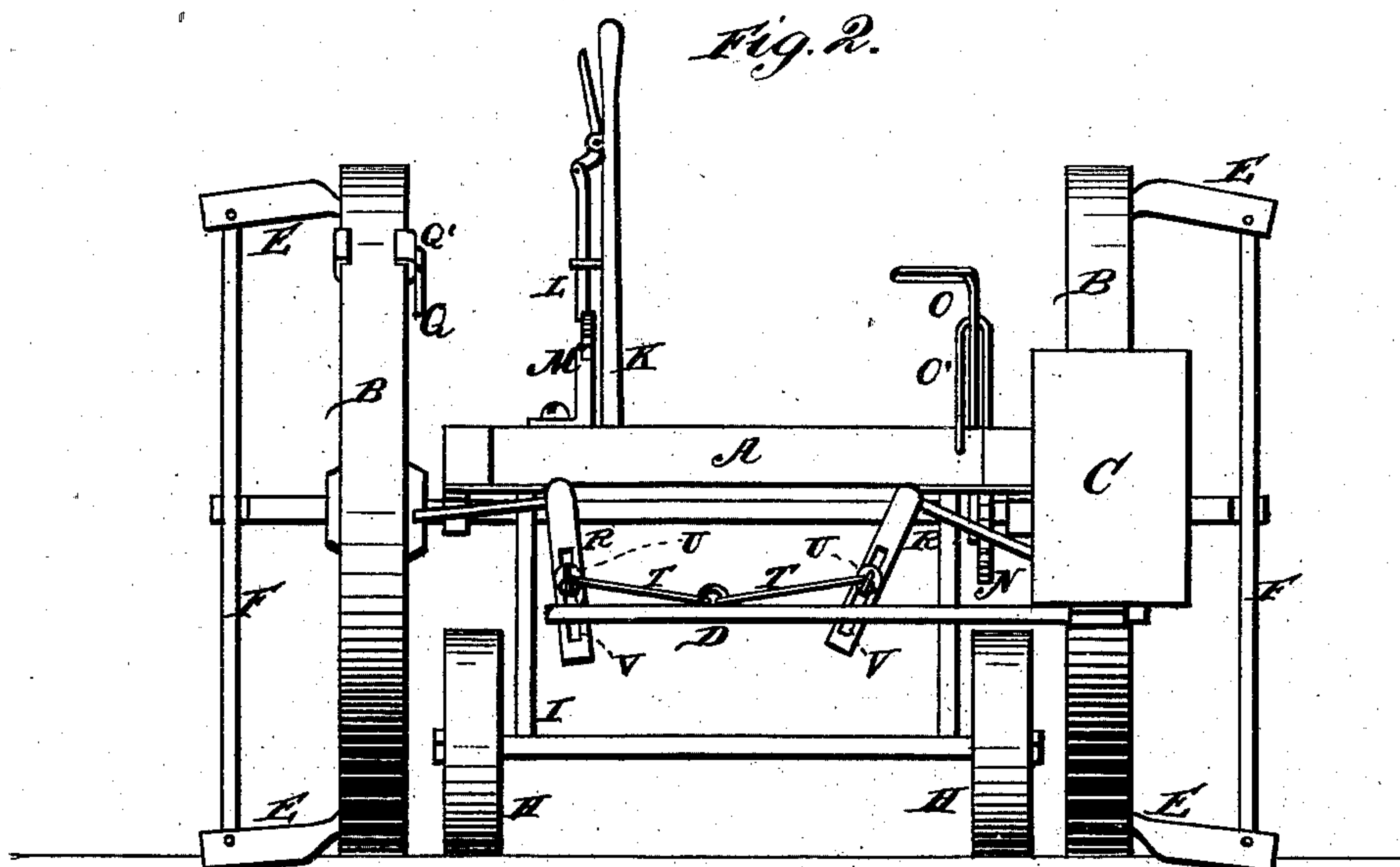
