

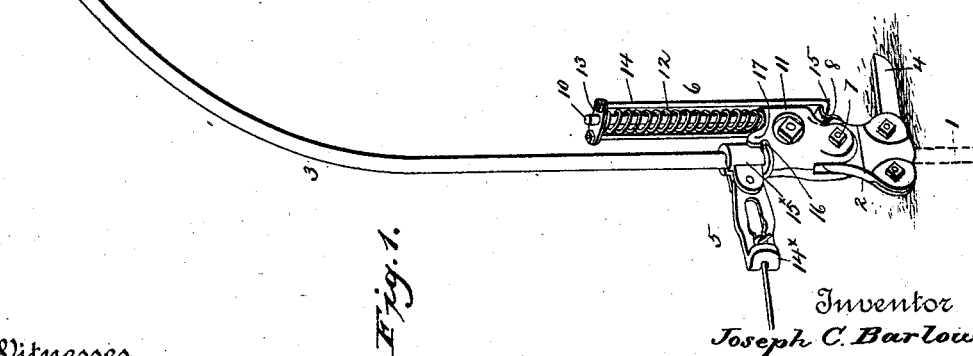
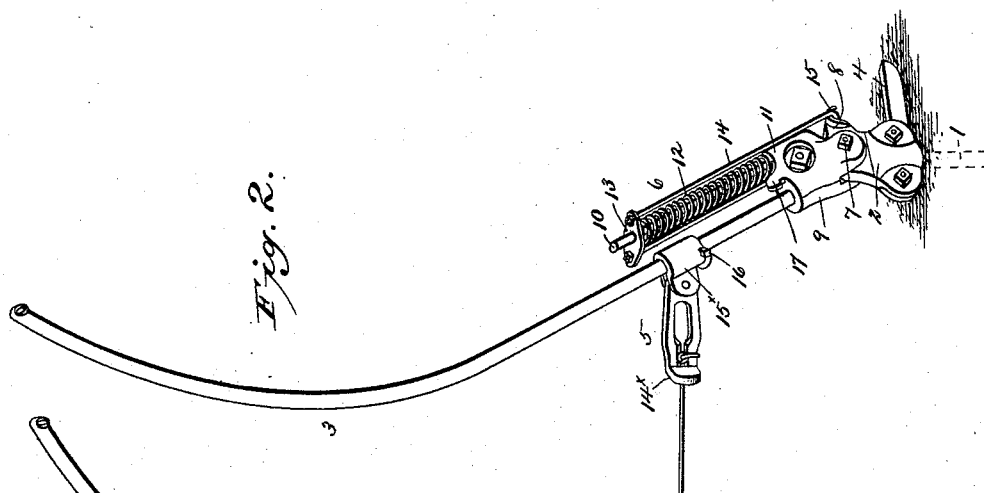
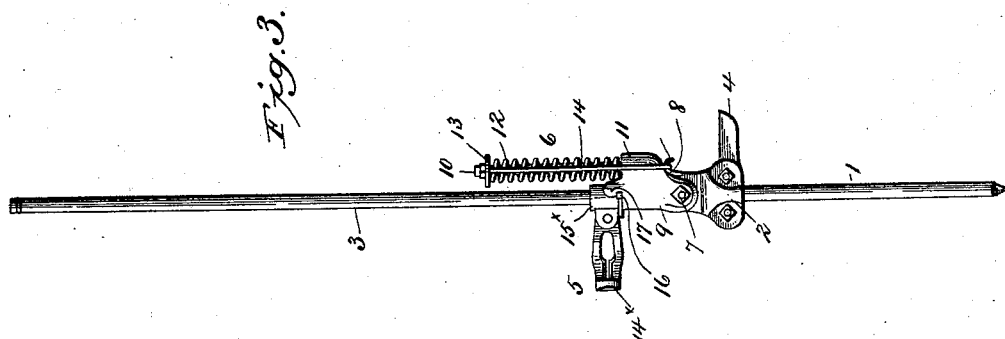
(No Model.)

2 Sheets—Sheet 1.

J. C. BARLOW.  
CHECK ROWER.

No. 455,380.

Patented July 7, 1891.



Witnesses

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his Attorneys

(No Model.)

