

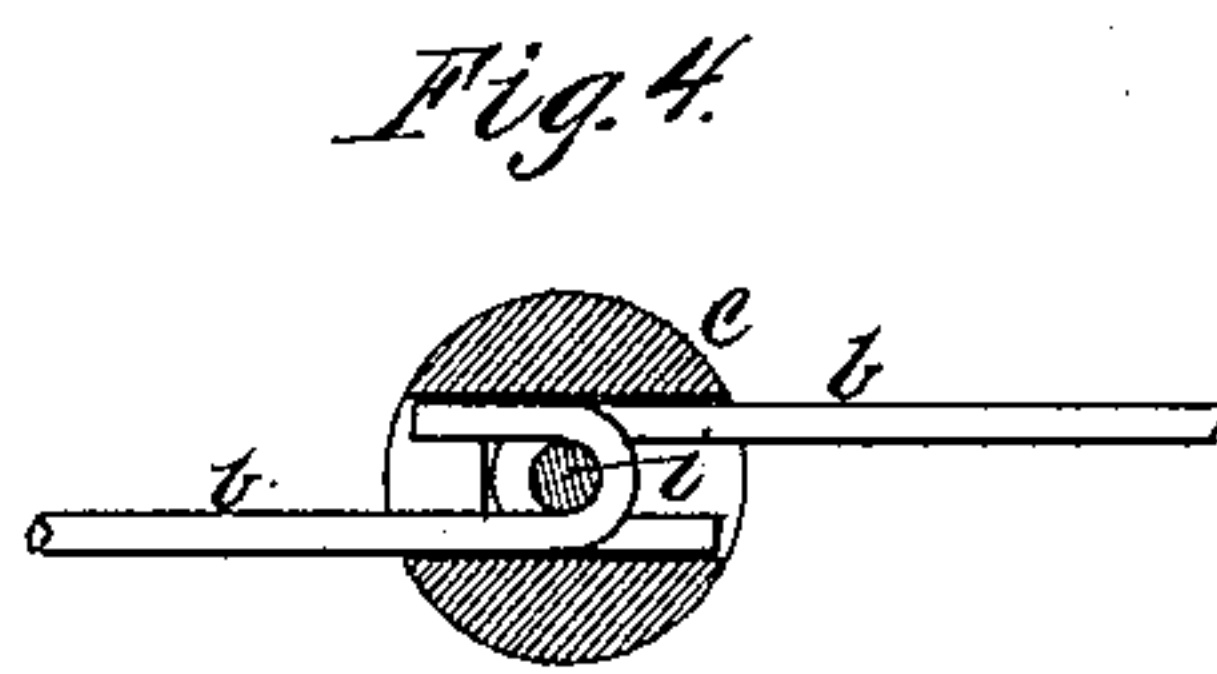