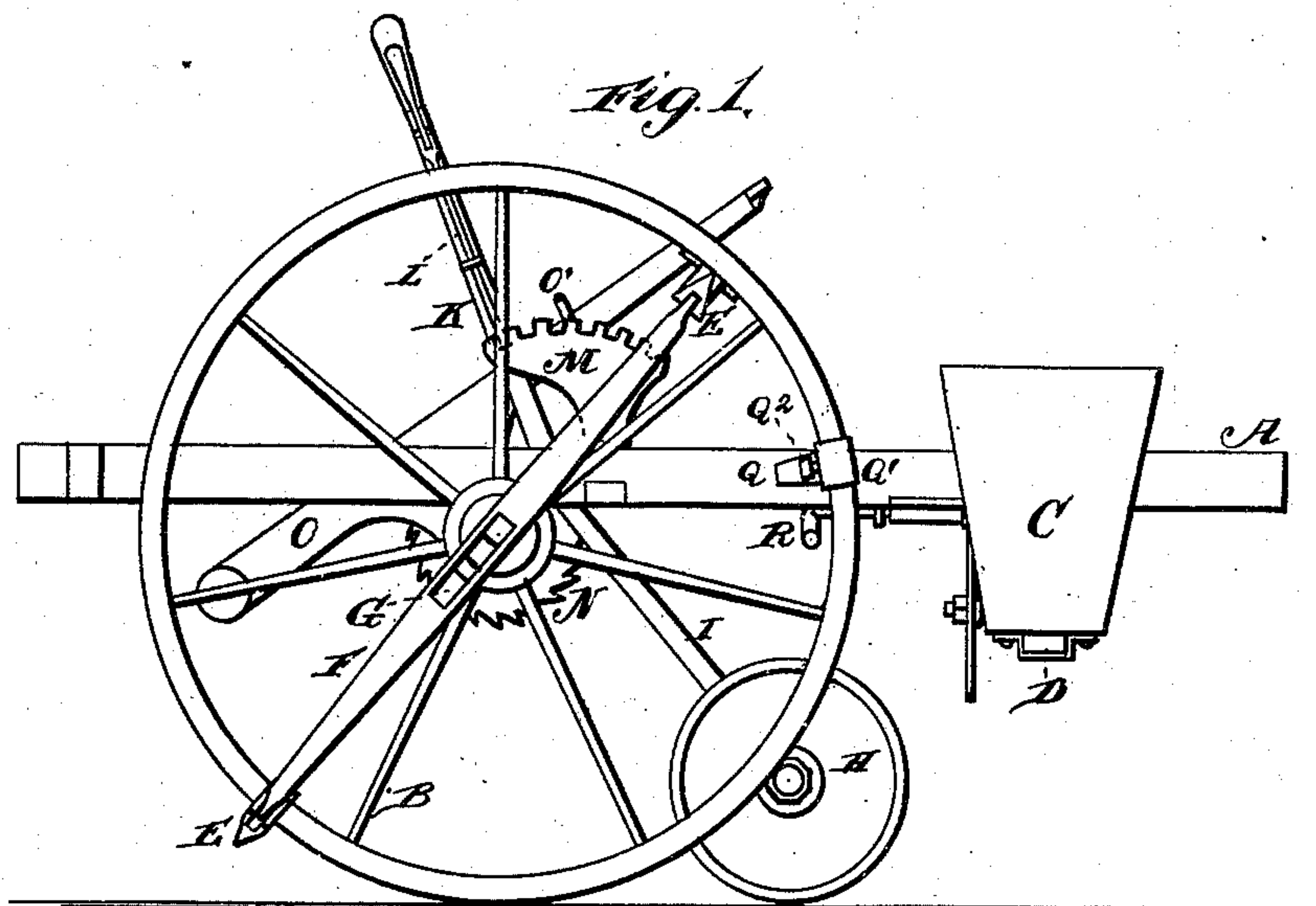


