(No Model.) 2 Sheets—Sheet 1.

C. O. WELTZIN.

CORN PLANTER.

No. 524,430. Patented Aug. 14, 1894.

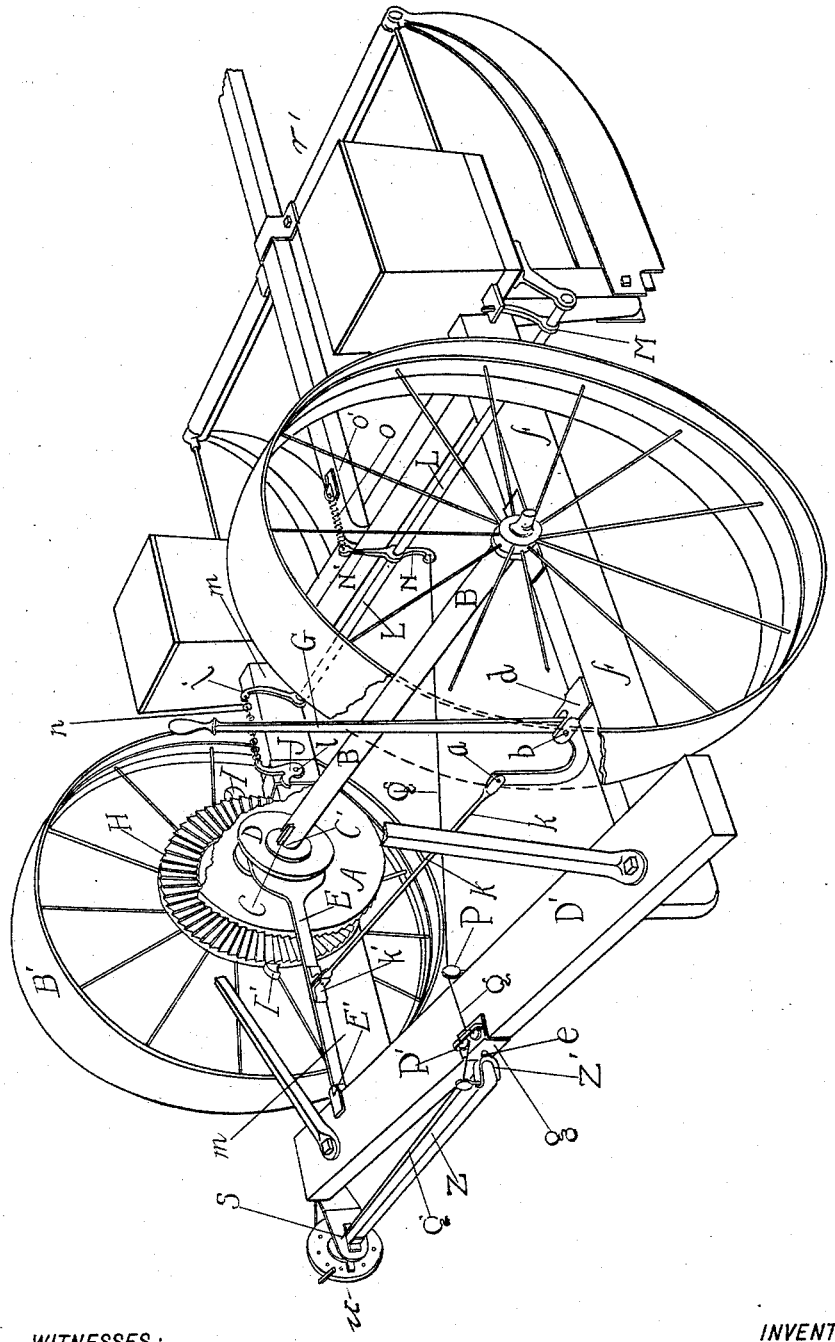

Fig. 1.

WITNESSES:
Max Flemming.
J. E. Wakeley.

