

L. L. HAWORTH.

Check-Row Attachments for Planters.

No. 156,085.

Patented Oct. 20, 1874.

Fig. 2.

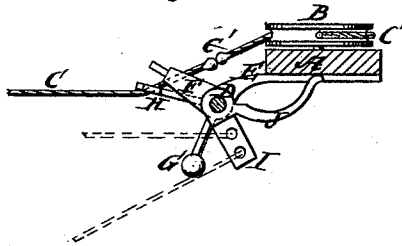


Fig. 3.

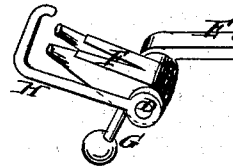
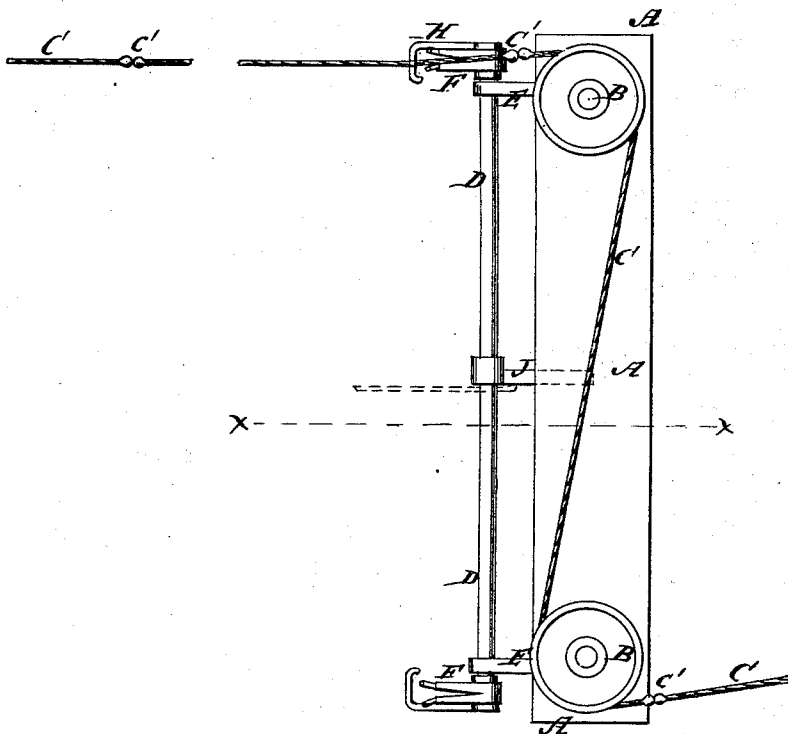


Fig. 1.



WITNESSES:

E. Wolff.
A. F. Terry

INVENTOR:

L. L. Haworth
BY *Munn & Co.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

LYSANDER L. HAWORTH, OF LONDON, OHIO.

IMPROVEMENT IN CHECK-ROW ATTACHMENTS FOR PLANTERS.

Specification forming part of Letters Patent No. **156,085**, dated October 20, 1874; application filed September 5, 1874.

To all whom it may concern:

Be it known that I, LYSANDER L. HAWORTH, of London, in the county of Madison and State of Ohio, have invented a new and useful Improvement in Check-Row Attachments for Planters, of which the following is a specification:

Figure 1 is a top view of my improved attachment. Fig. 2 is a detail cross-section of the same taken through the line *xx*, Fig. 1. Fig. 3 is a detail perspective view of a portion of the same.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved attachment, designed especially for one-horse planters to enable them to plant the hills in accurate check-row, and which shall be simple in construction and conveniently applied to the planter.

The invention consists in the combination of the weighted arm and the guard-arm with the slotted arm, through which a knotted cord passes, and with the shaft that operates the dropping-slide, as hereinafter fully described.

A represents a cross board or bar, which is designed to be secured to the frame of the planter, and to the upper side of the end parts of which are pivoted two pulleys, B, around which passes the cord C, which is stretched across the field, the ends of which are secured to the ground by stakes or other convenient means, and which is provided with knobs or knots *c'* at the required distance apart of the hills. D is a shaft placed a little in front of the board or bar A, and which works in and is supported by brackets E, attached to said board. To the ends of the shaft D are attached arms F, which are slot-

ted longitudinally to receive the rope or cord C, said slots being made of such a size that the cord C can slide through freely, but not the knots *c'*, so that as each knot *c'* strikes the slotted arm L it turns the said arm F to the rearward until it can slip through the outer part of said slot. As each knot *c'* of the cord C slips through the arm F, the said arm is again carried forward by the weighted arm G, also attached to the end of the shaft D. To the ends of the shaft D are attached the guard-arms H, which project a little in front of the slotted arms F, and the outer ends of which are bent inward across the outer ends of the slotted arms F, as shown in Figs. 1, 2, and 3, so as to prevent the cord C from getting out of the slot of said arms F as the knots *c'* slip through them. To the middle part of the shaft D is attached an arm, I, with which the dropping slide and valve of the planter are designed to be connected. To the shaft D is also attached a stop-arm, J, which strikes against the lower side of the board or bar A, and prevents the slotted arm F from being carried so far forward by the weighted arm G as to pass off the cord C.

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

The combination of the weighted arm G and the guard-arm H with the slotted arm F, through which the knotted cord or rope passes, and with the shaft D, substantially as herein shown and described.

LYSANDER L. HAWORTH.

Witnesses:

Z. T. GRAHAM,
E. McCORMACK.