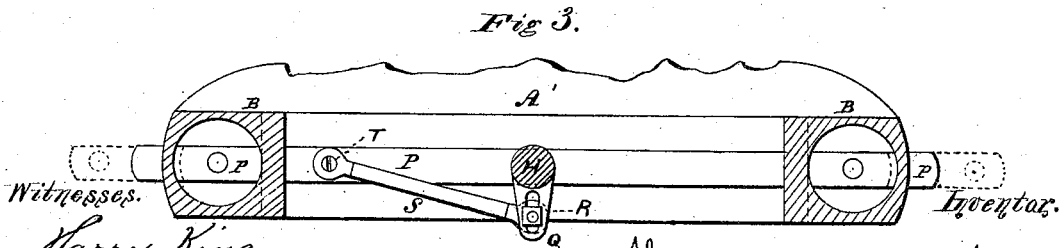
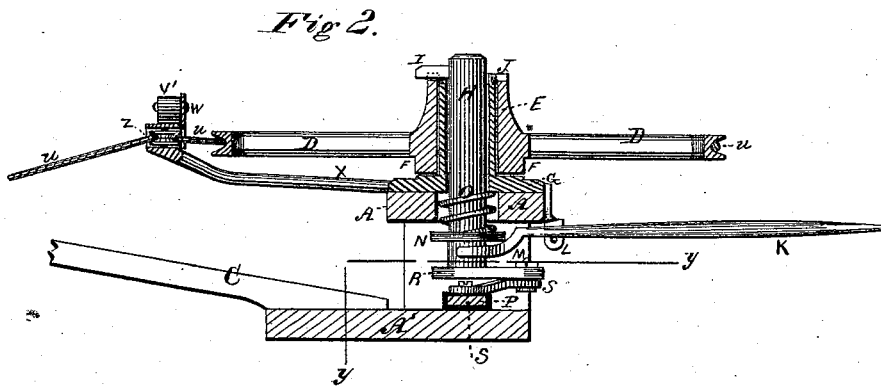
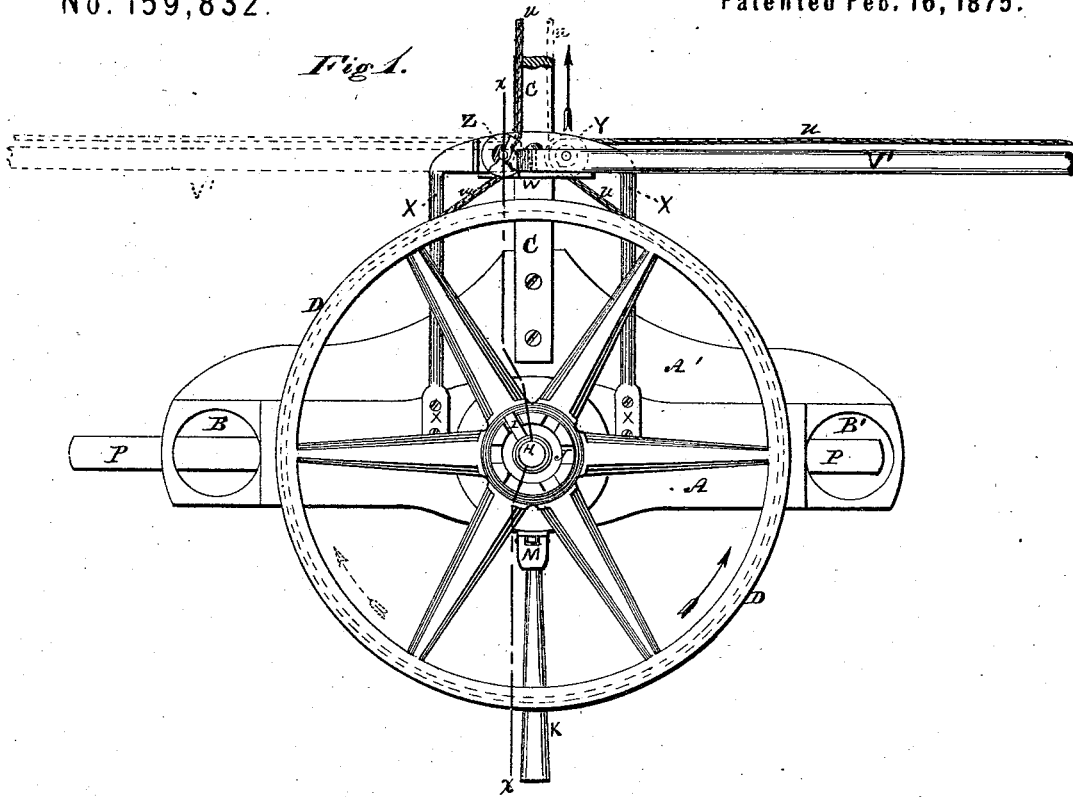


