

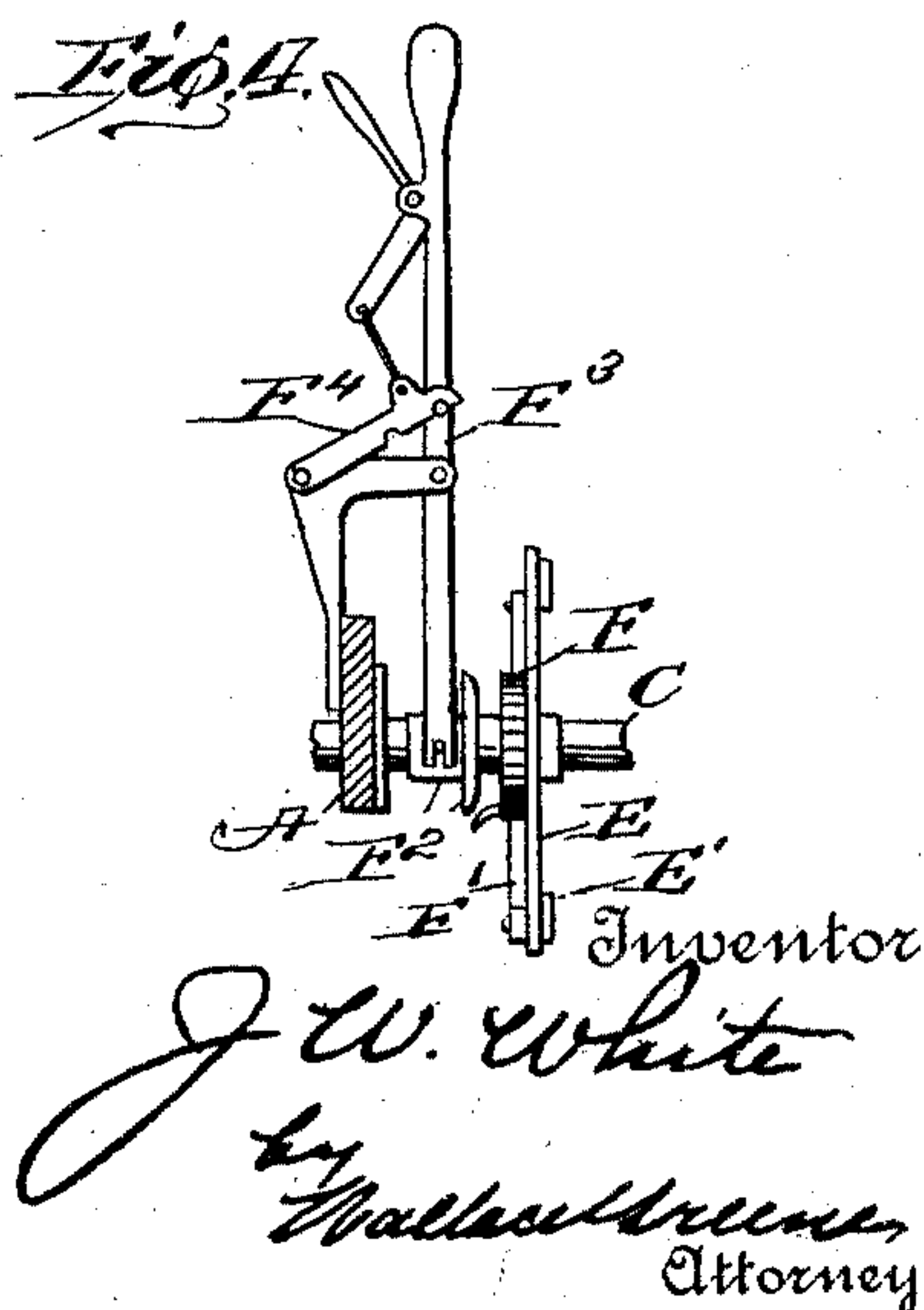
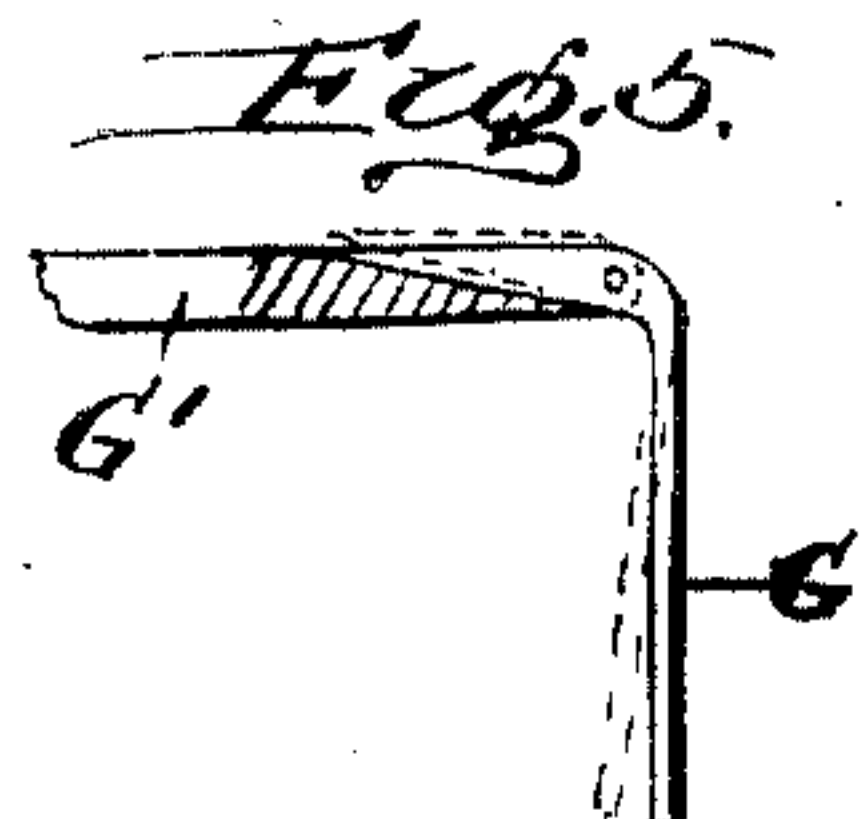