J. K. VOORHEES.
Corn Planter.

No. 229,343.

Patented June 29, 1880.



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Chas. G. Page

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ATTORNEYS

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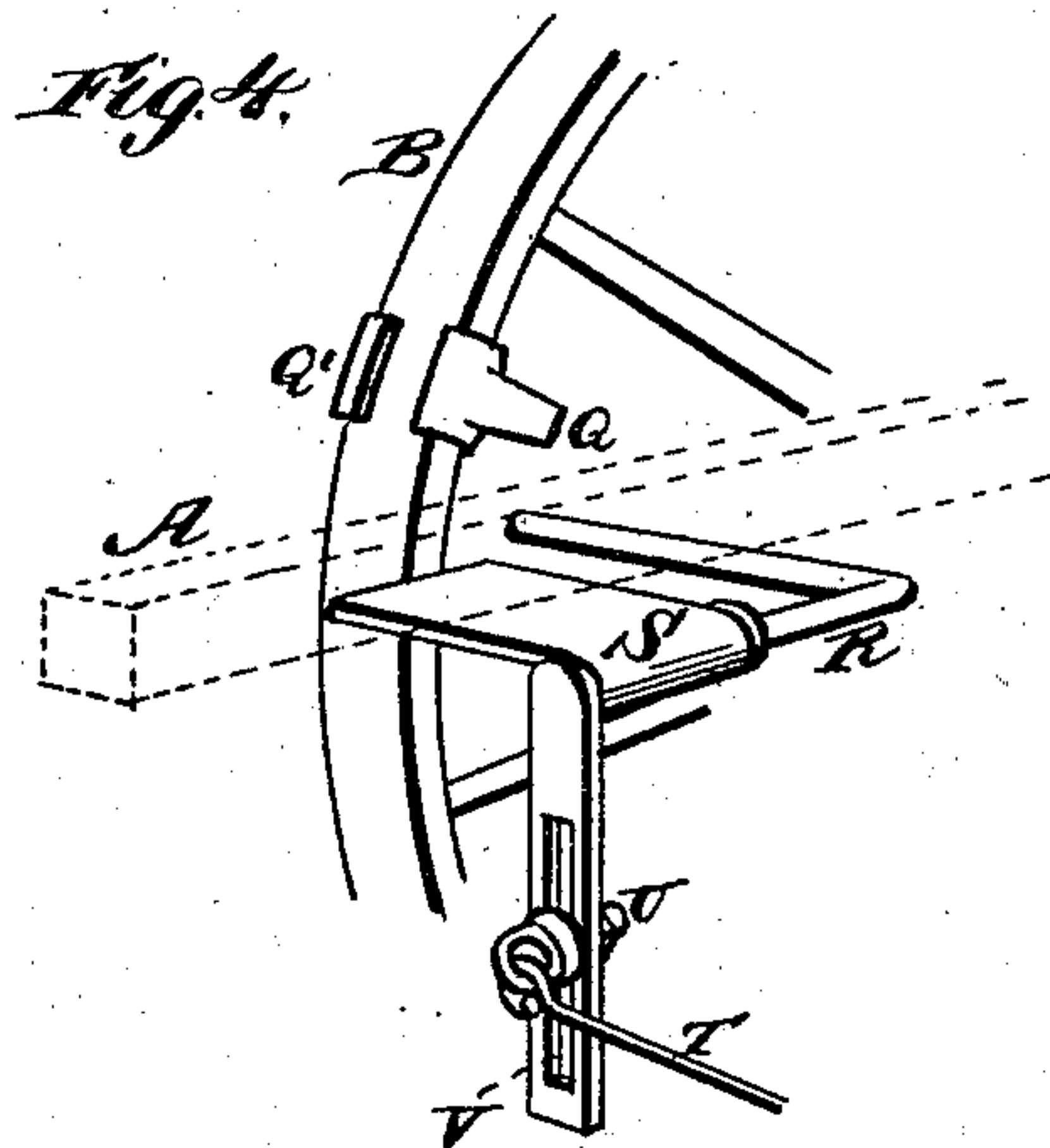
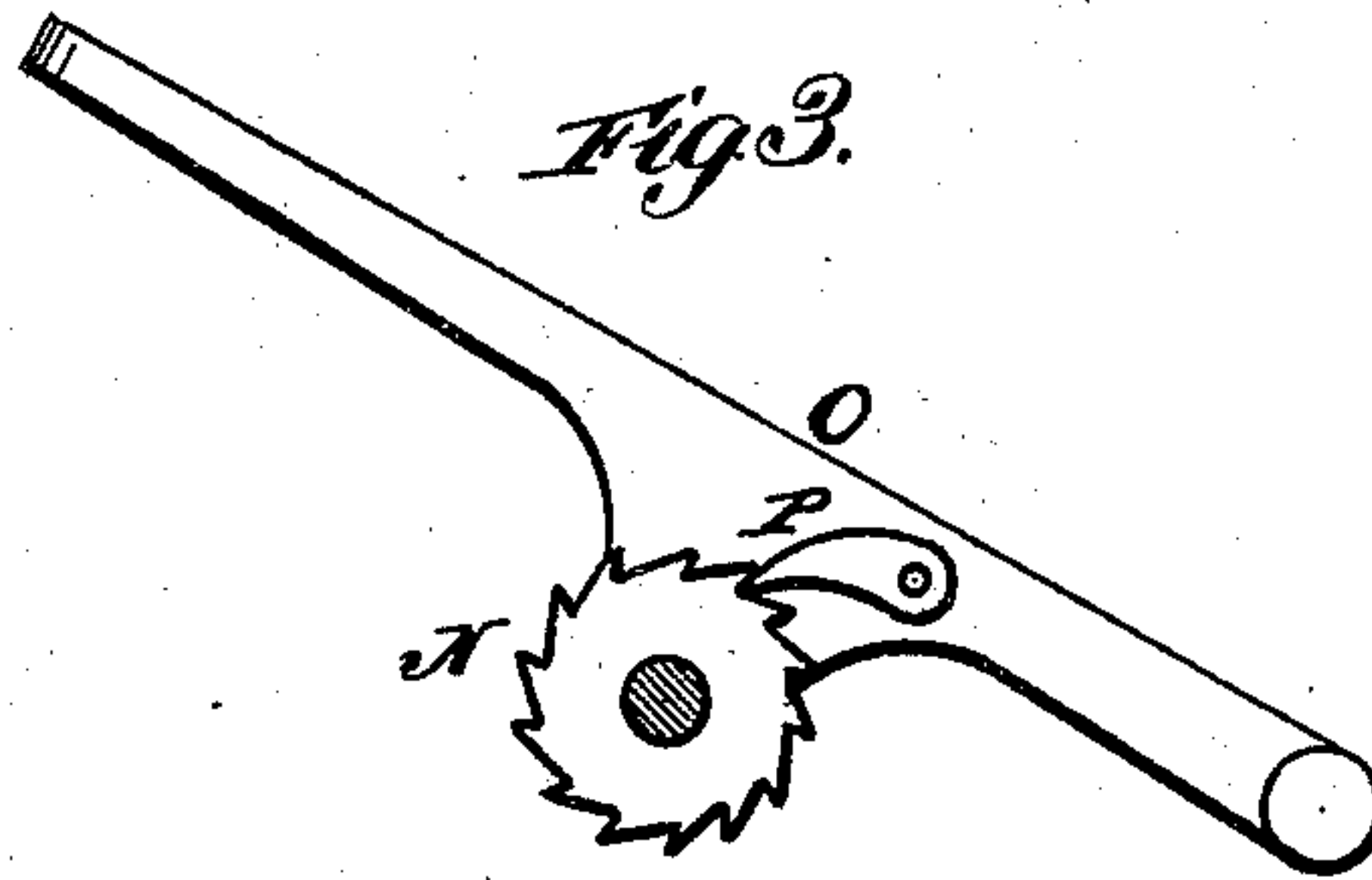


Fig. 5.

