2 Sheets—Sheet 1.

R. FARIES.

CHECK-ROWERS FOR CORN-PLANTERS.

No. 187,610. Patented Feb. 20, 1877.

Fig. 2.

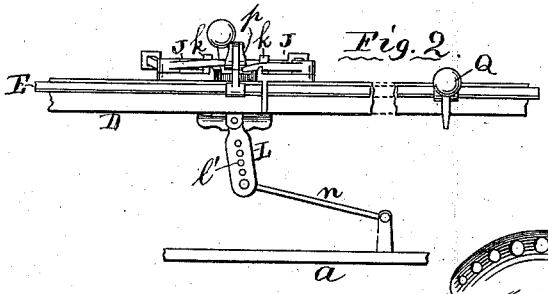


Fig. 1.

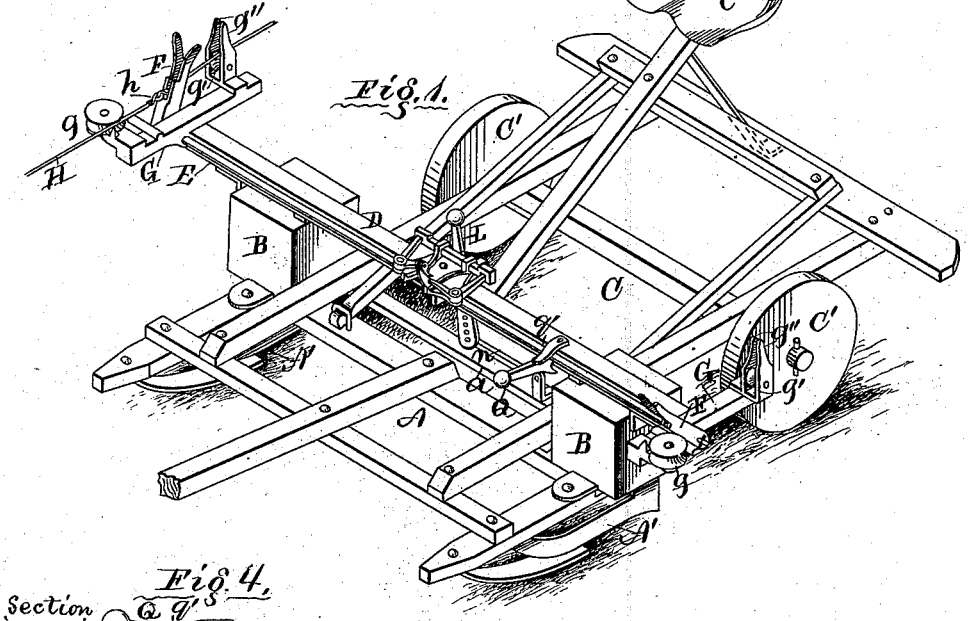


Fig. 4.

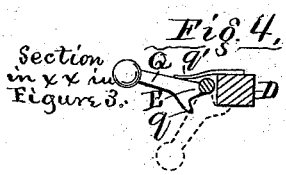
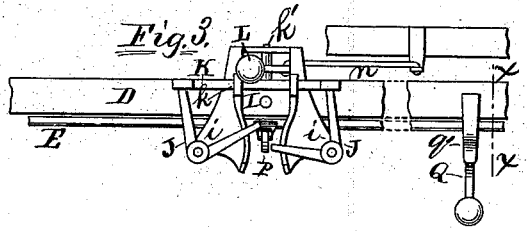


Fig. 3.



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2 Sheets—Sheet 2.

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CHECK-ROWERS FOR CORN-PLANTERS.

No. 187,610. Patented Feb. 20, 1877.

Fig. 5.

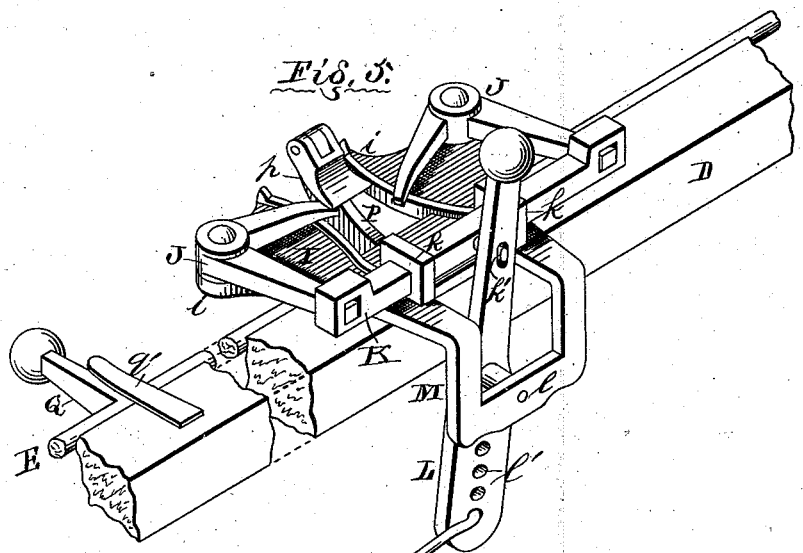


Fig. 6.

