(No Model.) 2 Sheets—Sheet 1.

E. E. WITTER.

MARKER FOR CORN PLANTERS.

No. 423,363. Patented Mar. 11, 1890.

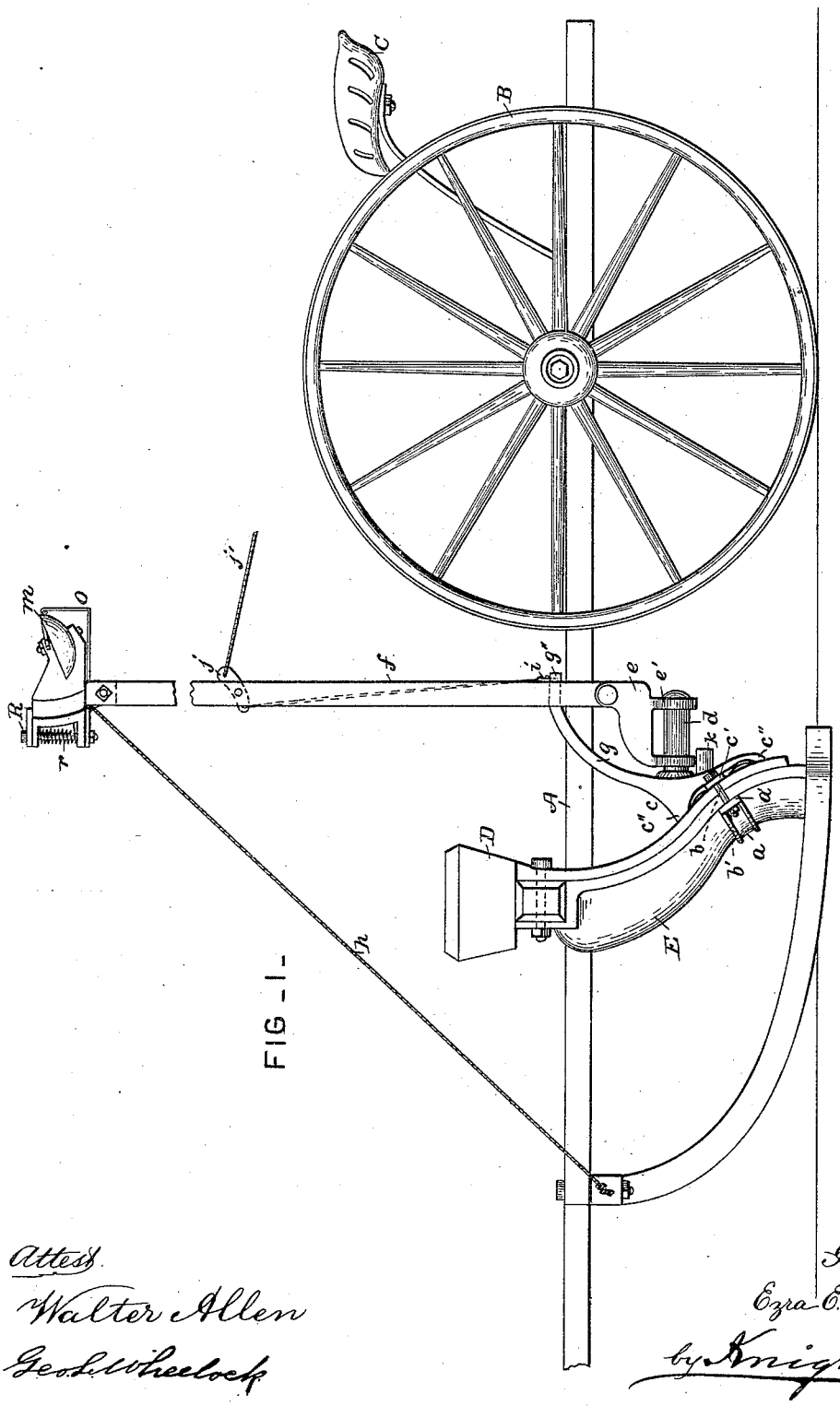

FIG - 1 -

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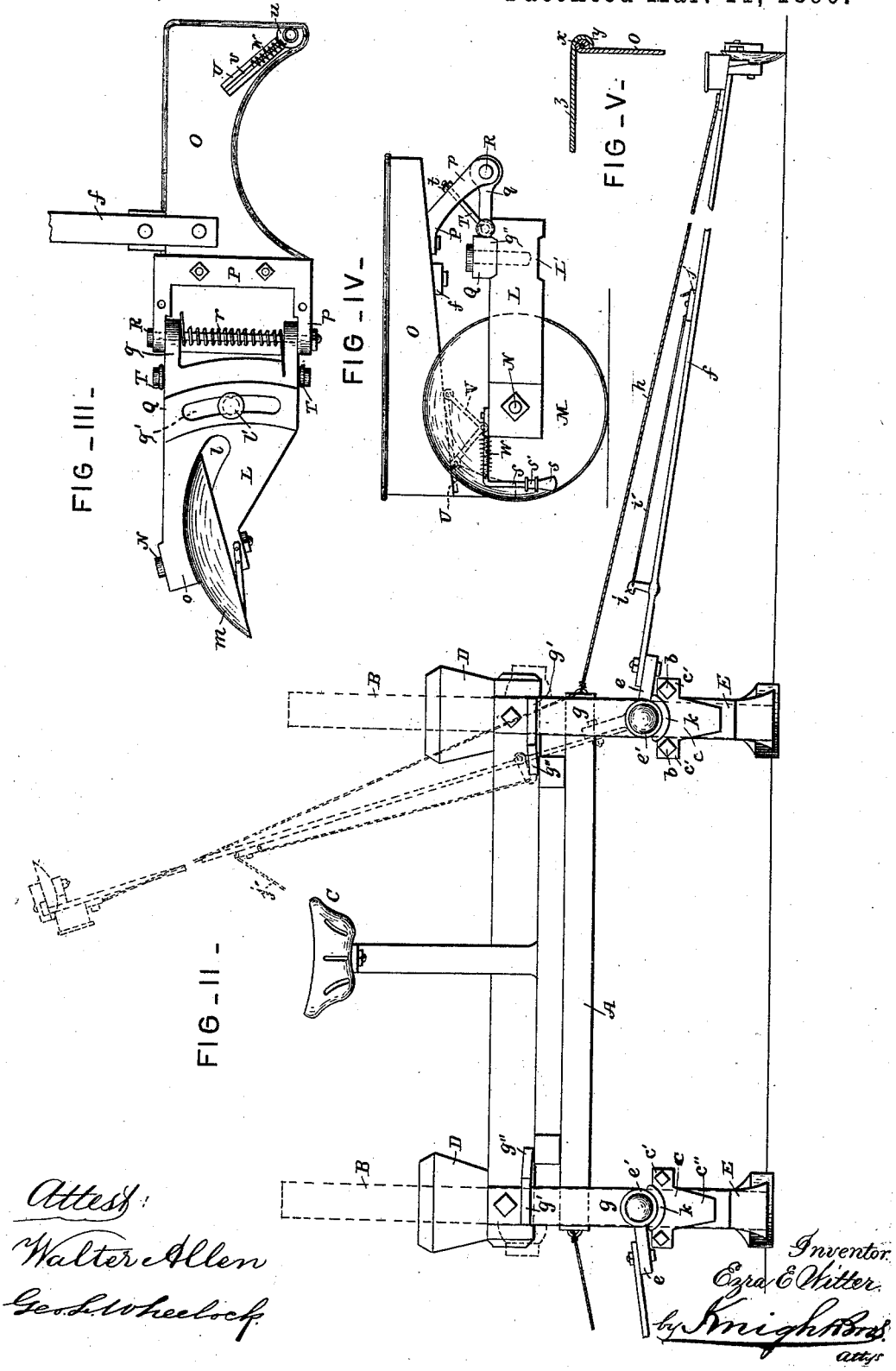

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UNITED STATES PATENT OFFICE.

EZRA EDGAR WITTER, OF MILFORD CENTRE, OHIO.

MARKER FOR CORN-PLANTERS.

SPECIFICATION forming part of Letters Patent No. 423,363, dated March 11, 1890.

Application filed April 29, 1889. Serial No. 308,990. (No model.)

To all whom it may concern:

Be it known that I, EZRA EDGAR WITTER, a citizen of the United States, residing at Milford Centre, Union county, in the State of Ohio, have invented certain new and useful Improvements in Markers for Corn-Planters, of which the following is a specification.

My invention has relation to that class of markers for corn-planters that have movable marker arms or shafts extending to one side of the machine, on the outer ends of which the marking attachments are secured, and some of the advantages are to provide a marker which has little or no side draft and be more accessible to the operator, together with a plain mark; and my invention consists in certain features of novelty to be hereinafter fully described, and then particularly pointed out in the claims.

In order that my invention may be fully understood, I will now proceed to describe it with reference to the accompanying drawings, in which—

Figure I is a side view of a corn-planter, showing my improved marker applied thereto. Fig. II is a rear view of the same, showing in full lines a marker in operative position, and in dotted lines in raised position out of use. Fig. III is a plan view of the parts by which the marking or furrow disk is carried, showing the powder-receptacle thrown to one side. Fig. IV is a side view of said parts in normal position. Fig. V is a detail view showing the joint between the body of the powder-receptacle and its cover.

Referring to the drawings, A represents the frame of the planter, B the wheels, and C the seat.

D are the hoppers for containing the corn or other seed, and E are the drill spouts or tubes.