INVENTOR
Carl O. Weltzin
BY
E. T. Wakeley
His ATTORNEY.

(No Model.) 2 Sheets—Sheet 2.

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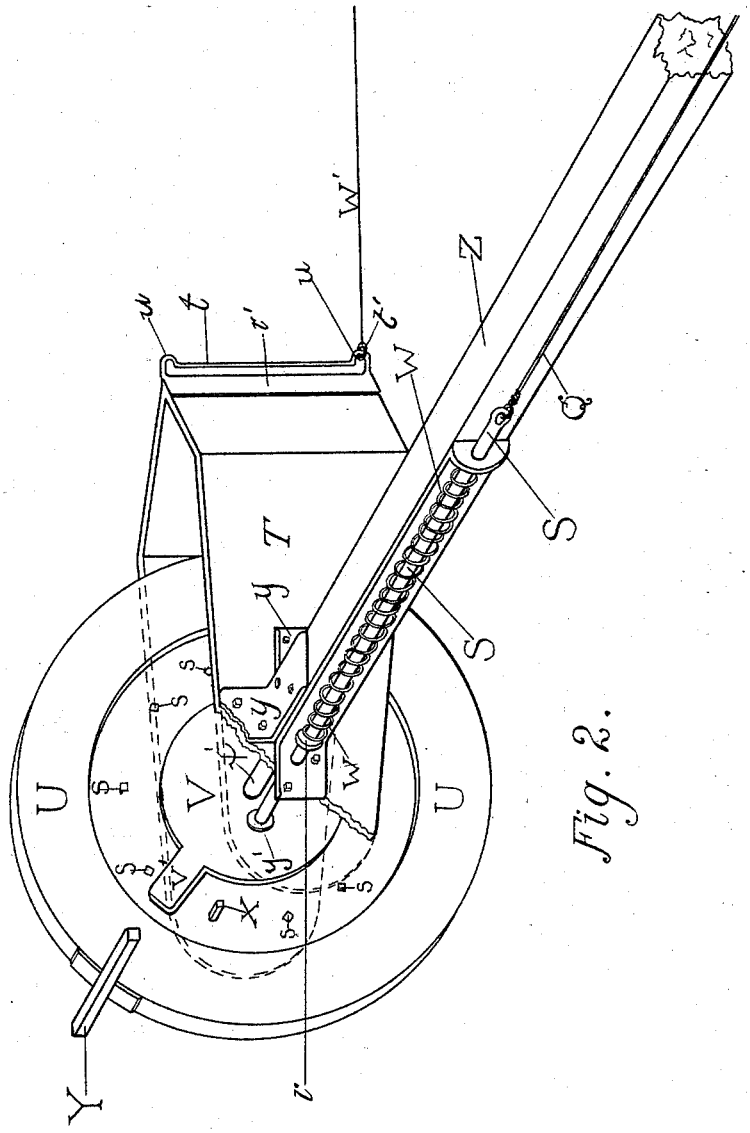

Fig. 2.

WITNESSES:
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INVENTOR
Carl O. Weltzin
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C. F. Wakeley.
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UNITED STATES PATENT OFFICE.

CARL O. WELTZIN, OF PRIMROSE, WISCONSIN.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 524,430, dated August 14, 1894.

Application filed December 19, 1893. Serial No. 494,070. (No model.)

To all whom it may concern:

Be it known that I, CARL O. WELTZIN, a citizen of the United States, residing at Primrose, in the county of Dane and State of Wisconsin, have invented a new and useful Corn-Planting Machine, of which the following is a specification.

My invention relates to improvements in power corn-planters operating without a wire track; and the object of my improvement is to provide a device for marking the ground adjacent to the hills, as planted, so that the next succeeding drive or bout may be made at the proper distance and the hills may be planted in checks. I accomplish these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the corn planting machine with the device in place; and Fig. 2 is a detail perspective view of the marking device detached.

Similar letters refer to similar parts in both views.