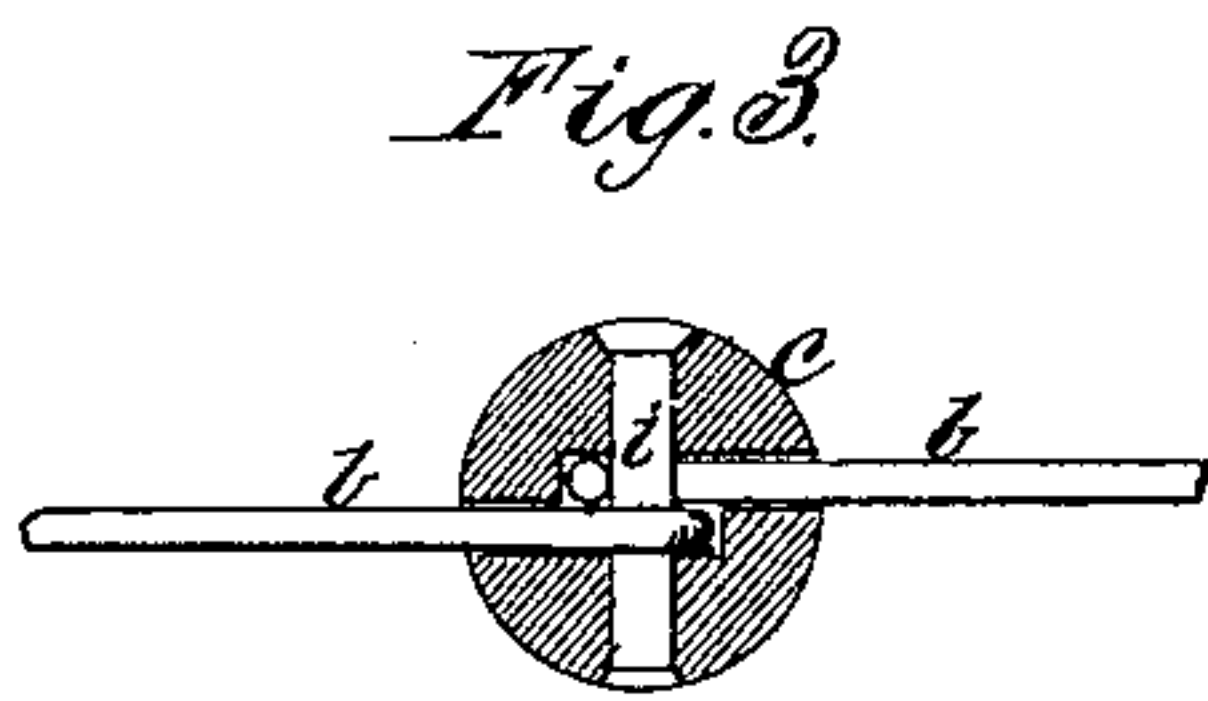
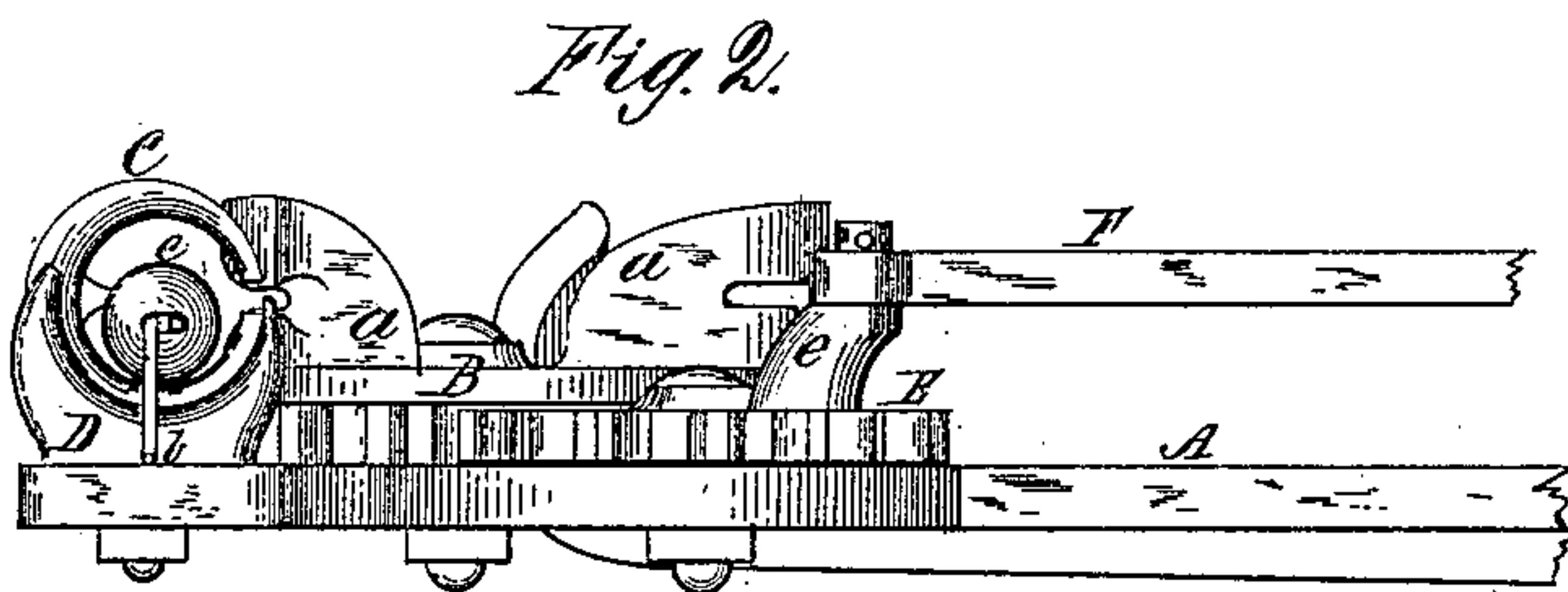
