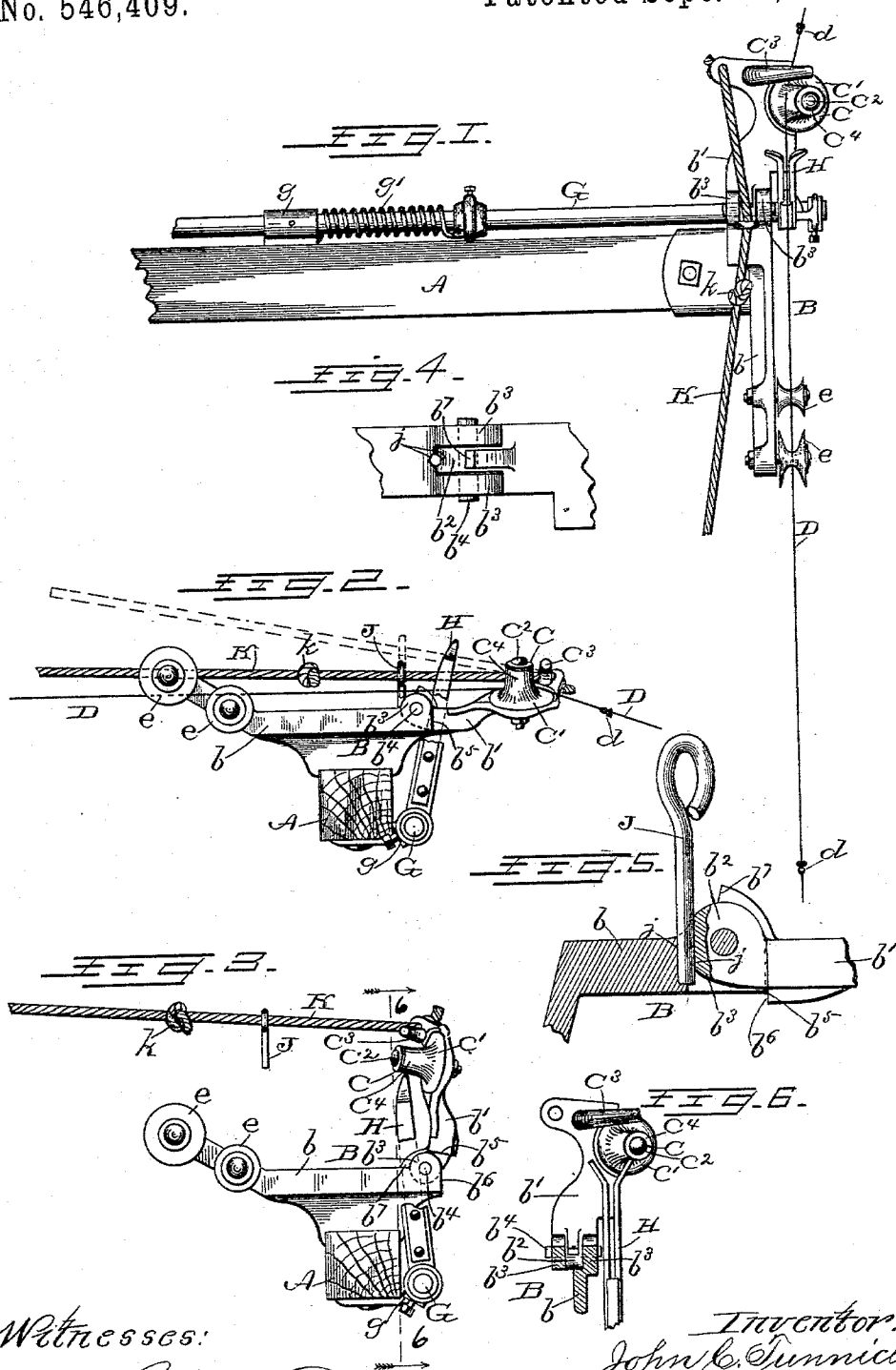


(No Model.)

J. C. TUNNICLIFF.
CORN PLANTER CHECK ROWER.

No. 546,409.

Patented Sept. 17, 1895.



Witnesses:

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UNITED STATES PATENT OFFICE.

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CORN-PLANTER CHECK-ROWER.

SPECIFICATION forming part of Letters Patent No. 546,409, dated September 17, 1895.

Application filed January 6, 1893. Renewed March 7, 1895. Serial No. 540,863. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. TUNNICLIFF, a citizen of the United States, residing at Galesburg, in the county of Knox and State of Illinois, have invented certain new and useful Improvements in Corn-Planter Check-Rowers, of which the following is a specification.

