L. B. BERRIEN.

Check-Rower and Corn-Planter.

No. 213,732. Patented April 1, 1879.

Fig. 1.

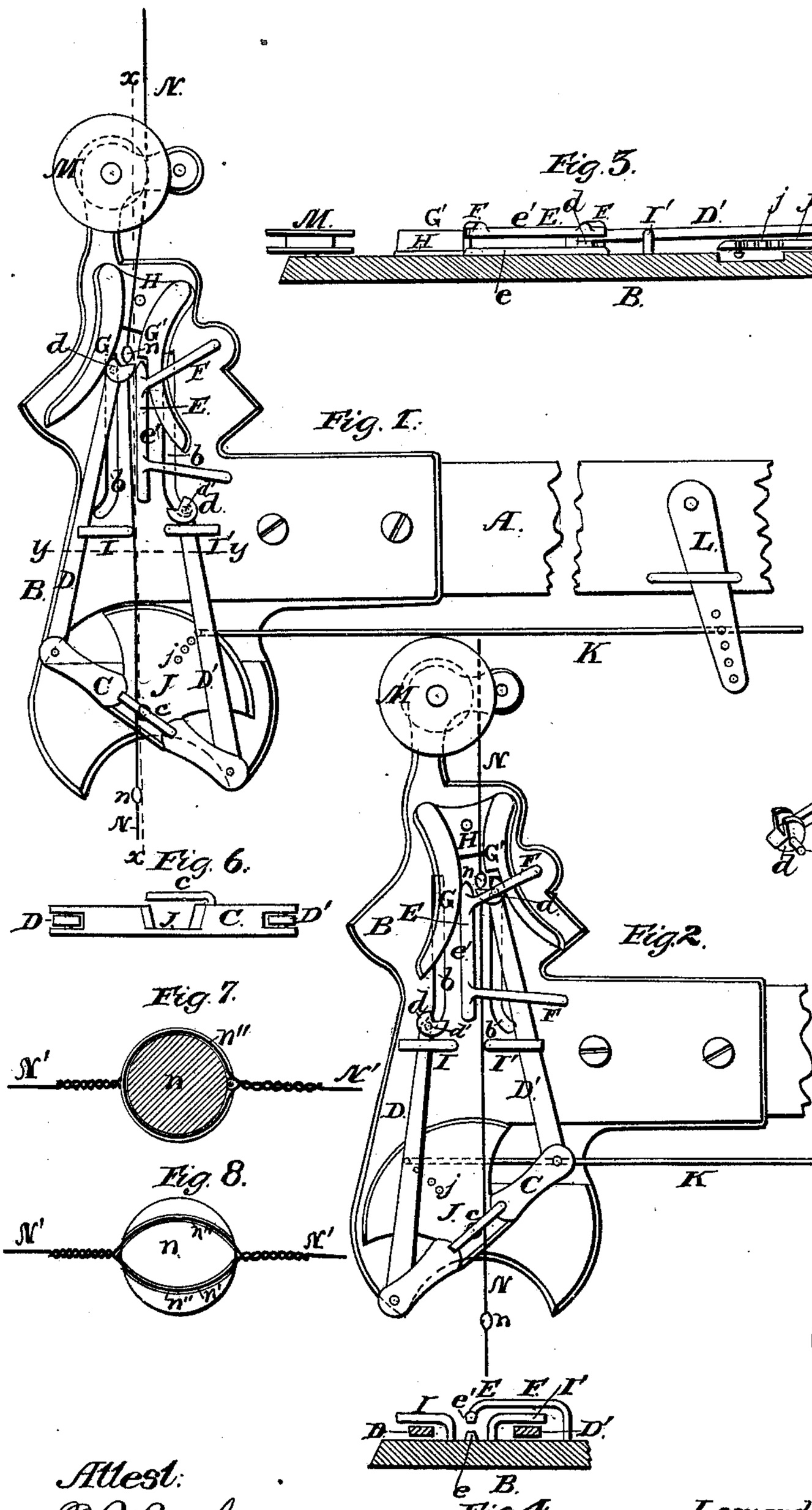


Fig. 5.

Fig. 6.

Fig. 7.

