J. W. FAWKES.

Check-Row Corn-Dropper.

No. 167,514. Patented Sept. 7, 1875.

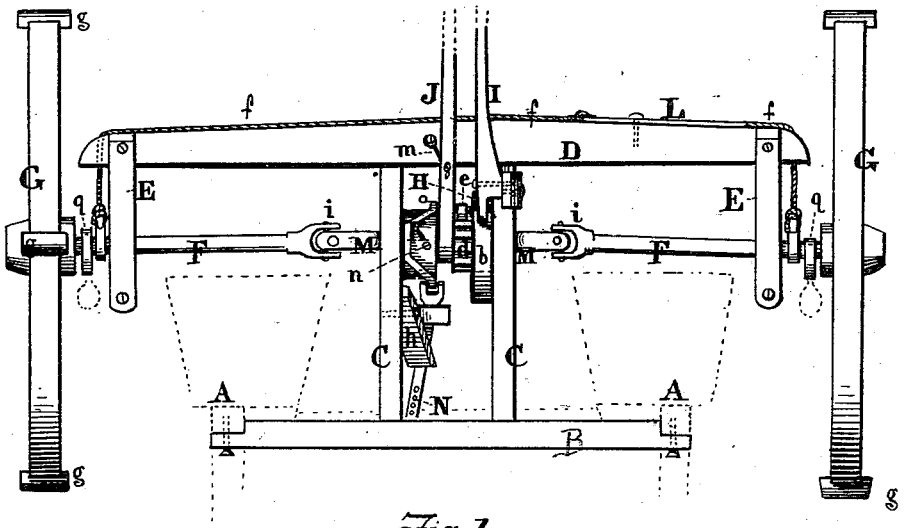

Fig. 1.

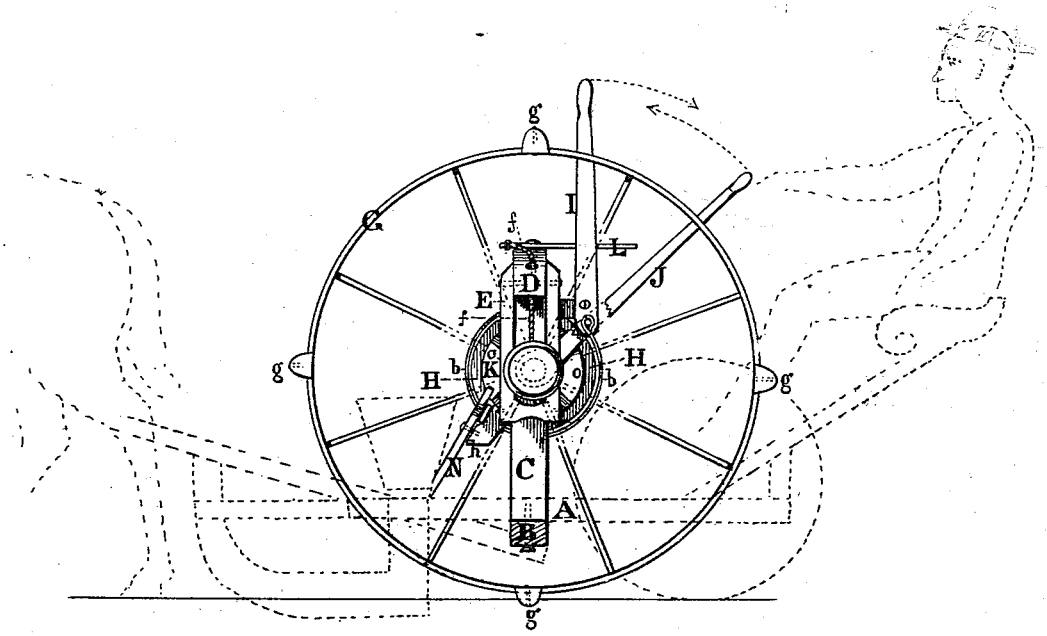

Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

JOSEPH W. FAWKES, OF MAROA, ILLINOIS.

IMPROVEMENT IN CHECK-ROW CORN-DROPPERS.

Specification forming part of Letters Patent No. **167,514**, dated September 7, 1875; application filed April 14, 1875.

To all whom it may concern:

Be it known that I, JOSEPH W. FAWKES, of Maroa, in the county of Macon, in the State of Illinois, have invented an Improvement in Combined Check-Row Markers and Corn-Droppers; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings, making a part of this specification, in which like letters refer to like parts, and in which—

Figure 1 represents a rear elevation of the marker and corn-dropper, showing the bars of the attached corn-planter; Fig. 2, side elevation.