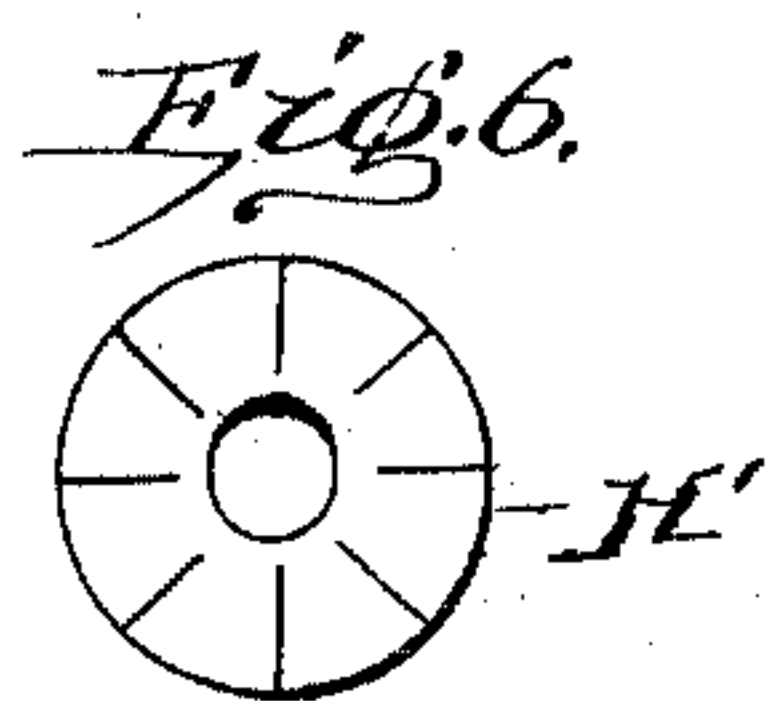