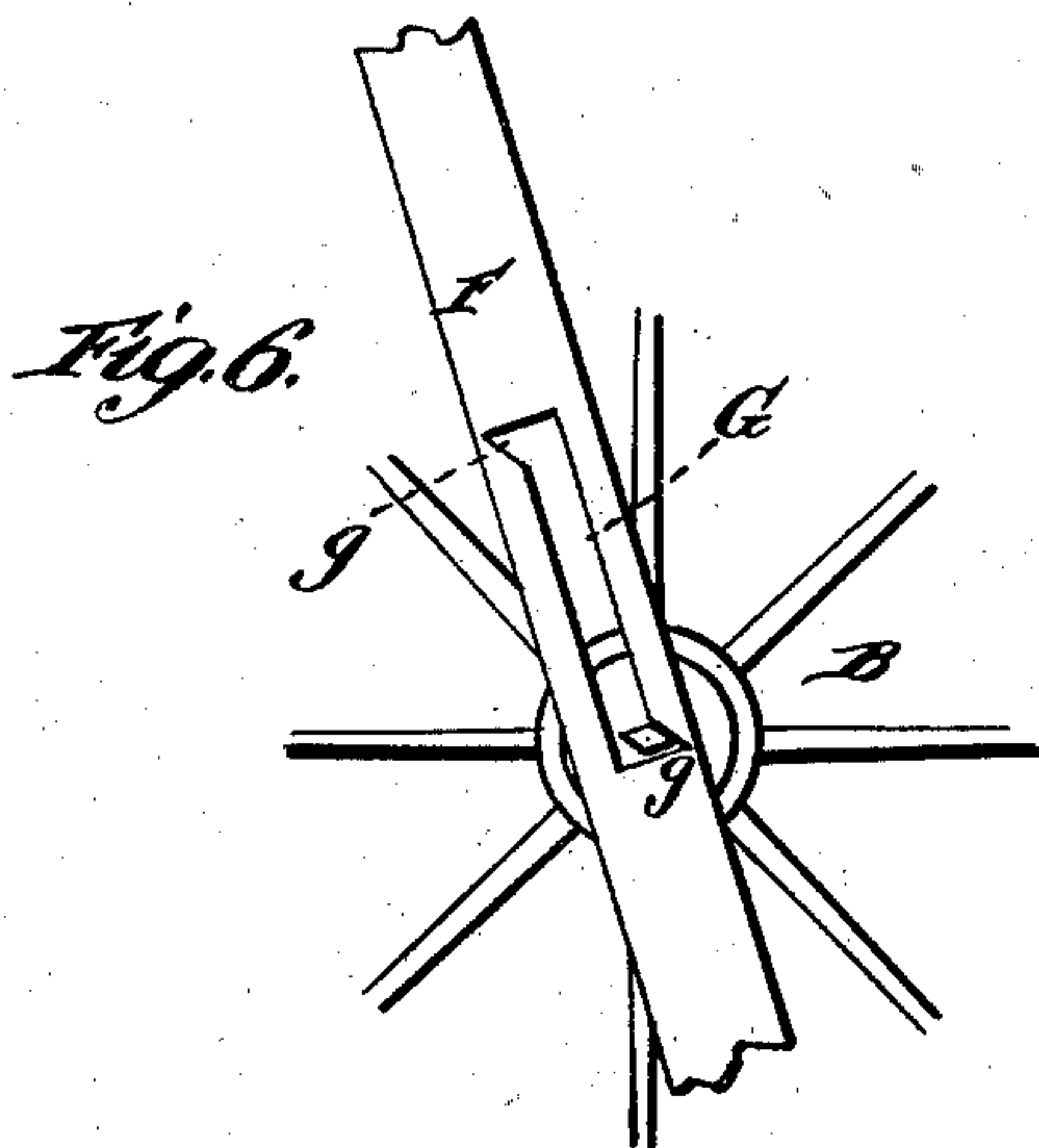