2 Sheets—Sheet 2.

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Fig. 4.

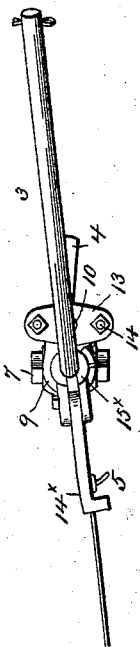


Fig. 5.

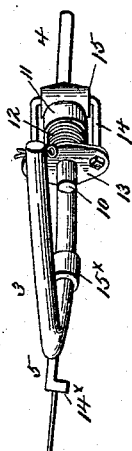
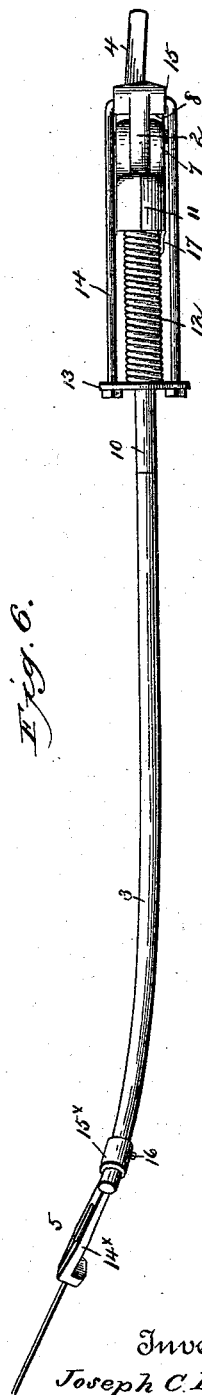


Fig. 6.



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# UNITED STATES PATENT OFFICE.

JOSEPH C. BARLOW, OF QUINCY, ILLINOIS.

## CHECK-ROWER.

SPECIFICATION forming part of Letters Patent No. 455,380, dated July 7, 1891.

Application filed February 25, 1891. Serial No. 382,739. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH C. BARLOW, of Quincy, in the county of Adams and State of Illinois, have invented certain new and useful Improvements in Anchors for Check-Rowers; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures of reference marked thereon.

This invention relates to improvements in that class of anchor devices for check-row cords or wires for which Letters Patent No. 373,170 were granted to me November 15, 1887; and it consists in the novel construction and arrangement of the parts designed to simplify and improve the device and render it more efficient in action.

In the accompanying drawings, Figure 1 represents the improved anchor in perspective as set for starting the check-rower. Fig. 2 is a similar view showing the anchor upon the return or approach of the check-rower. Fig. 3 is a side elevation with straight lever. Figs. 4, 5, and 6 are top plan views illustrating different phases of adjustment or motion.

Similar letters of reference in the several figures indicate the same parts.

As in my prior patented device, this anchor is furnished with an anchor-pin 1, a base or frame 2, a handle or lever 3 for setting the anchor and putting tension on the cord or wire, a foot-piece 4 to aid in inserting the anchor-pin, a holding and releasing device 5 for engaging the check-row cord or wire, and a tension device 6, operating, when the holding device is released, to permit of the extension of the cord or wire to accommodate the lateral adjustment of the planter on its return movement. While all of these elements, abstractly considered, are found in my improved anchor, they are constructed, arranged, and combined in a somewhat different manner, as will presently appear. The frame or head 2, with its foot-piece 4, is clamped upon the end or head of the anchor-pin 1 in the same or an equivalent manner to that described in my said prior patent; but the handle or lever 3, instead of being rigidly secured to the head 2, is pivotally attached thereto by a transverse bolt or pivot-pin 7. A shoulder or stop 8, engaging the casting or head 9 of the lever,

serves to restrain the movement of the latter in one direction, while permitting it to move in the opposite direction or away from said shoulder.