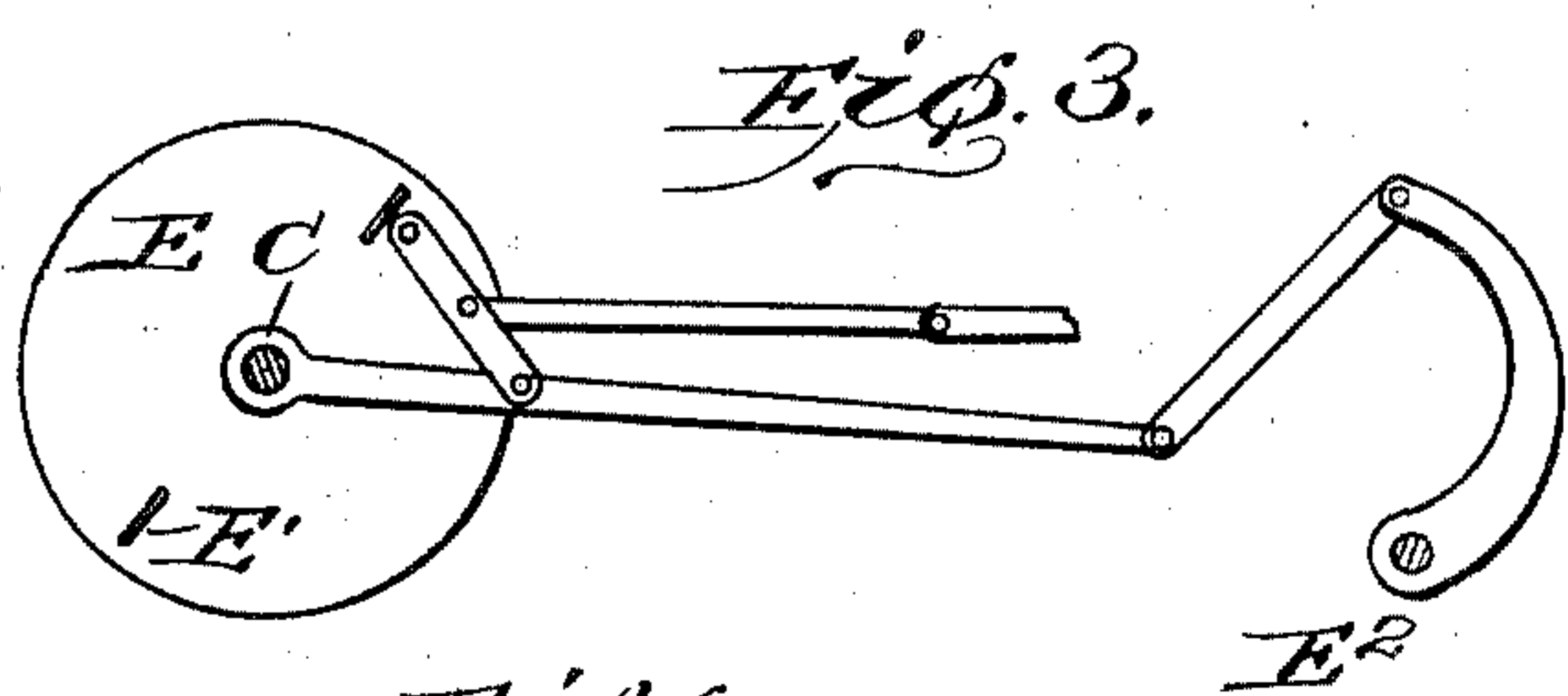
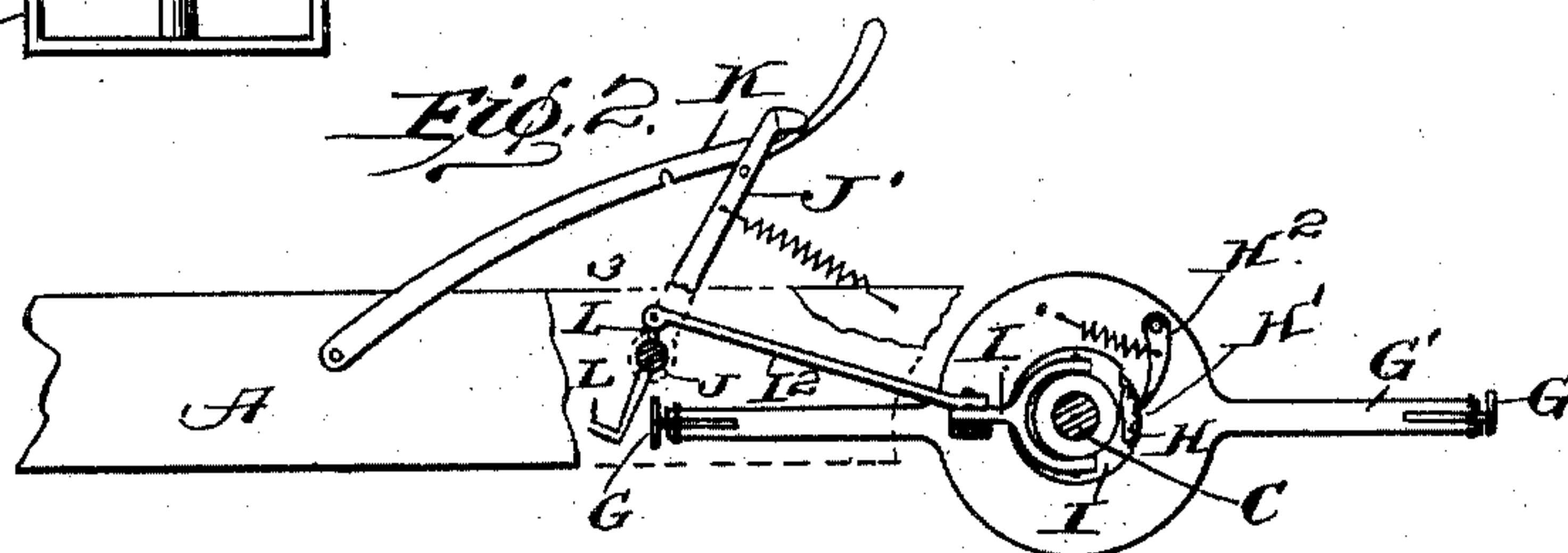