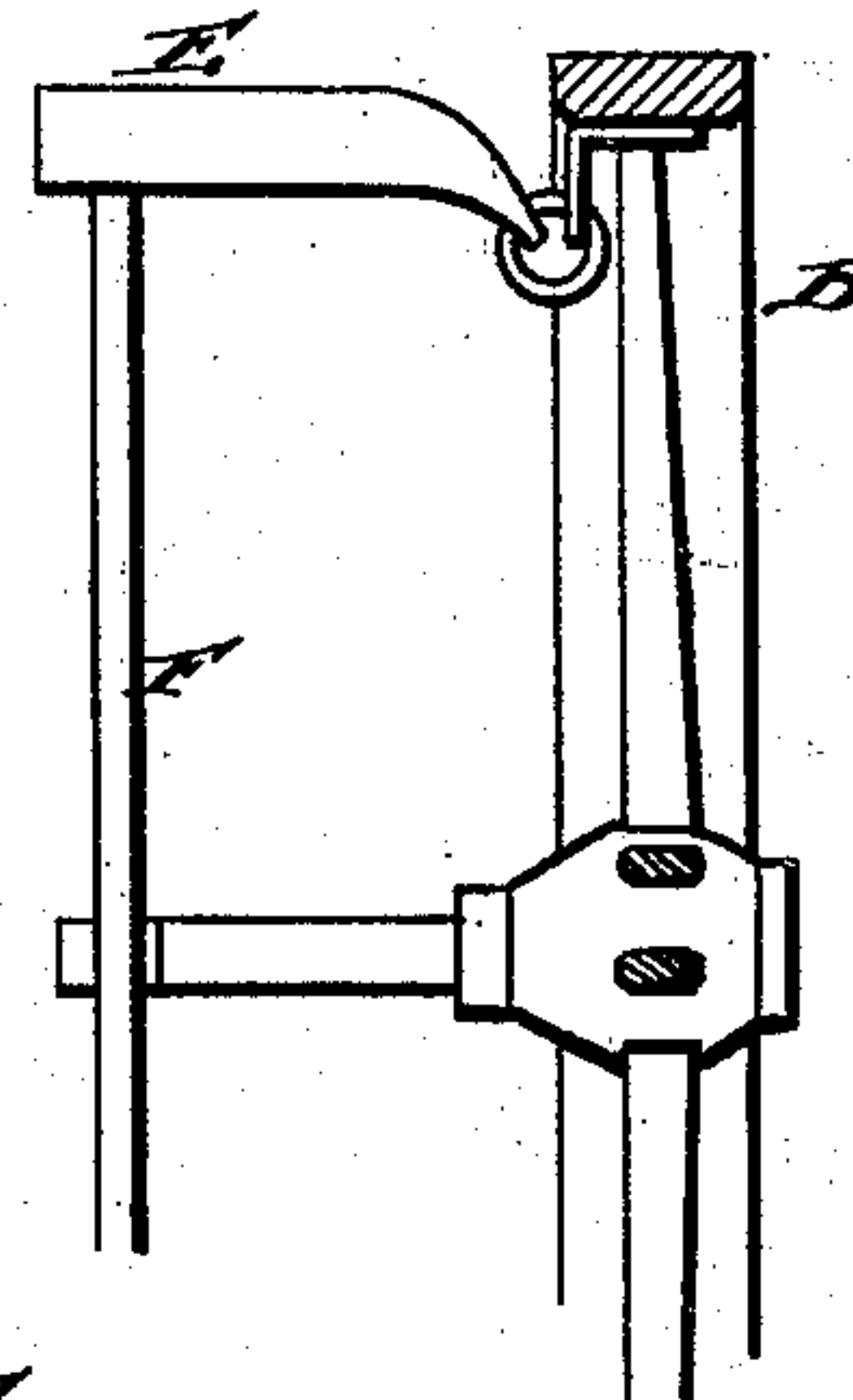