The lever 3 is maintained in an upright position and against the stop or shoulder 8 by the yielding tension device 6, which may be constructed and applied as follows: The head 9, which for convenience is formed in two longitudinal sections, carries a vertical pin or guide 10, clamped or otherwise properly secured in an offset or projection 11. A spring 12, encircling this pin, engages the offset 11, while its outer or upper end bears against a cross-piece 13, fitted to slide on the pin 10 and connected to a yoke or stirrup 14, whose opposite end or cross-bar engages a lip 15 on the head 9 below the offset 11. The spring 12 is compressed between the offset 11 and cross-piece 13, and serves to hold the lever against its stop 8, at the same time permitting the lever to yield to pressure applied in a direction to force it away from said stop. The lever 3 is secured at its lower end by being clamped between the sections of the head or casting 9, and its upper portion is bent or curved rearwardly, substantially as shown, so that its outer or free end will be projected in a plane diagonal to the plane of the axis or pivot 7, for a purpose to be explained. The slotted hook 14<sup>x</sup> or equivalent device for receiving and holding the check-row cord or wire, is pivotally attached to a collar or ferrule 15<sup>x</sup>, fitted loosely, so as to slide freely upon the lever 3, and said collar is provided with an offset or projection 16 for engaging a catch 17 on the head 9 of the lever when the collar is swung to one side, said catch serving to restrain the collar and prevent it traveling upon the lever until by the lateral motion of the hook the projection 16 is withdrawn from the catch.

The operation and mode of applying or using the improved anchor are as follows: The check row cord or wire is extended across the field, and one end is attached to the hook 14<sup>x</sup>, as by inserting one of the knots or protuberant portions between the jaws of the hook, the opposite end of the cord or wire being properly anchored at the opposite side of the field. The anchor is employed as a lever to draw the cord or wire taut and place the requisite ten-

sion upon it, to which end the lever is inclined to advance the anchor-pin, and the point of the latter is inserted in the ground, when, by straightening up the lever, the hook will be drawn back and the wire or cord stretched. The upper end of the lever is made to project rearwardly or away from the cord, so that in setting the anchor (which is done by first drawing the cord taut, as explained, and then forcing the anchor-pin into the ground) it will be swung around with the handle in line with the cord or wire to insure the proper adjustment of the parts—that is to say, to bring the collar or ferrule to which the hook is secured in engagement with the catch 17 and to locate the pivot 7 at an angle to the cord or wire—so that the plane of motion of the lever upon its pivot will intersect the direction of motion or line of travel of the planter upon its return trip. It will thus be seen that in the act of setting the anchor it is automatically adjusted to position, the pressure brought to bear upon the lever in drawing the cord or wire serving to rotate the anchor until the lever is brought into line with the cord or wire, when all the parts are in proper adjustment for operation. The anchor having been properly located and secured in position, with the check-row cord or wire fast in the hook, the planter is advanced in a path parallel with the check-row cord or wire and in a direction away from the anchor, which serves to hold the cord or wire in opposition to the drag of the check-row mechanism operated thereby. Under ordinary circumstances the spring will be sufficient to prevent motion of the lever and hold the end of the cord or wire in fixed position, but will permit it to yield to a limited extent in case of obstruction in the passage of the cord or wire through the seeding mechanism, thereby preventing sudden and violent shocks. It is during and near the termination of the movement of the planter in the opposite direction—that is, when approaching the anchor—that the yielding of the point of attachment of the cord or wire is effected, so as to accommodate the new position of the planter and at the same time retain tension upon the cord or wire, and this is accomplished in the following manner: The return movement of the planter takes place on a line substantially parallel with its forward movement, but to one side of the anchor. The anchor having been set so that the plane of motion of the lever will intersect the path to be traversed by the planter, as the latter approaches the anchor the collar 15<sup>x</sup> will be partially rotated about the lever and finally withdrawn from catch 17 by reason of the lateral deflection of the cord or wire attached to the hook. The continued approach of the planter brings the cord or wire into the plane of motion of the lever upon its pivot, and the said lever is drawn forward or toward the planter against the resistance of the spring, thereby permitting the collar, with its attached hook, to ride up on the lever

and advance toward the planter, producing the effect of an elongation of the check-row cord or wire at its point of attachment to the anchor, thereby automatically accommodating said cord or wire to the changed position of the planter, without, however, entirely relaxing the tension. It is in this connection that the curved form of the lever again comes into play to perform another and additional operation—that is to say, preventing the too sudden release of the end of the cord or wire. If a straight bar or lever were employed for the collar to travel upon, it would have to be moved through but a short arc before the collar would, owing to increased leverage, draw the lever down to a horizontal position, thereby quickly effecting the extension and as rapidly diminishing the tension on the cord or wire; but by inclining or curving the upper portion of the lever backward or away from the planter the collar is prevented from racing toward the end of the lever, and is drawn gradually out toward the planter as the latter approaches, thereby maintaining the tension on the check-row cord or wire and permitting the team to come up to and partly pass the anchor, as though the wire or cord lay in a straight line ahead of the planter.