This machine combines the mechanism for vibrating the cut-off lever of a corn-planter, and for check-rowing. The marking-wheels are provided with printing-blocks on their circumferences, and have each an axle connected, by a universal joint, with an intermediate axle or shaft, upon which is an adjustable zigzag cam, which vibrates the corn-planter lever. The wheels are raised or lowered by a lever and cords, and are retarded, in case of "gaining" on the row, by means of a lever and strap upon a drum upon the intermediate axle, or are hastened by means of a lever and pawl acting upon a ratchet-wheel set on said axle.

In the drawings, B represents a horizontal bar, which supports the above devices, and is attached at either end to the frame A A of a corn-planter. C C are vertical supports, rising from the middle of said bar B, bearing up the upper cross-bar D, which extends beyond the sides of the corn-planter. From either end of this bar depends a slotted guide, E E, in which the ends of the respective axles F F are raised or lowered. F F represent the two axles of the printing or marking wheels G G, each inclosed, as said, in a guide, and coupled by a universal joint, *i*, with a short axle, M, set in journals in the uprights C C, which carry a zigzag cam, K, having a winding-flange, *o*, running diagonally from one side to the other around its periphery, in such a manner as to give the requisite number of vibrations to the corn-planter lever N, and also making the outer parts of said flange extend for a short distance in the plane of its rotation, so as to retain said lever for a short time motionless at the extreme points of oscillation. The seed is dropped half-way between the prints of the blocks *g g* upon the soil. The cam is further provided with a set-screw, *n*, to regulate the operation of the zigzag flange upon the lever N, to drop seed "in check," by setting the cam (which is otherwise independent of the axle) at the proper point with relation to the blocks *g g*, &c., on the wheels. The vibrating lever N of corn-planter is pivoted to a block, *h*, attached to a convenient point, as the upright C. On the same axle is also set a drum, H, used to retard the wheels, when necessary, by the pressure of a strap, *b*, tightened by a lever, I, upon its periphery. Attached to said drum or axle M, and concentric with them, is a ratchet-wheel, *d*, between the latter and the cam, provided with a pawl, *e*, worked by a lever, J, set on the same axle, and used to set the marking-wheels ahead, if they have, by accident, fallen back in their marking behind the former marks. This lever may be supported so as to be opposite the driver by a short cord, *m*, or other check fixed to the bar D, or other point. L represents a lever, pivoted upon said bar D, to which, on either side of its pivot, is attached the cords *f f*, each running in opposite directions along the top of said bar to the outer ends of same, and there running through a passage down and fastened to one of the axles F F, near their respective wheels, by means of a collar. Beyond this collar on the same axle is a second collar, *q*, provided with a hook, to which a weight may be attached, in case the soil be hard, to weigh the wheels down to make a deeper mark. G G represent the marking-wheels, provided with blocks *g g*, &c., on their circumference, at equal distances, said wheels being situated at the proper distance apart to allow the wheel on the planted side always to travel exactly half-way between the adjoining rows of dropped seed.

The operation of this invention is as follows: It may be attached, by means of the cross-piece B, to any corn-planting machine. Previous to planting, an experimental trip may be made, to adjust the working of the cam K with the vibrating lever N, so that the latter may drop seed at the proper distance apart,

and half-way between the prints made by the blocks *g g*, &c. This is done by shifting the cam part of a rotation, and resetting it by means of the set-screw *n*. When this is done the machine is ready for the planting and checking, using the ordinary appliances for running on a true line, the wheels G G always traveling and marking half-way between each row of seed, and at the next transit one wheel goes back on its own track, and if the blocks *g* fall short of the former prints, the ratchet-lever J is worked upward and forward, causing the pawl *e* to move the wheels forward in advance of their time of rotation, and cause the blocks to fall exactly into their former prints. If the blocks mark in advance of the former prints, the wheels may be retarded for an instant, until they print at the proper place, by the use of the lever I and strap *b* on the drum H. On turning, at the end of a row, the wheels are elevated from the soil by the tension of the cords *f f* by the lever L, and to cause the new prints to fall upon those already marked, (*i. e.* the last or outer row,) the lever J is again used to hitch the wheels forward until the prints correspond.

The cam K vibrates the corn-dropping lever N, the flat part of the flange holding the lever thus for a short time stationary.

What I claim as my invention is—

In a corn-marker, the combination of the drum H, provided with ratchet-wheel *d*, strap *b*, lever I, pawl *e*, lever J, vibrating lever N, and cam K, provided with set-screw *n*, substantially as and for the purpose set forth.

In testimony that I claim the foregoing check-row marker and corn-dropper I have hereunto set my hand this 8th day of April, A. D. 1875.

JOSEPH W. FAWKES.

Witnesses:
JAMES M. MORSE,
H. W. WELLS.