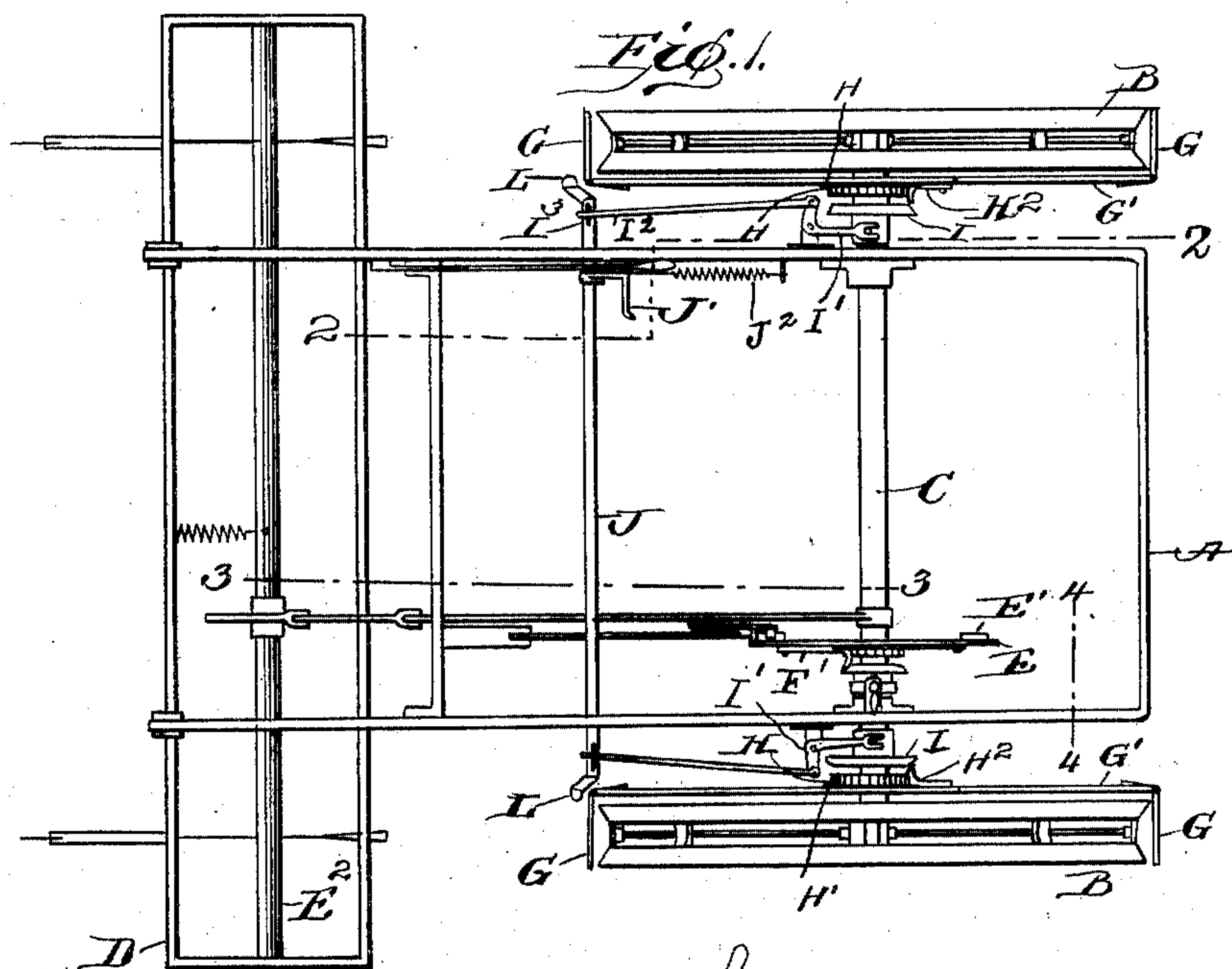
No. 760,045.

