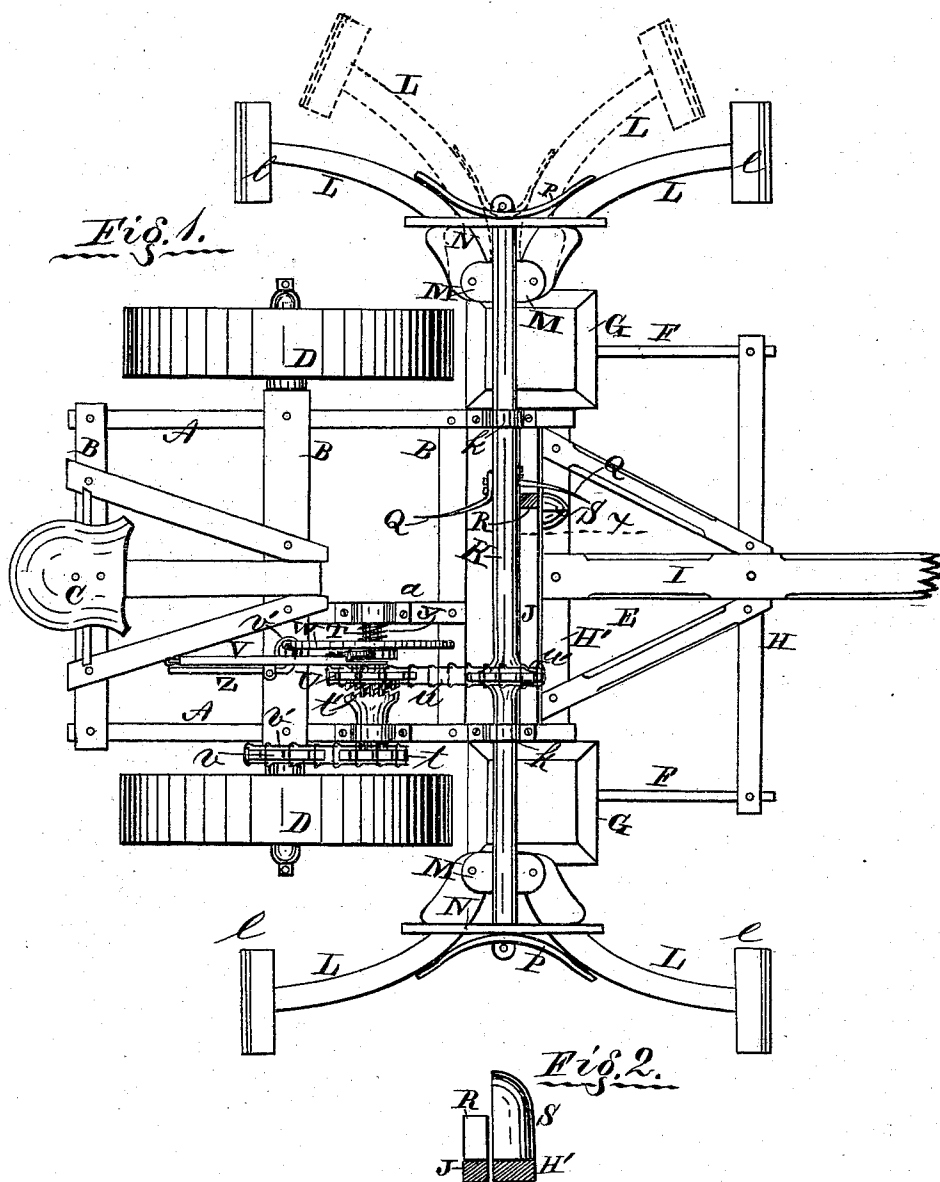


J. B. GALE.

CHECK-ROWERS FOR CORN-PLANTERS.

No. 177,931.

Patented May 30, 1876.



Witnesses:
 H. A. Boal.
 Chas. L. Lupper

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 atty.

UNITED STATES PATENT OFFICE

JOHN B. GALE, OF ELMORE, ILLINOIS.

IMPROVEMENT IN CHECK-ROWERS FOR CORN-PLANTERS.

Specification forming part of Letters Patent No. **177,931**, dated May 30, 1876; application filed March 8, 1876.

To all whom it may concern:

Be it known that I, JOHN B. GALE, of Elmore, county of Peoria and State of Illinois, have invented certain Improvements in Check-Rowers for Corn-Planters, of which the following is a specification:

The nature of my invention relates to improvements in that class of check-rowers operated from connection with the supporting-wheels of the corn-planter; and the invention consists in certain new devices and combinations of devices for transmitting motion to the marking and seed-dropping mechanisms, and in their peculiar construction, all as hereinafter fully described.