A. M. MANNY.
Corn-Planter.

No. 159,832.

Patented Feb. 16, 1875.



Witnesses.
Harry King.
B. L. Morse

A. M. Manny
 By *W. D. Baldwin*
 his Attorney.

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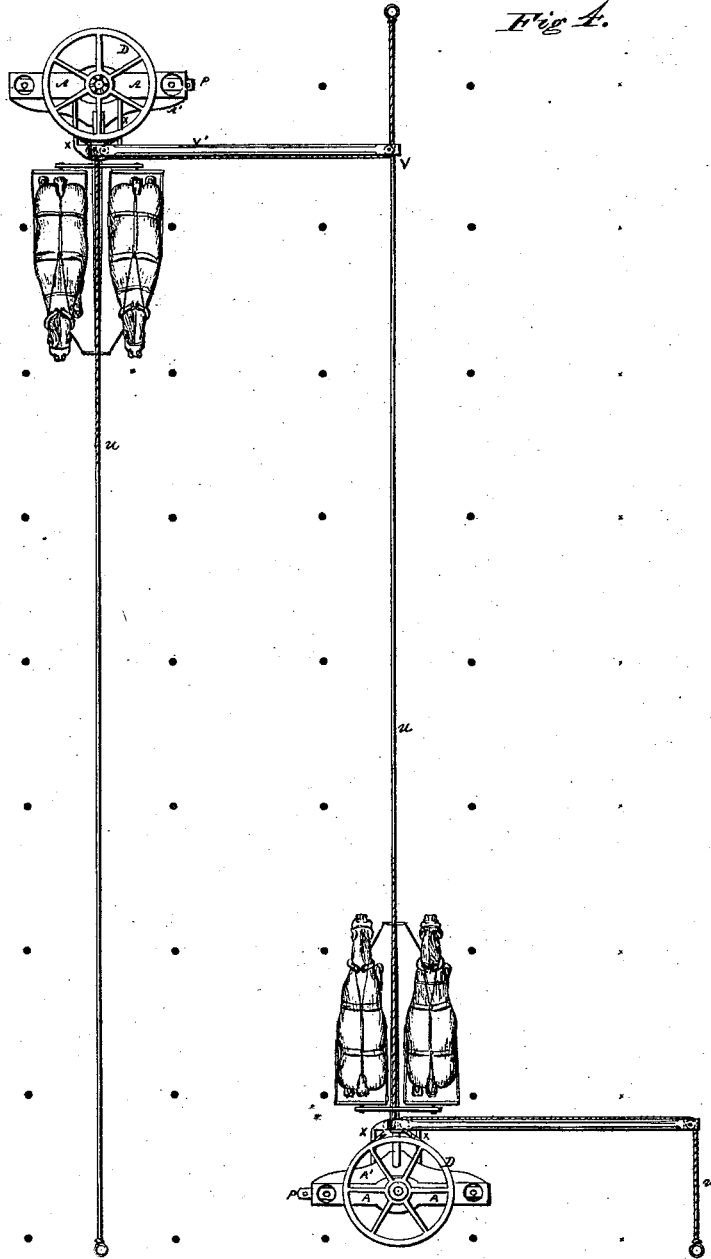


Fig. 4.