This invention relates to improvements in corn-planter check-rowers of that class in which the dropping mechanism of the planter is actuated at uniform distances in the travel of the machine for depositing the seed in check-rows by contact of a forked lever of the check-rower with tappets located in regular sequence on a check-row line which is stretched over the ground approximately paralleling the path of the planter, its object being to improve the same in respect to the means used by the driver, seated on the planter, for doffing or discharging the check-row line at the ends of rows planted without dismounting from the planter; and to this end the invention consists in a check-rower head in two parts, a fixed part and a hinged part, the hinged part carrying the forward guide-pulley and guide-finger, and hinged to the fixed part in such manner that it will turn or swing upwardly at its outer end to raise the check-row line above the forked lever, and at the same time bring the forward guide-pulley into such position that the check-row line will be doffed or discharged therefrom.

In carrying out this object of my invention other subsidiary improvements are evolved, which consist in novel structural features and in combinations of parts, which structural peculiarities and which parts separately and in combination are hereinafter described, and expressed in the claims of this specification.

A preferred construction of parts of my improvement and arrangement thereof and the adjacent parts of a check-rower in which the improvements are incorporated are illustrated in the accompanying drawings, in which—

Figure 1 is a top plan of one end part of a check-row bar and rock-shaft and a head embodying my improvements; Fig. 2, an end elevation of the check-row bar and side elevation, partly broken away, of other parts

shown at Fig. 1, and as at said figure, in position for planting; Fig. 3, elevation of same parts shown at Fig. 2 without the check-row line and in position for doffing said line, the forked lever shown broken away at its mid-length part; Fig. 4, an enlarged top plan of the joint in the check-row head; Fig. 5, an enlarged side elevation, partly in section, of the joint in the check-row head and side elevation of the locking-pin; Fig. 6, a sectional elevation in the line 6 6 in Fig. 3.

At Fig. 1 one end of an ordinary check-rower bar A and a head B are shown. The head B is in two parts, a rear part *b*, fixed to the end of the bar A, and a forward part *b'*, hinged to the part *b*, as hereinafter described. The forward end of the part *b'* carries a pulley C, which preferably has an annular flange *c'* on its end next the part *b'* and is journaled to rotate on a stud-bolt *C²*, which projects from the part *b'*. The revoluble pulley C and a bent finger *c³* serve as guides at the forward end of the head B for the check-row line D. The finger *c³* preferably projects upwardly from the part *b'* and is bent and thence extends laterally a short distance above the flange *c'* and to or slightly past the axis of the pulley C, and at a short distance from and in front of the part *c⁴* of said pulley. The rear guide-pulleys *e e* for the check-row line are journaled on stud-bolts, which project laterally from the fixed part *b* of the head B in an ordinary manner.

The rock-shaft G is journaled in bearings *g* to the bar A and carries a forked lever H on each of its ends, only one of which is shown. The check-row line stretched across the field being planted parallel with and adjacent to the path of the planter as the forked lever H contacts each of the tappets *d*, which are fixed thereon at regularly-recurring distances apart, it will be swung rearwardly by each tappet, and thereby swinging or rocking the rock-shaft G in one direction will impart movement to the seed measuring and dropping mechanism of the planter by any ordinary intermediary mechanism that may be used, and which is not shown. The rock-shaft and forked lever are swung in an opposite direction and returned to their normal positions by means of a spring *g'*.

The part b' is shown at Fig. 2 in its normal position, as when planting, and is hinged to the fixed part b to swing upwardly in a vertical plane and into a perpendicular or approximately perpendicular position with reference to the part b . A simple, strong, effective, and preferred hinge for the purpose is shown in the drawings, in which a lug or ear b^2 , projecting from the end of the part b' , fits snugly between ears b^3 , projecting from the part b , and is pivotally connected therewith by a pintle or hinge bolt b^4 . The shoulders b^5 , on the part b' coming in contact with the vertical end parts b^6 of the part b , limit the downward swing of the part b' to its position shown at Figs. 1, 2, and 5, and in which position it is locked and held by an eyebolt J in a seat formed by a groove j in the confronting parts of the lug or ear b^2 and the wall between the ears b^3 , as shown at Figs. 4 and 5. When the eyebolt J is withdrawn from its seat, the part b' can then be swung upwardly until the shoulder b^7 comes in contact with the upper side of the part b , as shown best at Fig. 3, and limits the further swinging movement thereof.

A cord K , fixed at one end to the outer or front end of the part b' , extends backwardly through the eye of the eyebolt J to the driver's seat on the planter. (Not shown.) A knot or other projection k on the cord K retains the eyebolt in position convenient for reinsertion in its seat. When the planter has reached the terminal end of the rows being planted, the driver in his seat, by first pulling at an incline upwardly on the cord K , will draw the eyebolt from its seat and thus unlock the part b' , so that by further direct pull he can swing said part into its perpendicular position. (Shown at Fig. 3.) In passing upwardly into such position the pulley C will raise the check-rower line out of and above the forked lever, and said pulley will be brought into such a position (shown at same figure and at Fig. 6) as will permit the check-rower line to slide freely from it as it is drawn or pulled laterally by its angular position (see Fig. 2) with reference to the check-rower and in front of the planter at the terminal ends of the rows being planted. After turning the planter around to commence planting rows in an opposite direction, the driver releasing the cord, the part b' will drop back into its horizontal position, where it is again locked by the locking-bolt and the check-rower line again put in place on the pulleys C and e in the forked lever H for planting.