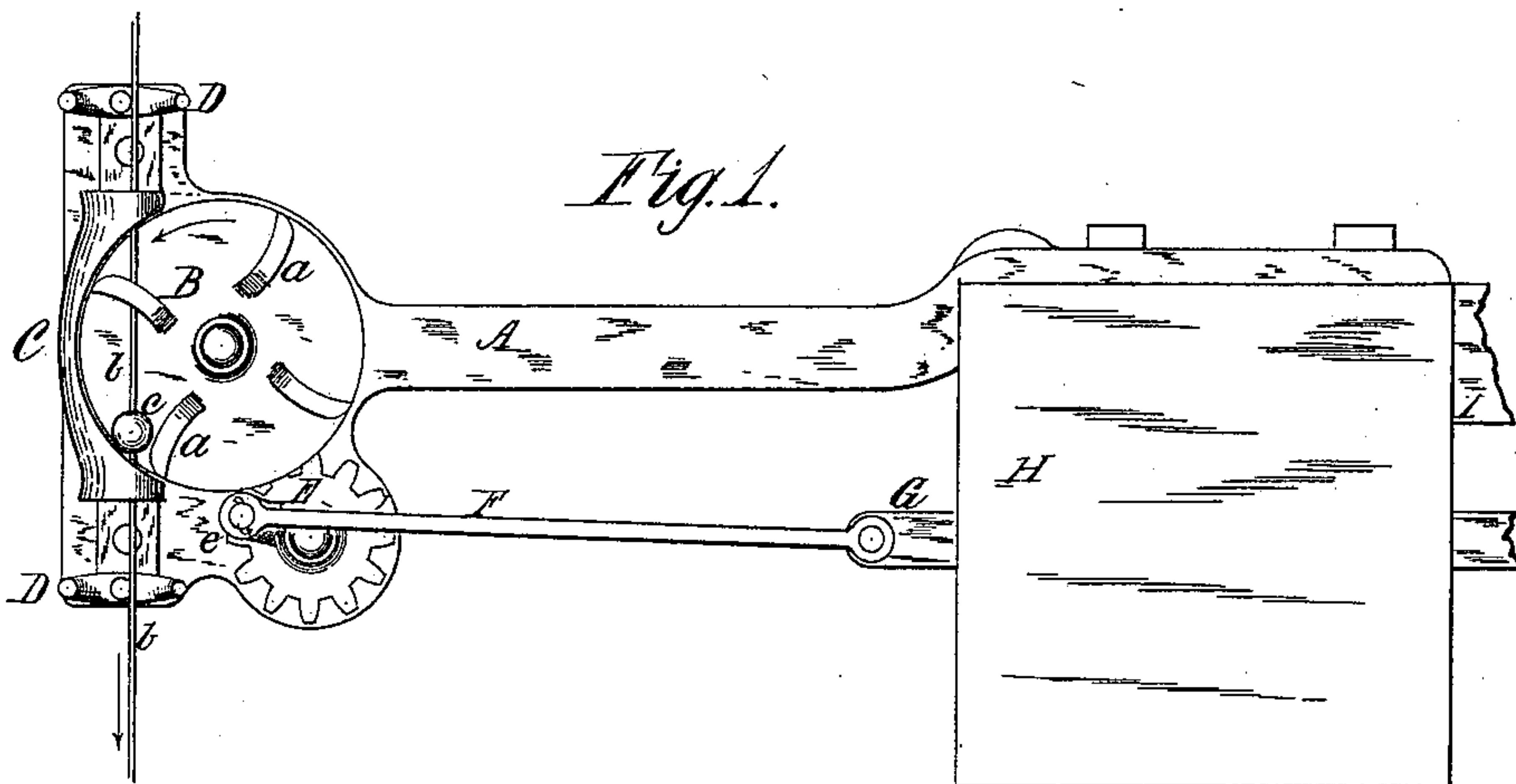
(No Model.)