In the accompanying drawings forming part of this specification, Figure 1 is a top view of an ordinary corn-planter with my check-rower mounted thereon; and Fig. 2 is a sectional view on that part of Fig. 1 crossed by the line *x.x*.

Referring to the parts by letters, letters A represent the longitudinal, and B the transverse, framing-pieces of the rear frame of an ordinary corn-planter; C, the driver's seat, and D D the supporting-wheels of the same. E represents the forward frame of an ordinary planter, consisting of runners F, seed-boxes G, forward and rear transverse frame-pieces H H', tongue I, and rod J, connecting, and for operating, the seed-cup slides or dropping devices. K is a shaft, mounted in suitable bearings *k* on the forward ends of the bars A; or it may be mounted on the forward frame E. The ends of the shaft K extend beyond the seed-boxes G, and carry each two markers, L, pivoted at one end between standards M projecting from the shaft K, and their other ends carrying feet *l*. N N are arms placed transversely on the ends of the shaft K, and slotted for the passage of the central parts of the markers L. P is a spring attached to the end of the shaft K, so that its ends will rest against and press back the markers L to the position shown by full lines at Fig. 1, and allow them to yield when striking obstructions or for other causes, as shown by dotted lines at the same figure. Q Q are spring-tappets placed one on each side of the shaft K, and coincident with the markers on the ends of same shaft. R is an upwardly-projecting stud from the shake-

rod J. S is an upwardly-projecting stud or deflector from the frame-piece H'. The deflector S is flat on its rear side and tapers to an apex at its front edge, and is as broad as the extent of movement of the shake-rod J, and is in such relative position to the tappets Q that one of them strikes and is deflected by one of its sides, and the other by the other side, and when either spring-tappet has passed the rear side of the deflector S its release will cause it to strike the projection R and drive it to its limit of motion, and into position to be driven in the opposite direction by the other tappet. T is a short shaft, mounted in suitable bearings in the frame-piece A and a short bar, *a*. The shaft T carries on one end a chain-wheel, *t*, and on its other end a ratchet-wheel, *t'*. The chain-wheel *t* gears, by means of a chain, *v*, with a chain-wheel, *v'*, on the hub of one of the supporting-wheels D. U is a chain-wheel, carried loosely on the shaft T, and geared, by a chain, *u*, with a chain-wheel, *u'*, on the shaft K. The face of the wheel U, adjacent to the wheel *t'*, is cut into ratchet-teeth corresponding with the teeth in the wheel *t'*, and may be thrown into and out of gear therewith by a shipping-lever, V, the lower end of which partly encircles the hub of the wheel U, and the central part of which carries an eye or loop, *v'*, which encircles an arc-shaped rod, W. Y is a spring, arranged to throw the wheel U into gear with the wheel *t'*. Z is an ordinary thumb-lever on the lever V.

The operation is as follows: As the machine advances the shaft K is rotated once with each revolution of the supporting-wheels D, and operates the droppers, as hereinbefore described, the markers L, one on each side of the machine, strike the ground and leave an impression simultaneous with the dropping of the seed, and on the return of the machine in the next rows it can readily be seen if the marks coincide in the soil, and, if not, the lever V can be used in the obvious manner to disengage the wheels U and *t'*, and readjust the parts and bring the dropping into line. The ratchet-teeth between the wheels U and *t'* being cut, as shown, will allow the machine to be backed without operating the check-rowing devices.

The wheels U and *t'* are shown out of gear in the drawings in order to show the ratchet-

teeth. It will also be seen that the comparatively large and broad feet *l* of the markers will leave large foot-prints or impressions in the soil, which will be so plainly visible as to obviate the necessity for marking out cross-rows.

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

1. The deflector S, constructed as described, and arranged to operate with the stud R and tappets Q, substantially as and for the purpose specified.

2. The combination of the deflectors S, stud R, tappets Q, and shaft K, with chain-wheels *t v' w'*, shaft T, ratchet-wheels U and *t'*, and

lever V, all operating substantially as and for the purpose specified.

3. In combination with the shaft K, operated as described, the markers L, pivoted between the standards M, and held apart by the springs P, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my invention I have hereunto set my hand this 11th day of February, 1876.

JOHN B. GALE.

Witnesses:

S. G. WOOLY,

W. B. RICHARDS.

1.250 words.