I have shown my improvement incorporated in a check-rower attachment for corn-planters, in which the check-rowing mechanism is mounted on similar heads at the ends of a check-rower bar that can be fixed on a planter. It will be evident, however, that the improvement can be applied to check-row planters in which the heads B are mounted on a frame-bar or projecting part of the planter. It will also be evident that the manner of trans-

mitting motion from the forked lever to the rock-shaft is not any part of my invention, and, in fact, that my improvement is equally applicable to a check-rower in which the forked lever is fixed on the rock-shaft, is mounted loosely thereon, or adapted to oscillate the rock-shaft or give it an intermitting rotation in one direction, or in which the forked lever transmits motion to the seeding mechanism of the planter by means of other devices than a rock-shaft or intermittingly-rotating shaft.

I have shown that mode of carrying out the invention made by me which I have thus far devised, and I desire to be understood as considering the scope of my invention as covering any organization of devices in which the described novel principle of construction is embodied—that is, a check-rower head with a forward part hinged to turn upwardly and backwardly to lift the check-row line out of the fork of the forked lever and having a guide-pulley at its forward end, from which the check-row line is thereby doffed or allowed to slide laterally from said pulley.

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

1. In a corn planter check rower, and in combination substantially as hereinbefore described, with a check rower line, forked lever and means for transmitting motion therefrom to the seed measuring and dropping mechanism of a corn planter, a check rower head with a forward end or part hinged to its rear fixed part, to swing upwardly in a vertical plane, to discharge the check rower line from a pulley mounted on its forward end.

2. In a corn planter check rower, the combination substantially as hereinbefore described, with a check rower line, forked lever, and means for transmitting motion therefrom to the seed measuring and dropping mechanism of a corn planter, of a check rower head with a forward end or part hinged to its rear fixed part to swing upwardly in a vertical plane, and provided with a pulley having an annular flange at its end next thereto.

3. In a corn planter check rower, the combination substantially as hereinbefore described, with a check rower line, forked lever, and means for transmitting motion therefrom to the seed measuring and dropping mechanism of a corn planter, of a check rower head with a forward end or part hinged to its rear fixed part to swing upwardly in a vertical plane, and provided with a pulley having an annular flange at its end next thereto, and a guard finger constructed substantially as described.

4. In a corn planter check rower, the combination substantially as hereinbefore described with a check rower line, forked lever, means for transmitting motion therefrom to the seed measuring and dropping mechanism of a corn planter, and a check rower head with a forward end or part hinged to its rear

fixed part to swing upwardly in a vertical plane, and provided with a guide pulley, of a locking pin removably seated in an aperture in the hinge between said fixed part and
5 swinging part.

5. In a corn planter check rower, the combination substantially as hereinbefore described with a check rower line, forked lever, means for transmitting motion therefrom to
10 the seed measuring and dropping mechanism of a corn planter, and a check rower head with a forward end or part hinged to its rear fixed part to swing upwardly in a vertical
15 plane and provided with a guide pulley near its free end, of a locking pin removably seated in an aperture in the hinge between said fixed part and swinging part of the head, and a
20 cord or line fixed at one end to the free end of the vertically swinging part of the head, and near thereto to the locking pin.

6. In a corn planter check rower, the combination substantially as hereinbefore described with a check rower line, forked lever, means for transmitting motion therefrom to
25 the seed measuring and dropping mechanism of a corn planter, and a check rower head with a forward end or part hinged to its rear

fixed part to swing upwardly in a vertical plane, and provided with a guide pulley C having an annular flange, c' , and a guard finger c^3 , of a locking pin J and a cord K, fixed
30 to the swinging part of the head and to the locking pin substantially as described.

7. In a corn planter check rower, and in combination substantially as described, with
35 a check rower head in two parts b and b' , a locking pin removably seated by insertion in an aperture formed by the confronting grooves j in the parts of the hinge.

8. In a corn planter check rower, and in
40 combination substantially as described, with a check rower head in two parts, a fixed part b and a swinging part b' hinged thereto, the contacting shoulders b^5 and vertical faces b^6
45 to limit the downward swing thereof and hold the swinging part in a horizontal position, and the shoulder b^7 adapted to strike the part b and limit the upward movement thereof.

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

JOHN C. TUNNICLIFF.

Witnesses:

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R. T. SOMMERS.