It is obvious that a straight bar or lever may be employed in place of the curved lever to serve as a guide for the hook, though it will not possess all the advantages of the curved form.

In Fig. 3 the straight form of lever is shown.

Having thus described my invention, what I claim as new is—

1. An anchor such as described, provided with a base having means for attaching it to the ground, a rod flexibly connected to said base and held retracted under yielding pressure, and a hook or holder for the check-row cord or wire, mounted to move longitudinally of the rod as the latter is drawn forward against the resistance of the yielding pressure device, substantially as described.

2. An anchor such as described, comprising a base or support, a rod hinged to said base and held retracted by spring-pressure, a collar movable longitudinally of said rod and provided with means for attaching the check-row cord or wire, and a catch engaging said collar to restrain its movement upon the rod until released, substantially as described.

3. An anchor such as described, consisting of a base for attachment to the ground, a lever pivotally attached to the base and provided with a retracting-spring, said lever being bent or curved rearwardly at its upper end, a collar movable longitudinally of said rod and capable of lateral motion also, a clamp or holder for the check-row cord or wire attached to said collar, and a catch engaging the collar to prevent its movement longitudinally of the rod until released by the lateral movement of the collar, substantially as described.

4. In an anchor such as described, the com-

5 bination, with the anchor-pin, of the upright lever pivoted thereto, a tension-spring connected to said lever, and a collar mounted to travel on said lever and carrying the cord clamp or hook, substantially as described.

10 5. In an anchor such as described, the combination, with the base and anchor-pin, of the upright curved lever pivoted to the base on an axis diagonal to the plane of the lever, a retracting-spring engaging the lever, and a collar or slide mounted to travel on the lever and provided with means for attaching the check-row cord or wire, substantially as described.

15 6. In an anchor such as described, the combination, with the base and anchor-pin, of the upright lever pivoted to said base and having its upper end curved or bent rearwardly in a plane diagonal to the plane of its movement on its pivot, and a collar mounted to reciprocate and turn upon said lever and provided with a hook or clamp, substantially as described.

25 7. In an anchor such as described, the combination, with the base or support, of the lever pivoted thereto and provided with a traveling cord clamp or hook, and a spring engaging the head of the lever and connected to the base for retracting said lever, substantially as described.

30 8. In an anchor such as described, the combination, with the base or support, of a lever pivoted thereto and provided with a retracting-spring and a catch near the pivot, a collar mounted on the lever and engaging said catch, and a clamp or hook for the check-row cord or wire, connected to the collar and operating when the cord or wire is deflected to disengage the collar from the catch and permit it to travel longitudinally of the lever, substantially as described.

9. In an anchor such as described, and in combination with the base or support provided with an anchor-pin, a lever pivoted to said base and having its upper portion curved or extended rearwardly in a plane diagonal to the plane of vibration upon its pivot, a retracting-spring, a collar movable longitudinally of the lever, a clamp or hook attached to said collar, and a catch near the pivot of the lever, engaging the collar when the hook or clamp is held in line with the curved or bent portion of the lever, but releasing the collar when the hook or clamp is drawn to one side toward the plane of motion of the lever upon its pivot, substantially as described.

10. The combination, with the base or support carrying the anchor-pin, and the lever pivoted thereto, of the yoke engaging the base, and the spring interposed between the head of the lever and said yoke, substantially as described.

11. In combination with the base or support, the lever provided with a sectional head or casting, the pin clamped between said sections, the spring encircling said pin and engaging the head of the lever, and the yoke pivotally attached to the base and carrying a plate or cross-head engaging the spring, substantially as described.

12. In combination with the base or support, the lever provided with a head or casting pivotally attached to the base and having a catch or projection, and the collar movable upon the lever and adapted to engage the catch on the lever-head, substantially as described.

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Witnesses:

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