the seed-valves in the boxes C C by means of anti-friction wheels *h* *h*, held against each face of the wheel D by means of the springs *h'* *h'*.

Fixed to the outer ends of the shaft E are the markers J, said shaft being hollow and loosely mounted about a solid actuating-shaft K, to each of the ends of which the spider-wheels K² K² are fixed. The shaft E, being shorter in length than the shaft K, is permitted lateral movement thereon, and when the shaft E is not in connection with the shaft K the former is stationary and the latter rotating when the machine is in motion.

The mechanism for connecting the two shafts together is shown in the detail view, Fig. 2, consisting of the clutch-head K³, fixed to shaft E, having the clutch-teeth *k* adapted to pass through the perforation or slots in the hub K⁴ of the markers J. The head K³ is grasped by the bifurcated end of a pivoted lever L, adapted to be actuated by the operator, Fig. 1. The clutch-teeth *k* are adapted, after passing through the perforations on the hub K³, to engage offset or notches *l* in the inner face of the hub L² of the spider-wheel K², a spring L³, coiled about the shaft E, normally tending to preserve this engagement.

M is a ratchet, Fig. 1, fixed to the shaft E, and *m* a pawl engaging said ratchet adapted to be actuated by the operator by means of foot-lever M².

The operation of our device is as follows: The spider-wheels K², engaging the ground in the advancement of the planter, rotate the solid shaft K, which in turn rotates the shaft E, when the clutch is engaged with the hub L² of one of the spider-wheels, the clutch-teeth *k* being held within the notches *l* of hub L², operating the seed-valve by means of valve-rods H H and zigzag wheel D. In order to actuate the seed-valves independently of the shaft K and thus compensate for loss of space, the clutch may be withdrawn from engagement by means of the lever L, and the shaft E rotated by means of the ratchet M,

pawl *m*, and lever *M*², the operator thus actuating the seed-valves to regain the lost space.

What we claim as our invention is—

1. In a corn-planter, the combination of a shaft actuated by means of the spider-wheels engaging the ground in the advancement of the planter, a hollow shaft mounted loosely about the actuated shaft operating the seed-valves, and means for detachably connecting the hollow shaft with the actuated shaft, as and for the purposes set forth.

2. The combination, in a corn-planter, of a solid shaft actuated by means of spider-wheels engaging the ground, a hollow shaft mounted about the solid shaft and having a lateral movement thereon, being normally held in engagement with the hub of the spider-wheels, whereby the two shafts revolve together, mechanism for actuating the seed-valves fixed to the hollow shaft, and means for disengaging the hollow shaft from the said hub, together with a pawl and ratchet for rotating the hollow shaft independently of the solid shaft, as and for the purposes set forth.

3. The combination, in a corn-planter, of an actuated shaft, a hollow shaft mounted about the actuated shaft, and a clutch-head secured to the hollow shaft, with which a hand-lever is connected, having teeth adapted to engage one of the hubs of the spider-wheels, said hollow shaft having lateral movement on the actuated shaft, as and for the purposes set forth.

4. The combination, in a corn-planter, of a solid rotating shaft, a tubular shaft on the solid shaft, and means for transmitting rotary motion from the solid shaft to the tubular shaft at pleasure, a zigzag or scalloped wheel fixed to the tubular shaft, and valve-rods to actuate the seed-dropping valves, having anti-friction rollers held against the sides of the zigzag wheel by means of yielding springs, as and for the purposes set forth.

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