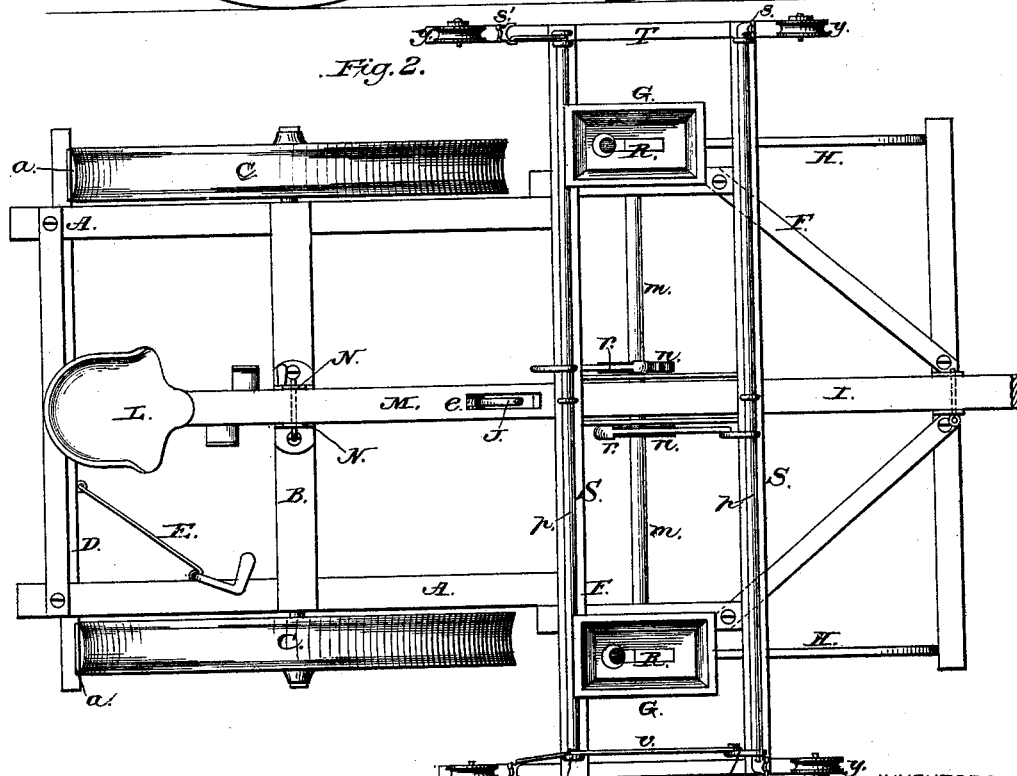
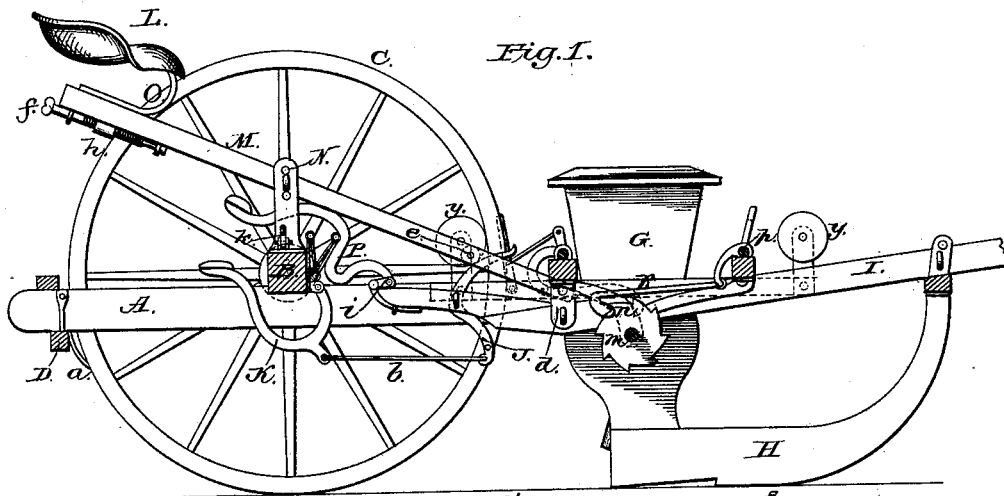


A. & C. A. NORLING.
Corn-Planter.

No. 214,179.

Patented April 8, 1879.



WITNESSES
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AUGUST NORLING AND CHARLES A. NORLING, OF STANTON, IOWA.