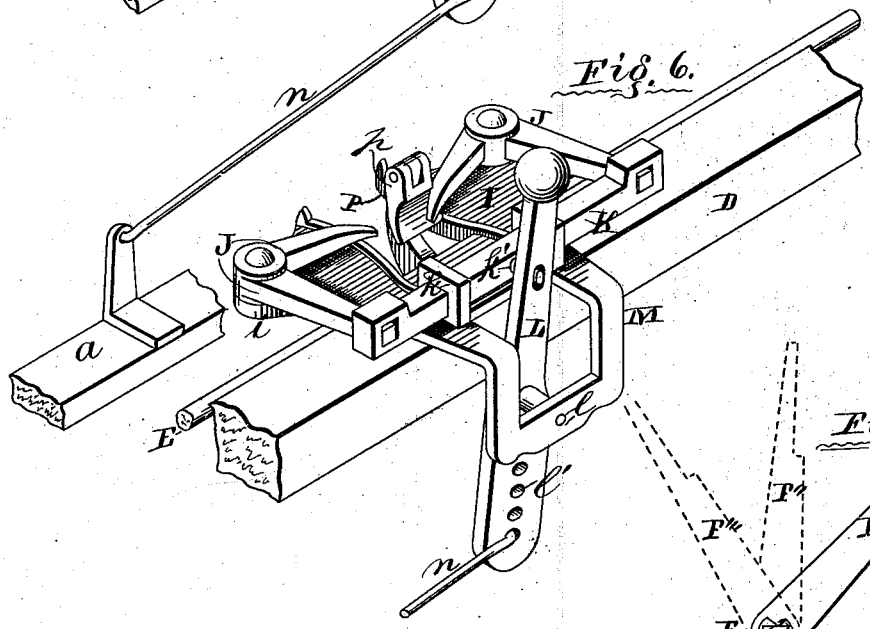
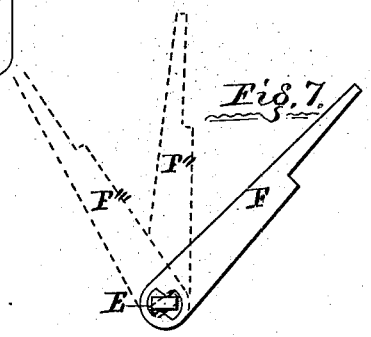


Fig. 7.



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UNITED STATES PATENT OFFICE.

ROBERT FARIES, OF DECATUR, ILLINOIS, ASSIGNOR TO WM. B. CHAMBERS, WM. J. QUINLAN, AND J. EDWARD BERING, OF SAME PLACE.

IMPROVEMENT IN CHECK-ROWERS FOR CORN-PLANTERS.

Specification forming part of Letters Patent No. 187,610, dated February 20, 1877; application filed January 16, 1877.

To all whom it may concern:

Be it known that I, ROBERT FARIES, of Decatur, in the county of Macon and State of Illinois, have invented certain new and useful Improvements in Check-Rowers for Corn-Planters; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view of a planter embodying my invention. Fig. 2 is a front elevation of the devices for operating the seed-slides. Fig. 3 is a top view of the parts shown in Fig. 2. Fig. 4 is a detail view, hereinafter referred to. Fig. 5 is a perspective view of the mechanism for transmitting motion from the rock-shaft to the seed-slides. Fig. 6 is a similar view to Fig. 5. Fig. 7 is a side elevation of one of the forked levers, and the end of the shaft on which it is mounted.

This invention relates, generally, to that class of corn-planters in which the ordinary seed-measuring and discharging mechanism is operated by devices intermediate between the seed-measuring mechanism and an actuating knotted wire or cord stretched across the field, and relates especially to improvements in said intermediate devices.

The invention consists in the use of a single wiper to transmit motion from the rock-shaft alternately to two bell-crank levers. It also consists in the employment of a wiper carried on a rock-shaft for operating the seed-slides, having a hinged plate on its end, adapted to carry one of the tappets upon which it acts forward, and rise by swinging on the hinge, to allow it to return over the other tappet and into position to act upon it at its next forward movement. It further consists in certain details of construction and arrangement, hereinafter referred to.

The same letter of reference indicates the same part in the different views of the drawing.