C. S. HOWARD.

CHECK ROWER FOR CORN PLANTERS.

No. 350,591.

Patented Oct. 12, 1886.



Witnesses.

Brown & Clark  
E. R. Watters

*Inventor.*

Chas. S. Howard.  
By Justus M. S. John,  
His Atty.

# UNITED STATES PATENT OFFICE.

CHAFIN S. HOWARD, OF MONROE, LINN COUNTY, IOWA.

## CHECK-ROWER FOR CORN-PLANTERS.

SPECIFICATION forming part of Letters Patent No. 350,591, dated October 12, 1886.

Application filed March 24, 1886. Serial No. 196,348. (No model.)

*To all whom it may concern:*

Be it known that I, CHAFIN S. HOWARD, a citizen of the United States, residing in Monroe township, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in Check - Rowers for Corn-Planters, of which the following is a specification.

The object of my invention is to produce a check-row attachment for corn-planters which shall be simpler and cheaper than those in general use, and which shall be durable and effective in operation.

The invention consists in the construction, arrangement, and adaptation of devices to the ends in view, as fully set forth and described herein.

In the accompanying drawings, forming a part of this specification, Figure 1 is a plan view of the invention; Fig. 2, an enlarged side elevation of the operative parts thereof, and Figs. 3 and 4 the detail of the check-wire and button.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents an arm adapted to connect with one of the beams of the planter I. The outer end has lateral extensions, and to these are attached guide-lugs D D; or the lugs may be cast integral with and form a part of the arm. Somewhat back from the end of the arm is mounted so as to revolve in a horizontal plane a sprocket-wheel, B, having four radial arms, *b b a a*, rising from the upper face of the wheel. These arms are preferably curved in the manner indicated, and are provided with a flaring notch, as shown. The lower part of the wheel forms a gear, meshing with the pinion E, which is just half the size of the former, so that a quarter-revolution of the sprocket-wheel produces a half-revolution of the pinion. The pinion is provided with a wrist-pin, *e*, to which is journaled the rod F, connecting with the seed-slide G. To the end of the arm A is secured a check-wire guide and guard-iron, C, the ends of which are bell-mouthed, so as to admit freely the check-wire *b* and its buttons *c*. Between the ends the inner side of the guard-iron is hollowed out to conform to the periphery of the sprocket-wheel B, and is set so close thereto as to prevent the wire from getting between them and

out of engagement with the arms *a a*. In one side of the terminal rings of this guard-iron is a slot to receive the wire, and to prevent the wire from escaping from the rings the inner horn of the guide-lugs D D should extend up to or above the slot.

The operation of the device will now be clearly seen by reference to Fig. 1. As the planter passes along the wire in the direction indicated by the arrow, a button engages with the forward arm *a*, just back of the mouth of the guard-iron, and turns the sprocket-wheel to the position shown, when the button passes through the rear ring, and the wheel remains stationary until the next button is reached. The movement has made a full stroke of the connecting-rod F, and thus dropped the required quantity of corn. It will be seen that the movement will always be precisely the same, as the guard-iron tends to hold the button in engagement with the arm of the sprocket-wheel up to a certain point, regardless of any kinks in the wire or other circumstances calculated to vary the motion.

In practice I use a spherical button, and regard it as rather essential in connection with this device. The construction of this button and the manner of attachment to the wire are illustrated in Figs. 3 and 4, in which the former represents a section of the button in the plane of the axis of the pin *i*, and the latter a section transverse thereto. Through the center of the button in one direction extends a slot wide enough to receive the hooked ends of the wires *b b*. In the opposite direction, and through these hooks, passes the pin *i*, locking them together. To prevent the hooks from slipping out of the button back of the pin an offset is formed in the slot, as shown. This construction leaves the button quite spherical, and thereby secures its easy and smooth passage through the check-row attachment. Its construction is also comparatively simple and rapid.

The whole device, as described above, is very simple and cheap, may be easily attached to the ordinary corn-planters, and has been found to perform the work required of it perfectly.

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

1. In a check-row attachment for corn-plant-



- ers, the guard-iron C, having openings at each end for the passage of the check-wire, and one side hollowed to correspond with the periphery of the sprocket-wheel B, and set close to said sprocket-wheel, whereby the wire is prevented from disengaging from said wheel at any point, and the limit of the stroke of the wheel is determined, substantially as and for the purpose set forth.
- 10 2. In a check-row attachment for corn-planters, the combination of the described guard-iron C, sprocket-wheel B, mounted and in relation to the guard-iron, as specified, and a pinion, E, one-half the revolution of which corresponds with that portion of the revolution of the sprocket-wheel made in passing between the point of engagement with the button of the check-wire and the point of disengagement, as determined by the guard-iron, substantially as set forth.
- 20 3. The combination of the wire-guide and guard-iron C, having bell-mouthed rings at the

ends with an opening therein to receive the wire, the guide-lugs D D, the inner horn of which extends up to or above the opening in the ring to prevent the escape of the wire, and the sprocket-wheel, all substantially as and for the purpose set forth.

4. In a check-row attachment for corn-planters, the check-wire composed of hooked links *b b*, the spherical ball or button *c*, having the offset slot corresponding with the extreme width of the wire loop, and the pin *i*, whereby the loops may be inserted in the button endwise from opposite directions, and are held in position by the pin in front and the offset at the back of the loop, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

CHAFIN S. HOWARD.

Witnesses:

FRANK G. CLARK,  
G. G. WATTERS.