WITNESSES

Harry King

E. Davidson,

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INVENTOR

A. M. Manny

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UNITED STATES PATENT OFFICE.

ABRAM M. MANNY, OF ROCKFORD, ILLINOIS.

IMPROVEMENT IN CORN-PLANTERS.

Specification forming part of Letters Patent No. **159,832**, dated February 16, 1875; application filed May 14, 1874.

To all whom it may concern:

Be it known that I, ABRAM M. MANNY, of Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Corn-Planters, of which the following is a specification:

My invention relates to a machine of the class known as "check-row" planters, in which a rope crossing the field to be planted, and staked at each end, is employed to operate the dropping devices; and my objects are to simplify the construction and operation of such machines, while insuring accurate work.

The subject-matter claimed will hereinafter be set forth.

In the accompanying drawings, which show so much of a machine embodying my improvements as is necessary to illustrate the invention herein claimed, Figure 1 represents a plan or top view; Fig. 2, a vertical section on the line *x x* of Fig. 1; Fig. 3, a view, partly in section, on the line *y y* of Fig. 2, showing the seed-slide and its connections. Fig. 4 represents a diagram of a field being planted, showing the machine as both crossing the field for the first time and returning, the hills planted being represented by dots.

The main frame of the machine is, in this instance, composed of two beams, A A', one directly over the other, between which hoppers B B', of any suitable well-known construction, are secured. A tongue, C, is secured centrally to the frame-beam A'. This tongue I prefer to secure firmly to the frame, so as to have no movement independently thereof; but, if preferred, the tongue may have a limited vertical adjustment. A large grooved wheel, D, is mounted loosely upon a vertical tubular axle, E, terminating at its lower end in a low shoulder, F, and plate G, by which latter the axle is firmly secured to the frame-beam A, in the same vertical plane as the tongue. The lower end of the wheel-hub and the surface of the short shoulder F are made smooth to lessen friction between them as the wheel revolves. A shaft, H, passes through the hollow axle E, and carries a pin, I, above the axle. The upper surface of the wheel-hub is provided with teeth or notches J, into any one of which notches the pin may be caused to take, when desired, by means of a lever,

K, fulcrumed at L to the upper frame-piece A. This lever is forked at M to embrace the shaft H. The fork M acts upon a fixed collar or annular flange, N, on the shaft. A coiled spring, O, encircles the shaft, and bears at its lower end upon the collar N, and at its upper end against a shoulder formed by the under side of the axle-plate. The spring works in a slot in the frame-piece. The lever may be provided with any suitable stop or detent, to hold it up against the collar N when the spring is compressed. By this clutch-coupling the shaft may be readily connected with or disconnected from the wheel, to stop or start the seed-slide P at any moment desired.

The seed-slide is composed, in this instance, of a metal bar, which slides back and forth, when in operation, on the lower frame-piece A'. This reciprocating movement of the slide P is imparted from the sliding shaft H, when connected with the wheel D, by means of a crank-arm, Q, on the lower end of the shaft, which arm is slotted to receive and allow the proper play or adjustment to a bolt or pin, R, which connects one end of a pitman, S, with the crank, the opposite end of the pitman being connected to the seed-slide by a pivot, T. The seed-slide works, at its ends, in the hoppers B B', and is provided with suitable openings, to constitute seed cups or cells, each of which simultaneously registers with openings in the bottoms of the hoppers twice in each hopper for every revolution of the wheel D—once for each half-revolution. The wheel D is revolved by the frictional contact of a rope, U, extending from side to side, or end to end, of the field to be planted, parallel (except that portion carried by the machine) with the path of the machine, and with the rows dropped or to be dropped. The rope is secured at one end to a stake driven into the ground in rear of the machine, and to one side of it, (in the direction of the ground subsequently to be planted,) a distance from the hopper, or the opening therein, on that side of the machine next to where the subsequent rows are to be dropped, equal to one and a half times the distance between the two hoppers, or, more properly, between the openings in their bottoms, through which the seed passes. From the stake the rope passes around a friction-