A represents a pulley (or clutch) which is placed upon the axle B near one of its wheels B′ and revolves with the axle B and is movable longitudinally thereon by means of the tongue or shoulder C extending longitudinally upon the axle matched in the gain C′ extending laterally through the inner surface of the pulley A along its bore and receiving the tongue.

D represents the hub of the pulley A enlarged and grooved around its circumference. In the groove, the two prongs of the fork headed lever E ride one on each side of the pulley. The forked lever E is articulated upon the bolt E′ in the rear rail D′. The inner end of the rod K is articulated upon the journal K′ near the middle of the lever E. The rod K extends laterally across the frame and at its other end is articulated to the journal *a* upon the inner and shorter arm of the bent lever G. The bent lever G consists of a longer and a shorter arm and is articulated at the base of its longer arm upon the journal *b* inserted in a double lipped lug *d* attached to the side rail *f*.

The lever G having its upper and front end with the connecting rod K thrown to the left by the operator will swing the upper or forward end of the lever E outward carrying outward also the pulley A and hub D. and will bring the pulley A into contact and into gear with the pulley H, both of which last pulleys are cogged and mesh together at contacting parts.

The pulley H is journaled upon the axle B adjoining the hub of the wheel B′ and outside the pulley A. The pulley H has upon its rim the two cams I I′ which as the pulley revolves strike and throw downward the rear arm of the lever J. The lever J is centrally hung upon the pin *l* in the side rail *m*. The forward end of the lever J is connected by means of the chain *n* with the upper end of the crank *l′*, upon the shaft L. The shaft L extends laterally across the machine and has attached at either end the levers M, M which operate the dropping device. The shaft L at the center operates the cranks N. N.′ The upper crank N′. is connected by the spiral spring O to the center rail or tongue O′ and is thrown back by such spring after being thrown forward by the wire Q. The lower crank N is connected by the wire Q to the plunger S—the wire Q first passing over pulley P and between pulleys P′ P′ at the central part of the rear rail D′ near its front and rear edges respectively and thence to the plunger S.

Z represents a boom having its outward end attached to the frame T. of the marking wheel U which it braces and supports laterally. The inner end of the boom Z is inserted in in the collar Z′ which collar terminates in a pivot *e*, resting in a bearing *g* on the central part of the rear edge of the rear rail D′ so that the marking wheel and frame and their attachments can be swung alternately to the left and right sides of the planting machine when the same is turned around.

T represents a frame in which is hung the marking wheel U revolving on the axle X′ which axle rests in the support *y* attached to the frame.

Y represents a cross marking block upon the rim of the marking wheel U.

V represents a disk upon the axle X′ resting normally with its outer surface against the inner surface of the marking wheel U and movable longitudinally upon the axle X′ so as to have a reciprocating motion away from and up to said marking wheel U. The

disk V is provided with the arm V′ extending from its periphery and also resting normally against the marking wheel U.

The plunger S rests in a perforation in the support *y* and is attached at the end to the outside of the disk V by the joint *y′* near the center of the disk and gives the same a reciprocal motion as the plunger is pressed by the spring wire W and is drawn inward by the wire Q as such wire Q is drawn forward by the striking of the cams I I′ against the lever J and the action of the connected levers and rods as described.

The wheel U marks the land longitudinally and also cross marks it at intervals by the cross marker Y attached to its rim.

For the purpose of blocking the marking wheel and causing it to slide after it has performed one revolution and its cross block has nearly reached its operating position such wheel U is provided with the pin X projecting inward from its surface outside the circumference of the disk V and within the range of the arm V′. Series of perforations *s s* in the wheel U are provided for selecting the proper location for the pin X. The pin X catches the arm V′ and arrests the rotation of the wheel U causing such wheel to slide until the plunger S with the disk V is drawn back allowing the pin X to pass under the arm V′ which arm will be instantly restored to its position against the wheel U by the spring wire W. By the regular blocking and releasing of the wheel U the marker Y is caused to make its impression in the soil at regular intervals.