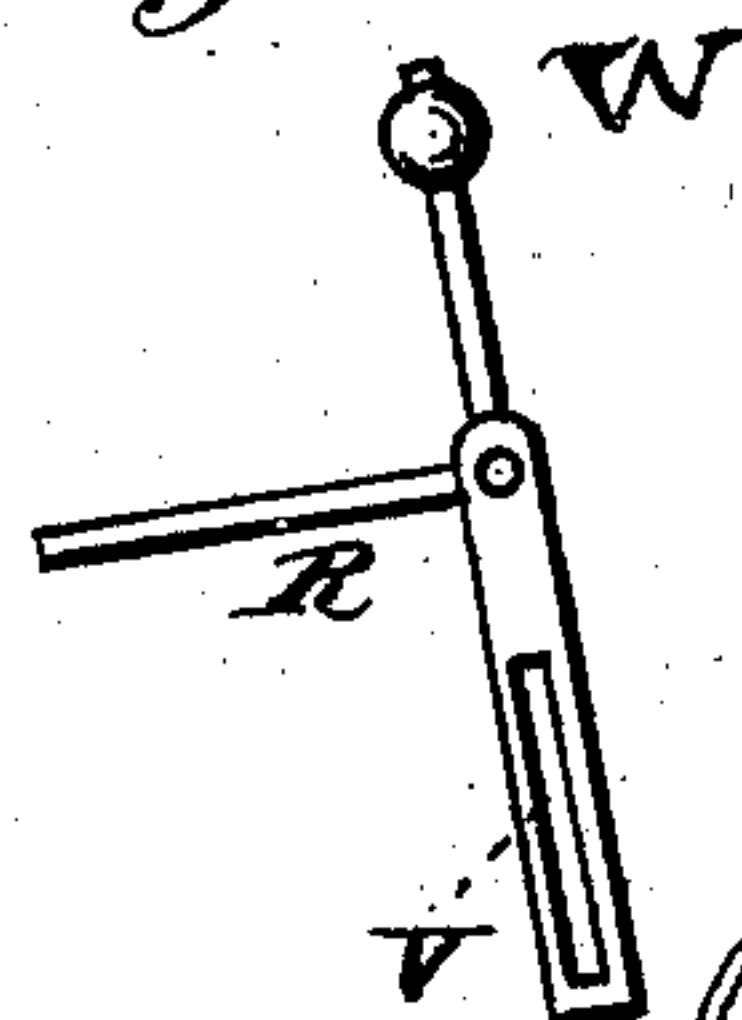