pulley, V, in a guide at the end of a long arm or carrier, V'. This arm is hinged in the vertical plane of the tongue and of the friction-wheel axis to swing or rock vertically, and project beyond either side of the machine transversely to its path in a bracket, W, supported on the forward part of a supplementary skeleton-frame, X, preferably composed of a bowed or U-shaped rod of metal firmly secured at its rear to the top frame-beam. From the guide at the end of the carrier the rope passes to a guide in the bracket W around a pulley, Y, secured therein, thence around the grooved periphery of the friction-wheel D, from which it passes to another pulley, Z, in the bracket-guide, and from there to the ground just on one side of and beneath the pole C. The rope passes to the ground close to, but not in contact with, the pole. The free end of the rope is then carried across the field, pulled sufficiently taut to straighten, but not strain or stretch, it, and fastened to another stake. The rope thus serves as a guide, by which the driver is enabled to plant straight rows by keeping the tongue of the machine over the rope. The carrier-arm must be of the proper length (a length equal to twice the distance between the hoppers) to pay out the rope as it passes from the wheel D in line with the starting-stake, parallel with the path of the machine, in proper position for the tongue to pass over it to guide the driver on the return of the machine after it has been turned around toward the unplanted portion of the field, the clutch-coupling having been employed to disengage the seed-slide and friction-wheel before turning, the carrier-arm freed from the rope, and reversed by swinging it over on its pivot, and the stake (the one previously in front, but now in rear of the machine) set in the same direction and the same distance from the machine that the first stake was set at starting.

The machine being started, the driver operates the clutch-controlling lever to cause the wheel D to work the slide, and start the new hills to be planted in line transversely to the path of the machine with those already planted. As the circumference of the operating-wheel D governs the distance between the hills in the direction of the path of the machine, they can of course be planted at any desired distance apart in this direction by using different-sized wheels, thus allowing the

hills to be dropped either the same distance apart each way, or farther apart in one direction than in the other.

As a smooth rope is used instead of a knotted rope or a series of links, the machine works evenly and without jarring or straining. The operating-wheel being revolved by frictional contact with the rope, a slack rope may be used, thus avoiding the objection sometimes raised against this class of machines on account of their irregular operation, caused by the shrinking or stretching of the rope. As the rope acts as a guide by which to drive the machine, the rows are accurately spaced, and there is but little trouble after starting the machine in operating it, as it is only necessary to shift the rope and carrier, and move the stake at the ends of the rows.

The machine is of cheap construction, and my invention can be applied to many of the planters now in use, whether mounted upon wheels or upon runners.

I claim as my invention—

1. The combination, in a check-row corn-planter, of the main frame, the tongue, the friction-wheel, having its axis in the vertical plane of the tongue, the guides over the tongue, the rope, and the seed-slide, these members being constructed and operating in combination, substantially as hereinbefore set forth.

2. The combination of the main frame, the hoppers, the seed-slide, the friction-wheel, the endwise-moving sliding shaft, connecting the wheel and slide, and the shipping-lever, these members being constructed and operating in combination, substantially as set forth.

3. The combination of the friction-wheel and a single reversible carrier-arm, pivoted in the same vertical plane as the tongue and the axis of the friction-wheel, these members being constructed and operating in combination, substantially as and for the purposes specified.

4. The combination of the main frame, the skeleton-frame, the guides therein, the horizontal friction-wheel, and the single reversible arm pivoted in the vertical plane of the tongue, substantially as set forth.

In testimony whereof I have hereunto subscribed my name.

ABRAM M. MANNY.

Witnesses:

N. E. BENOIT,

H. A. SPELLMAN.