PATENTED MAY 17, 1904.

J. W. WHITE.
CORN PLANTER.

APPLICATION FILED NOV. 19, 1903.

NO MODEL.



Witnesses
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JOSEPH W. WHITE, OF BRIGHTON, IOWA.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 760,045, dated May 17, 1904.

Application filed November 19, 1903. Serial No. 181,793. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH W. WHITE, a citizen of the United States, residing at Brighton, in the county of Washington and State of Iowa, have invented new and useful Improvements in Corn-Planters, of which the following is a specification.

My invention relates to corn-planters intended to be used without check-row wires or the like, and particularly to the marking devices and devices for correcting alinement.

In the accompanying drawings, Figure 1 is a plan view of so much of a corn-planter as is necessary to show my devices in operative position. Figs. 2, 3, and 4 are sections on the lines 22, 33, 44, respectively. Fig. 5 is a detail view of a certain marker. Fig. 6 is an enlarged detail view showing a certain friction-producing spring-disk hereinafter mentioned.

The planter illustrated involves a main frame A, supported by wheels B and a wheel-driven axle C and having the usual front or runner frame D and ordinary attachments hinged to its forward end. Upon the axle is mounted a disk E, provided with lugs E', which act, through devices without novelty, to rock a dropper-shaft E². Primarily the disk is loose upon the axle; but a ratchet-wheel F is fixed to the axle alongside the disk and normally engaged by a spring-actuated pawl F' upon the disk, the arrangement being such that the forward rotation of the axle compels the like rotation of the disk, while the rearward rotation of the axle is without effect upon the disk because of the slipping of the pawl. The pawl may be moved out of engagement for any desired interval by means of a sleeve F² of conical form, which is carried back and forth on the axle by means of lever F³, pivoted upon the frame and provided with a pawl F⁴, adapted to lock it at either limit of its movement. The dropping may thus be delayed for an instant while the machine advances or may be suspended while turning or while moving the machine from field to field, for example. Practically the tendency is for the dropping to occur before the proper point is reached, and hence by retarding the dropping action as occasion may

require perfect alinement may be secured. No novelty is found in the devices through which the lugs upon the disk operated the dropping-rod.

In order that alinement may be readily made, it is necessary that the points where seed is deposited should be accurately and distinctly marked, and with this fact in view I have devised certain mechanism which stamps across the track of each wheel and at proper points very conspicuous marks. These marks are made by plates G, extending across the rim of each wheel at diametrically opposite points, bent at right angles just within the plane of the wheels and pivoted to the ends of bars G', loosely mounted upon the axle, the pivotal union being such that the plates may swing against the wheel-rim, but cannot swing outward beyond normal position. It follows that when they travel around with the rim they strike the earth when below the axle, swing against the wheel-rim, and are pressed into the ground by the weight of the machine and without any strain upon the bar. Alongside each bar is a ratchet-wheel H, preferably separated from the bar by a spring-disk H' to afford a slight frictional resistance to the independent rotation of the bar, and on the bar is a spring-pressed pawl H², normally engaging the ratchet-wheel and in such manner that forward rotation of the axle must be accompanied by like rotation of the bar. The pawl may be released, freeing the bar from the axle, by means of a conical sleeve I sliding on the axle and by passing under a projection upon the pawl, moving the latter outward. The sleeve is actuated by the forked arm of a bell-crank lever I', pivoted upon the frame and having its other arm connected by a link I² with an arm I³ upon a transverse rock-shaft J, mounted upon the frame in front of the wheels and rocked forwardly by a foot-lever J'. A strong spring J² resists the rocking and restores the shaft to position when it is released. When the shaft is rocked forward, it is automatically locked against return by a latch K, which engages a pin upon the foot-lever; but it may be instantly released at any time by raising this latch. When the cone lifts the pawl out of engagement in the manner just explained,