The frame T with the wheel U and attachments are hung at a distance behind the machine and such distance is gaged by the length of the wire W′ the rear end of which is attached to the front end of the frame by a sliding ring *t′* running upon the wire traveler *t* which ring is carried from one end of the traveler to the other when the marking devices are thrown from one side to the other of the machine as the same is turned around. The wire W′ is attached at one end to either of the loops *w w* on the traveler *t*, and at the other end to the front cross rail *r′* of the frame. When one of the lugs I I′ strike and throw downward the rear arm of the lever J the front arm of such lever, by means of the connecting chain *n* turns the crank *l′* and shaft L a part of the revolution to the rear spring O restores the cranks N N′ to their original position rotating the shaft L forward. The levers M M which work the seed dropping apparatus are attached to the shaft L. As the shaft L turns backward the seed is dropped and at the same time the upper crank N′ of the shaft turns forward carrying the front end of the wire Q bringing inward the rear part of such wire with the attached plunger S disk V and arm V′ disengaging such arm from the pin X. The marking wheel U will recommence to revolve and its marker Y will have made its print in the ground. The spring W then instantly forces the plunger S—released from the tension of the wire Q—back to its normal position carrying with it the disk V and arm V′ up to the marking wheel U where the arm V′ will catch the pin X and again block the marking wheel U at the proper point for making its cross mark, when it will slide again until the seed is again dropped by the action of the series of levers and the pulley as described. The distances between the hills and the lateral and longitudinal lines will be thus conspicuously marked so as to drive successively at proper distances and plant in check rows, the dropping device being started true as the machine enters the row at the end.

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

1. In a corn planter in combination a pair of pulleys upon and operated by the axle of the carriage wheels, lugs on one of the pulleys a centrally articulated lever having one end in the path of such lugs and moved thereby, a shaft operating a lever attached to the dropper and having three cranks; a chain connecting one crank to the other end of said first lever a traction spring connecting the second crank to the frame of the planter; a traction wire connecting the third crank to a plunger; a spring wire bearing the plunger outward; a disk with an outward arm loosely hung upon an axle and attached to the plunger; a frame hung in the rear of the planter supporting the axle and the plunger; a marking wheel upon the axle outside the disk a pin in the marking wheel projecting in the course of the arm and a cross block on the rim of the marking wheel;—so that the marking wheel will be blocked at the end of each revolution until the hills are planted.

2. In a corn planter in combination a pair of pulleys upon and operated by the axle of the carriage wheel, two lugs in the rim of one pulley, a centrally attached lever having one arm in the track of the lugs, a shaft having a lever attached to the operating device of the dropper, and having cranks connected respectively by a chain to the other end of such first lever, by a traction spring wire to the frame of the machine and by a traction wire to a plunger, a disk with a projecting arm attached to the plunger and loosely hung upon an axle in a frame at the rear of the planter a marking wheel revolving upon such axle outside the disk, a pin in the side of the marking wheel which strikes the arm of the disk, and a compressed wire spring intermediate the frame and a projection on the plunger; so that the marking wheel will be stayed after each revolution until the hills are planted and a cross mark made.

3. In combination a cross block and pin upon the marking wheel, an arm having a hub upon the axle of the wheel; a spring bearing the arm against the wheel and pin; and a traction wire connecting the arm with the

machinery operating the dropper; so that the wheel will revolve and the block will print in accord with the dropping of the hills.

4. In combination a marking wheel of a corn planter less in circumference than the distance between the hills, a pin therein, a cross stick thereupon a suspended block pressing against the pin when the wheel has revolved and a traction wire connecting the block to the mechanism operating the dropper; so that, such wheel will slide after each revolution to—and make its cross mark at—the time the hills are dropped.

CARL O. WELTZIN.

Witnesses:
J. E. WAKELEY,
FRANK M. WOOTTON.