Fig. 8.

Fig. 4.

Fig. 5.

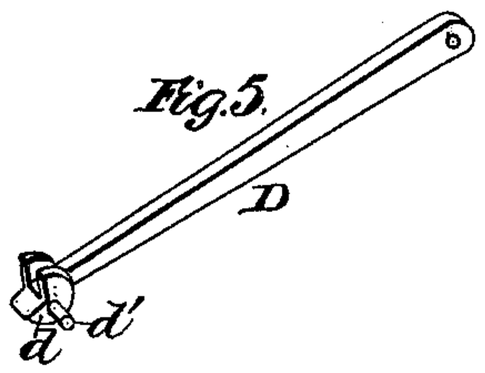
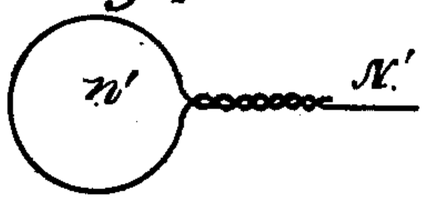


Fig. 2.

Fig. 9.



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LEONARD B. BERRIEN, OF GALESBURG, ILLINOIS.

IMPROVEMENT IN CHECK-ROWERS FOR CORN-PLANTERS.

Specification forming part of Letters Patent No. **213,732,** dated April 1, 1879; application filed January 13, 1879.

To all whom it may concern:

Be it known that I, LEONARD B. BERRIEN, of Galesburg, in the county of Knox 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 of the invention, 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, in which—

Figure 1 is a top-plan view of a construction embodying my invention. Fig. 2 is the same view as Fig. 1, but the working parts in different relative positions. Fig. 3 is a vertical sectional view in the line *x x* in Fig. 1. Fig. 4 is a vertical sectional view in the line *y y* in Fig. 1. Fig. 5 is a perspective view of one of the slide-bars. Fig. 6 is a rear elevation of the bar which connects the slide-bars. Fig. 7 is a sectional view of the knot on the wire. Fig. 8 is a perspective view of a knot and adjacent wire. Fig. 9 is a view of the end of one section of wire.

This invention relates to check-row attachments to corn-planters of that class which are adapted to be actuated by a knotted check-row wire or cord; and consists, first, in the use of sliding arms pivoted to an oscillating bar, and adapted to alternately receive impulses from the knots on the wire or cord for actuating the seeding devices of the planter; second, in combination with the sliding arms, a guide, which causes the part of the arms in contact with the knots to slide in a direct path while it is desired to have the knots act thereon, and which deflects the arm to release the knot when desired; third, guards to prevent the knots continuing in contact with the sliding arms when deflected by the guides, as hereinbefore stated; fourth, a guard arranged between the sliding arms in such manner as to retain the knots in contact therewith alternately, and so constructed and fixed in position as to permit of the wire or cord passing from one side of the guard to the other; fifth, in combination with the sliding arms and knotted cord or wire, oscillating guides, so arranged that the sliding arms set the oscillating guides into positions to deflect the wire or cord to the sliding arms for action upon them alternately; sixth, the invention further consists in knots formed on a check-row wire by making the wire in short sections, with interlocking eyes on the ends of the sections, in which small balls are held by the interlocking eyes.

The invention further consists in constructions and combinations hereinafter described and claimed.

Referring to the drawings by letters, the same letter indicating the same part in the different views—

Letter A represents a bar with a cross-head, B, on each end, which parts may be constructed as desired, and adapted to fixing on a corn-planter in the ordinary manner, with a head, B, at each side of the planter; but one head, B, is shown in the drawings.

C is a bar, centrally pivoted at the rear end and to the upper side of the head B, and has the rear ends of sliding bars D D′ pivoted, respectively, to its ends. The forward ends of the bars D D′ are constructed, as shown at Fig. 5, each with two lugs, *d*, projecting from their confronting faces, and a lug, *d′*, projecting from its lower side. The lugs *d′* project downward, each through a guide-slot, *b*, in the head B. The slots *b* are straight lines to near their rear ends, where they curve outward, as shown at Figs. 1 and 2 of the drawings.