My attachment is intended to be applied to all kinds of drill or planter spouts of a corn-planter; and to this end I provide a ribbed casting *a*, of semicircular or other form, according to the shape of the drill-spout to which it is to be applied. At each end it has an ear *a'*, through which on each side of the spout pass bolts *b*, that also pass through ears or lugs *c'* on each side of a casting *c*. When the nuts *b'* are screwed tight, the parts will be clamped against the spout rigidly and secured. The ends *c''* of casting *c* engage the spout, while the intermediate portion is slightly arched to more effectually secure a clamping action, by reason of a slight give in the casting caused by the strain exerted by the bolts.

Formed with and extending rearwardly from the casting *c* is a journal-pin *d*, on which is mounted to swing vertically sidewise a bracket *e*, having collars or rings *e'*, through which the pin passes. Pivoted at right angles to the bracket is a marker arm or shaft *f*, which swings laterally or rearwardly—*i. e.*, it is adapted to move in a plane at right angles to the movement of the bracket *e*.

Extending upwardly and rearwardly from the casting *c* is an arm *g*, that at its upper end extends laterally at *g'* toward the machine, and then rearwardly at *g''*. When the marker-arm is raised, the lateral portion *g'* of the arm *g* prevents it from tilting forward, and the rearward projection *g''* prevents it from tilting sidewise, and thus the marker-arm is supported in raised position with the assistance of a cord *h*, secured to the outer end thereof, and to a front portion of the planter, which cord prevents it tilting backward.

To prevent the marker-arm tilting away from the planter, I provide a hook *i*, pivoted to the side of the arm, the hook end of which engages over the projection *g''*. A cord or wire *i'*, secured to the outer end of the hook, is also connected with one end of a lever *j*, and to the other end of this lever a cord *j'* is secured, that may be placed in convenient reach of the driver. On pulling the cord *j'* the hook *i* will be disengaged, and the marker-arm may be swung over into horizontal position.

To support the marker-arm at a certain distance from the ground, I form on the casting *c*, underneath the inner collar *e'* of the bracket, a curved lip or flange *k*, the ends of which extend upwardly and engage the under side of the bracket when in the position shown in Fig. II.

The construction and operation of the marker proper are as follows:

L is a frame or carriage, which is slotted to admit the furrow or marker disk M, through both of which passes the axle N, the forked

ends of the frame being so constructed as to afford a dirt-check for the axle. The furrow-disk M is set in the slot *l* of frame L at an angle, so as to make a wide mark.

O is a box, which on the under side is bolted or otherwise secured to the outer end of the marker-arm *f*. On the under side of the box is a piece P, having downwardly-inclined ends or arms *p*, through which and through perforated lugs *q* on an adjusting piece or bracket Q a pivot-bolt R passes.

The adjusting-piece Q, to provide means for changing the angle of the furrow or marker disk, and hence broaden the mark, is provided with a curved slot *q'*, through which and engaging in the frame L a set-screw *l'* passes. The slotted part of the piece Q is provided on each side with a beveled rib *q''*, concentric with the slot. The slot and the ribs are drawn on a radius whose center is at the axle of the disk and at a point where the juncture is formed by a line drawn from the periphery of the concave side of the furrow-disk about the point where it touches the ground. This causes the mark to be in one stated line with the drill-spout and in line with the chalk-spout. The ribs are received by either one of the bevel-sided recesses L' on both sides of the frame L, so that when the set-screw is loosened and the frame L is shifted by the tightening of the set-screw the furrow or marker disk will be secured at the desired angle and the mark will be equidistant from the corn-planter spout. Surrounding the pivot-bolt R, and bearing at one end on top of the piece Q and at the other end on the under side of box O, is a spiral spring *r*, which resiliently supports the box.

S is a scraper-arm secured to the frame L, and having a downturned end which fits into a socket of the disk-scraper *s*, which is secured on the end of the arm by set-screws *s'*.

T are links that are pivoted at each side of the piece Q, and the free ends of which pass through openings in the arms *p*, said ends being screw-threaded to receive nuts *t*, which act as stops to prevent the box jumping up too high as the furrow or marker disk passes over rough or uneven ground.

The box O is to contain chalk, ashes, or other powdered marking material, and as it will have more or less motion when passing over rough ground I provide it with a device whereby said motion is utilized to open and close the slide-valve U of the spout *u*, and thus permit the discharge of the powder. As a marker usually fails to make a distinct mark when passing over very rough, cloddy, or stony ground, this auxiliary marking arrangement is desirable.