the bar is carried on with the wheel and axle by friction until it is arrested by an arm L, carried by the rock-shaft, and thrown rearward by the forward rocking. The machine
 5 may now be turned or moved from place to place while the markers are thus held out of action. The parts are so proportioned and arranged that if the dropper-operating disk be brought to a predetermined position and
 10 the latch be then raised, releasing the rock-shaft and the markers, the latter move on with the axle and reach marking position just in time to mark the points at which seed has been deposited, and thereafter the two
 15 markers on each wheel mark at intervals corresponding exactly with the spaces between successive hills so long as the planter advances precisely the proper theoretical distance for each revolution of its wheels. For
 20 well-known reasons there is often a slight lag in the advance of the planter, and the seed is dropped slightly before proper alinement is reached. By means of the two clutch mechanisms both dropping and marking may be
 25 readily delayed at any time so much as is necessary to correct fault of alinement, and this may be accomplished almost instantly while the machine is advancing or more deliberately by stopping and carefully adjust-
 30 ing both dropping and marking devices. It is to be observed that this arrangement not only saves much time lost in arranging check-row wires, but also permits discarding much mechanism and materially reduces the cost of
 35 the planter.

What I claim is—

1. The combination with a frame, frame-supporting wheels and a wheel-driven axle, of dropper-operating devices, a member pri-
 40 marily revoluble upon the axle and adapted to actuate said devices when it rotates, a ratchet-wheel fixed to the axle alongside said member, a spring-pawl carried by said member and normally engaging the ratchet-wheel,
 45 compelling said member to rotate with the latter, a conical sleeve sliding on the axle into and out of position to lift the pawl, and means for moving the sleeve in either direction.

2. The combination with a planter-wheel,
 50 of a marker just without the wheel-rim, automatic means for adjusting the same circumferentially about the wheel and means for arresting the adjusting movement at a predetermined point.

55 3. The combination with a planter-wheel, of markers transverse to the wheel's rim, just

without the rim in the wheel's plane, hinged to swing toward the rim under pressure, and arranged to be adjusted around the periphery of the wheel. 60

4. The combination with a planter-wheel of a marker in the plane of the wheel, transverse to the rim and hinged to swing toward the same, and means for at will compelling the marker to revolve with the rim during any de- 65 sired interval only.

5. The combination with a planter-wheel and axle, of connected markers located radially just beyond the wheel-rim, a friction device constantly urging the marker to accom- 70 pany the wheel in its rotation, means for arresting the frictionally-produced movement of the markers when they reach a predetermined position, and means for positively compelling the markers to accompany the forward 75 rotation of the wheel.

6. The combination with a planter-wheel and its wheel-driven axle, of markers located radially just without the wheel-rim and revoluble independently of the same, devices 80 frictionally urging the markers to accompany the wheel in its rotation, means for at will arresting and releasing the markers at a certain point in their frictionally-produced movement, and means for at will positively com- 85 pelling the markers to rotate with the wheel.

7. The combination with a planter-frame, wheels and axle, of dropper-operating devices, a member revolubly mounted upon the axle and arranged to operate said devices when it 90 rotates, and means for at will locking said member to the axle and for releasing it therefrom.

8. The combination with a planter-frame, wheels and axle, of marker devices consisting 95 of diametrical bars revolubly mounted upon the axle alongside the wheels, respectively, and provided at their ends with markers extending over the wheel-rims, means for at will locking the marker devices to the axle 100 and for releasing them therefrom, stops movable into and out of position for arresting the released markers at fixed points, and means whereby actuating the marker locking and releasing devices also actuates said stops. 105

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH W. WHITE.

Witnesses:

LABAN C. FLEAK,
 H. B. DARDEN.