Letter A represents the forward part or frame of a corn-planter, supported on runners A′, and carrying the seed-boxes B B, mounted on the frame A, and containing the seed-cup slides, which are operated in both boxes, B, by a connecting-rod, *a*. C is the rear frame, mounted on wheels C′, and carrying a driver's seat, *c*. The foregoing parts represent an ordinary corn-planter, which may be of any other construction, having two seed-boxes with seed-measuring devices operated by a connecting-rod. D is a bar, on which my improvements are mounted, and is itself mounted above the boxes B, transversely with the planter, and with its ends projecting somewhat beyond the seed-boxes B B. E is a rock-shaft, journaled in suitable bearings to and parallel with the bar D. F F are levers, mounted, as hereinafter described, one on each end of the rock-shaft E, and their distal ends crotched or forked, as shown in the drawings. On the outer ends of the bar D are arms G, carrying pulleys *g g′*, the rear pulley *g′* journaled between vertical arms *g″*. These pulleys *g g′* and arms *g″* serve as guides to direct and retain the wire or cord H in proper contact with the forks in the levers F, as the machine is drawn forward beneath said cord, which is previously stretched across the field, and is provided with regularly-recurring knots or trippets *h*. Midlength of the bar D is fixed a plate, I, with projecting arms *i i*, on the outer end of each of which is loosely fulcrumed at its apex a bell-crank lever, J, the rearwardly-projecting arms of which are seated loosely in holes in a link, K, which connects them, and is itself held by loops *k*, through which it may be longitudinally reciprocated. L is a lever, fulcrumed at *l* to a curved standard, M, which projects from the bar D, and has a slot in its upper end, which receives a stud, *k′*, that projects from the link K.

The lower end of the lever L has a series of holes, *l′*, which receive one end of a link, *n*, the other end of which is connected in any suitable manner with the bar *a*, which is the ordinary bar connecting the seed-slides of corn-planters. By adjusting the link *n* in the holes *l′*, the device may be adjusted to planters having greater or less throw of the seed-slides. The lever L may be connected at its lower end directly to the bar *a* by passing

through a slot therein, or otherwise. P is an arm or tappet projecting from the rock-shaft E, and has a broadened plate, *p*, hinged to its outer end. Q is a weighted arm projecting from the shaft E, its descending movement limited by a shoulder, *q*, on its rear portion striking the bar D, and its ascending movement limited by a spring-plate, *q'*, (see Fig. 4,) thus limiting the oscillations of the rock-shaft E about its axis.

As the planter is drawn forward, with the cord H resting in the fork of one of the forwardly-inclined levers F, said lever will be brought successionally into contact with the knots *h*, and will be, by reactionary force, oscillated periodically rearward to an angle permitting the escape of the knot *h* from the forked lever. The oscillation of the lever F will oscillate the bar E, and raise the weighted arms Q to the spring *q'*, and when a knot, *h*, releases a lever, F, the bar E and lever F will be oscillated or returned to their original positions by means of the weighted arm Q.

In order to give the necessary sudden impulse to the seed-slides, the levers F are mounted so as to oscillate through about one-half of their arcs of motion before acting on the shaft E, which is accomplished, as shown at Fig. 7, by making the end of the shaft E rectangular in its cross-section, and seating it in an opening through the lever F, shaped as plainly shown at same figure, and from which it will be seen that the lever F may be oscillated from the full-line position to the dotted-line position F″ without moving the shaft E, and that, in further moving it to the dotted-line position F‴, it will carry the rock-shaft E with it. As the shaft E is oscillated by the lever F, it will oscillate the tappet P, and the plate *p* will engage with an arm of one of the levers J, and carry it rearward, as plainly shown at Figs. 1, 3, and especially 6, thus reciprocating the link K, and oscillating the lever L, and operating the seed-slide bar *a*, in the obvious manner, and at the same time throwing the other bell-crank J into position, as shown at Figs. 1 and 7, to receive the next impulse of the same kind. As the tappet P is thrown back toward its normal position by the weighted arm Q, the plate *p*, swinging on its hinge, will pass over the now intervening arm *j* of the bell-crank lever, as shown by Fig. 5. This operation is repeated, the tappet P striking the bell-crank levers J alternately, and its movement of the one bringing the other into position for its action, as described.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The single wiper or tappet P, combined with the bell-crank levers J J and rock-shaft E, to transmit motion alternately to said bell-crank levers, substantially as described, and for the purpose specified.

2. The wiper or tappet P, having a hinged plate, *p*, affixed to its distal end, combined with the loosely-hung bell-crank levers J J and rock-shaft E, substantially as described, and for the purpose specified.

3. The knotted wire H, forked levers F, shaft E, wiper P, having hinged plate *p*, bell-cranks J J, link K, lever L, link *n*, slide *a*, and bar D, combined substantially as described, and for the purpose specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

ROBERT FARIES.

Witnesses:

JAMES A. READ,

HENRY A. WOOD.