E is a guard, formed of a ledge, *e*, between and parallel with the slots *b*, and a bar, *e′*, supported by overhanging arms F, above and parallel with the ledge *e*.

G G′ are arms or guides, their forward ends connected by a cross-bar, H, which is centrally pivoted to the head B. Each bar G G′ is curved outwardly at both ends, and are placed one on each side of the guard E, as shown at Figs. 1 and 2 of the drawings.

I I′ are studs in rear of the slots *b*, and may have their upper ends bent outwardly over the sliding bars D D′, to prevent the bars D D′ rising. J is an arm or plate projecting laterally from the bar C, and has a series of holes, *j*, to receive a connecting-rod, K, which extends to the lever L, or to the ordinary lever for operating the planter seed-slides. M is the ordinary guide-pulley at the forward end

of the head B, and there may be another at its rear end, if desired.

The upper central portion of the bar C may be removed, and an arm, *c*, inserted in one side of the recess to project over to the other side, as shown at Fig. 6 of the drawings.

In operation, the knotted wire or cord is stretched across the field and the planter drawn alongside of it in the ordinary manner. The parts are shown in such positions at Fig. 1 of the drawings that a knot, *n*, on the wire or cord N will act upon the lugs *d* on the sliding arm D and push the arm D backward, the knot *n* being prevented from slipping off the lugs *d* by the guard E until the arm is deflected outward by the curved rear end of the slot *b*, and allows the knot to escape. The stud I will prevent the knot being drawn over by the deflected arm D. Forcing the sliding arm D backward, as described, will give one throw to the arm J, and thereby actuate the planter seed-slides, and forcing it back, as described, will also throw the arm D′ forward to the position shown at Fig. 2 of the drawings. The arm D′ in passing forward will strike the inner curved side of the arm G′, and force it, with its fellow arm G, over to the positions shown at same figure, in which positions the arm or guide G will guide the next recurring knot on the wire or cord over to the side of the guard E next the arm D′, and thus cause it to force the arm D′ backward. The knot is released from the arm D′ in same manner as described in relation to the arm D, and the arm D′ actuates the arms D and J in the obvious manner. The bar *e′* is fixed at such distance above the ledge *e* as to permit the wire or cord N to pass between them, but not permit the knot *n* to pass.

The wire N is formed of short sections N′, with eyes *n′* formed on one of their ends by turning it back upon the main wire and twisting the two parts together, as shown at Fig. 9.

A small spherical ball, *n*, having grooves *n″* for the wire, is placed in the eye *n′*, and the end of another section then passed around the ball *n*, at right angles to the eye *n′* already around it, and interlocking therewith, and its end turned back upon the main wire and twisted therewith to secure it, as shown at Figs. 7, 8, and 9 of the drawings.

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

1. In combination with a knotted check-row wire or cord, sliding arms D D′, pivoted to an oscillating arm, C, so that each may act upon the other, and so that they may be brought alternately forward to receive alternate movements from contact with successional knots on the wire or cord.

2. In combination with sliding arms D D′ and a knotted check-row wire or cord, guides or slots *b*, which cause the sliding arms to move in a direct path a portion of their throw, and then to move laterally, to release the knot, substantially as and for the purpose specified.

3. Guards or studs I I′, arranged to operate with the sliding arms having lateral deflection, and with the knotted check-row wire or cord, substantially as and for the purpose specified.

4. In combination with the knotted check-row wire or cord and the sliding arms D D′, a guard, E, located between the arms, and constructed to permit the wire or cord to pass to its opposite side and retain the knot in contact with the sliding arms, as and for the purpose specified.

5. The oscillating deflectors G G′, in combination with the sliding arms D D′ and knotted check-row wire or cord, and adapted to be actuated by the sliding arms and to guide the knots to the arms D D′ alternately, substantially as described, and for the purpose described.

6. The sliding arms D D′, bar C, guard E, and guides G G′, arranged to operate substantially as described, and for the purpose specified.

7. A wire check-row chain, formed of short sections, with spherical knots secured between the sections in interlocking eyes formed on the sections, substantially as and for the purpose specified.

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

LEONARD B. BERRIEN.

Witnesses:
THOMAS MCKEE,
M. W. GAY.