Fig. 7.



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UNITED STATES PATENT OFFICE.

JOHN K. VOORHEES, OF PELLA, IOWA.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 229,343, dated June 29, 1880.

Application filed November 22, 1879.

To all whom it may concern:

Be it known that I, JOHN K. VOORHEES, of Pella, in the county of Marion and State of Iowa, have invented certain new and useful
5 Improvements in Corn-Planters; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being
10 had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side elevation of my corn-planter. Fig. 2
15 is a rear view of the same, and Figs. 3, 4, 5, 6, and 7 are detail views.

This invention relates to corn-planters; and it consists in the improvements in the construction of the same, hereinafter fully described, and particularly pointed out in the
20 claims.

In the accompanying drawings, which illustrate only so much of a corn-planter as is necessary to clearly explain my invention, A designates the main frame, which is supported
25 by the main wheels B B, and C C designate the seed-boxes, with the usual seed-slide D, arranged to reciprocate so as to admit of the discharge of corn through the discharge-spouts in the ordinary way.

E E designate the markers, which consist of angular-shaped bars linked in pairs to the main wheels B B. Each pair of markers is
30 connected by a bar, F, which is pivoted at its ends to the markers, so as to admit of a free reciprocating or up-and-down movement during the rotation of the wheels.

In order to guide the connecting-bars F, I form each of them with a slot, G, into which projects the end of the axle of the main wheels.
40 I prefer forming the slot G with an angular recess, g, at each end, and making the axle ends diamond-shaped in cross-section, so that the walls of the said recess will fit upon the axle, and thereby prevent the bar F from dropping
45 until it is nearly in a vertical line.

H H designate a pair of supplemental wheels, which are mounted upon a hinged frame, I, below the main frame. These wheels are adapted to be thrown forward, so as to allow
50 the weight of the machine to come upon the main wheels B, or to be brought nearly or di-

rectly under the hinged bearings of the frame I, so as to raise the main frame and wheels A B, and thus transfer the weight to the supplemental wheels H. This latter operation is
55 to be effected when the markers are out of check and it becomes necessary to adjust the same by rotating the main wheels independently of any travel of the machine; and to this end I cause the requisite oscillation of
60 the frame carrying the supplemental wheels or rollers by means of a hand-lever, K, which extends up through the main frame, so as to be within convenient reach of the driver; and I further provide this lever with a latching-
65 lever, L, which engages with a sector-rack, M, so as to hold the hand-lever, hinged frame, and supplemental wheels or rollers in position for maintaining the main wheels clear of the ground. In order to rotate the wheels while
70 thus elevated I secure upon the axle a ratchet-wheel, N, and also mount loosely upon the axle, alongside of the same, a weighted hand-lever, O, arranged to work in a guide-frame, O', and carrying a pawl, P, which engages with
75 the ratchet, and thereby rotates the same, together with the axle and main wheels, when the hand-lever is vibrated by the driver. After the wheels have been thus rotated and the markers brought in check, the latching-lever
80 may be freed from the sector-rack and the machine lowered, so that the main wheels will travel upon the ground as before.

The devices for reciprocating the seed-slide consist of studs Q, projecting from the rims of
85 the main wheels, lever-bars R, bent so as to constitute in effect bell-crank levers, pivoted in bearings S, and connecting-rods T between the seed-slide and the forward arms of the bent levers R. These rods T are linked or
90 otherwise flexibly connected both to the seed-slide and to set-screws U, which are adjustably secured within slots V of the forward arms of the bell-crank levers. The object of this adjustment is to vary the throw of the seed-slide,
95 it being obvious that by shifting the position of the set-screws the forward arms of the levers will be practically varied in length.

The studs Q are formed with or secured to clasps Q', which embrace the rims of the main
100 wheels B, and these clasps may be shifted and secured in proper position upon the wheels by

means of set-screws Q^2 , so as to determine their periods of action upon the bell-crank levers. I propose providing each of these levers with a counterpoise-weight, W, so as to
5 insure the full throw of the seed-slide during operation.

As the machine is drawn forward the markers, which are carried round with the main wheels, drop at stated periods by gravity, half
10 of the circumference of each wheel between each pair of markers being equal to the space between two hills of corn.

What I claim, and desire to secure by Letters Patent, is—

15 1. In a corn-planter, a marker hinged to the main wheel and adapted to drop automatically

by gravity at stated periods, so as to space off the ground, substantially as herein shown and set forth.

2. The combination of the main wheel B, 20 hinged markers E, bar F, pivoted to the markers, and the axle extending into a slot, G, of the pivoted bar, substantially as shown and set forth.

In testimony that I claim the above I have 25 hereunto subscribed my name in the presence of two witnesses.

JOHN K. VOORHEES.

Witnesses:

CHAS. G. PAGE,
JAMES J. SHEEHY.