V is a toggle, one end of which is pivoted to the spout *u*, and the other end of which is pivoted to the slide-valve U. W is a spiral spring that is secured at one end to the spout *u* and at the other end at the toggle-joint to keep the slide-valve in its inner position to close the opening in the spout. It will be observed that as the hinged box O is jolted down by the passage of the device over rough ground the toggle will come into contact with the part *o* of the frame L and spread the arms of the toggle and pull out the slide-valve, and as the box rises the spring W will draw in the valve. The edges of the box O are turned over round wire *x* to form a bead, over which the curved flange *v* of the cover *z* is sprung.

Should the furrow or marker disk strike an obstruction, the cord *h* will break and permit the attachment to swing back out of the way.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. In combination with a corn-planter, a marker at the side of the planter and its laterally-extending arm, and a clamp for securing the arm to the drill-spout of the planter, substantially as set forth.

2. In combination with a corn-planter, a marker, a vertically and laterally movable arm carrying the marker, and a clamp to which said arm is pivoted for securing the arm to the drill-spout of the planter, substantially as set forth.

3. In combination with a corn-planter having a drill-spout, a clamp-piece on one side of the drill-spout, another clamp-piece on the opposite side, connecting-bolts, and a marker-arm and marker connected with one of said clamp-pieces and extending laterally from the planter, substantially as set forth.

4. In combination with a corn-planter having a drill-spout, a clamp secured to the drill-spout, an arm extending up from one part of said clamp, a marker and its arm, the latter having hinge-connection with the clamp, and means for supporting the marker-arm in elevated position against the arm of the clamp, substantially as set forth.

5. In combination with a corn-planter having a drill-spout, a casting secured thereto provided with a pivot bolt or pin, a bracket having collars or rings journaling on said pin, and a marker-arm having a marker and secured to said bracket, substantially as set forth.

6. In combination with a corn-planter, a piece carried thereby having a horizontal pin or bolt, a bracket having rings or collars journaling on said pin, a marker-arm connected with said bracket by a vertical pivot, a marker at the outer end of the arm, and a cord connecting the marker-arm with the front of the machine, substantially as set forth.

7. In combination with a corn-planter, a piece carried thereby having the horizontal pin or bolt, the marker-arm having pivotal connection with said pin, a marker, and a lip under said pin to limit the downward movement of the marker-arm, substantially as set forth.

8. In combination with a corn-planter, a

piece carried thereby having an upwardly-extended arm, said arm having a lateral portion with a projection, a vertically-swinging arm carrying a marker and pivoted to the piece, and a catch on the arm adapted to engage the said projection, substantially as set forth.

9. In combination with a corn-planter, a piece carried thereby having an upwardly-extended arm, said arm having a lateral portion with a projection, a marker-arm connected with said piece by means of two hinge-joints at right angles to each other, a marker carried by the marker-arm, a catch on the arm adapted to engage said projection, and a cord connecting the marker-arm with the front of the machine, substantially as set forth.

10. A corn-planter having a marker situated at the side thereof, consisting of a vibratory powder-receptacle having an opening, an automatic valve controlling said opening operated by the vibration of the receptacle, and a furrow-disk, substantially as set forth.

11. In combination with a corn-planter, a marker attachment having an adjustable furrow-disk, with means for adjustment, consisting of the member carrying the disk, another member having a slot, and a set-screw passing through said slot into the other member, substantially as set forth.

12. In combination with a corn-planter, a marking attachment consisting of a frame, a furrow-disk journaled therein, a receptacle having hinge-connection with said frame and provided with an opening, and an automatically-operated valve controlling said opening for discharging marking-powder, substantially as set forth.

13. In combination with a corn-planter, a marking attachment consisting of a frame, a furrow-disk journaled therein, a bracket with which said frame has adjustable connection, a receptacle having an opening, an automatically-operated valve in said opening, and a bracket on the receptacle having pivotal connection with aforesaid bracket, substantially as set forth.

14. In combination with a corn-planter, a marking attachment consisting of a frame, a furrow-disk journaled therein, a receptacle having pivotal connection with said frame, a spiral spring surrounding said pivot and supporting the receptacle, and an automatically-operated valve controlling an opening in said receptacle for discharging a marking-powder, substantially as set forth.

15. In combination with a corn-planter, a marking attachment consisting of a frame, a furrow-disk journaled therein, an oscillating receptacle connected with said frame, a spring for resiliently supporting the receptacle, and an automatic valve controlling an opening in the receptacle for discharging marking-powder, substantially as set forth.

16. In combination with a corn-planter, a marking attachment consisting of a frame, a furrow-disk journaled therein, an oscillating receptacle having a spout and connected with said frame, a spring for resiliently supporting the receptacle, a slide-valve controlling an opening in said receptacle, and means for automatically operating said valve, consisting of toggle-levers pivotally connected with the spout and said valve, and a spring connecting the spout and the joint of said toggle, all combined and operating substantially as and for the purposes set forth.

EZRA EDGAR WITTER.

Witnesses:
ELI GABRIEL,
RODNEY GABRIEL.