IMPROVEMENT IN CORN-PLANTERS.

Specification forming part of Letters Patent No. **214,179**, dated April 8, 1879; application filed March 14, 1879.

To all whom it may concern:

Be it known that we, AUGUST NORLING and CHARLES ALFRID NORLING, of Stanton, in the county of Montgomery and State of Iowa, have invented certain new and useful Improvements in Corn-Planters; and we do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the annexed drawings, and to the letters of reference marked thereon.

The nature of our invention consists in the construction and arrangement of a corn-planter, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawings, which form a part of this specification, and in which—

Figure 1 is a longitudinal vertical section of our corn-planter. Fig. 2 is a plan view of the same.

A represents a suitable frame-work, secured to the axle B, on the ends of which are the wheels C C. To the rear portion of the frame A is connected a bar, D, provided with scrapers *a a*, and operated by means of a lever, E, for applying the scrapers to the wheels C to keep them free from dirt.

To the front of the sulky-frame A is hinged the planter-frame F, carrying the seed-boxes G G.

H H are the runners. I is the tongue of the planter, adjustably fastened on the front cross-bar of the frame F. This tongue extends rearward beyond the rear of said frame, and its extreme end is turned slightly upward, as shown. In the rear end of the tongue is a mortise, in which is pivoted an elbow-lever, J, and the lower arm of this lever is by a rod, *b*, connected with a foot-lever, K. This foot-lever is hinged to a bracket or otherwise on the front of the axle B, and is curved under and upward in rear of the same.

L is the driver's seat, connected to a plank, M, which is held between two standards, N N, on top of the axle, and can be adjusted up and down between the same, as required. The lower or forward end of the plank M is pivoted between hangers *d d*, attached to the

rear cross-bar of the frame F, and connecting the same with the tongue I underneath.

The upper arm of the elbow-lever J, above described, projects through a slot or mortise in the lower end of the plank M, and a friction-roller, *e*, is mounted in said slot back of the lever for the same to bear against. It will readily be seen that by pressing down on the foot-lever K the upper arm of the elbow-lever J is made to press against the roller *e* and lift the sulky-frame, so as to transfer the weight from the same onto the planter-frame F, and thus press the runners down into the ground.

The seat L is provided with a spring, O, and made adjustable on the plank M by means of a screw, *f*, which is placed in suitable bearings longitudinally on the under side of the plank. This screw passes through a lug, *h*, projecting from the spring O through a slot in the plank, so that by turning the screw *f* the seat will be moved up or down on the plank, according to the weight of the driver.

To a bracket at the front of the axle B is further hinged or pivoted a lever, P, by means of a double-acting hinge, the forward end of which is by links *i i* connected with the rear end of the tongue I, as shown in Fig. 1. This lever P is in such proximity to the plank M that the driver can at any time put his foot thereon and press down, which will raise the planter-frame F, so as to bring the runners up from the ground, and when thus raised it is held by means of a latch, *k*, in one of the standards N taking hold of the lever P. By simply releasing this latch the frame F will pass down to its position again.

Below each seed-box G of the planter, in a suitable casing, is a rotary dropping-wheel, R, secured upon a horizontal shaft, *m*. We, however, lay no claim to any particular construction of the dropping mechanism, as this may be constructed in any suitable manner to accomplish the object sought.

The two shafts *m m* have upon their inner ends ratchet-wheels *n n*.

On the planter-frame is secured a check-rower, consisting of two parallel bars, S S, with a cross-bar, T, at each end. The frame formed of these bars is fastened to the planter-

frame, so that one bar S is in front and the other in rear of the seed-boxes.

In suitable bearings on the bars S S are two rocking shafts, *p p*, to which are connected pawls *r r* to engage with the ratchet-wheels *n n*.

The forward shaft *p* has at each end a crotch, *s*; and a similar crotch, *s'*, is pivoted to the cross-bar T in rear of the rear shaft *p*. This latter crotch is by a rod connected with an arm, *t*, on the rear shaft, and one or both of said arms is by a rod, *r*, connected with an arm, *w*, on the front shaft.

The usual knotted rope is to be used for check-rowing, which rope passes through the crotches *s s'* at one side, and is guided by rollers or pulleys *y y* on the bar T.

As the planter moves forward it will be observed that the two dropping mechanisms are not operated simultaneously, but first one and then the other, so that the corn-hills are planted in diamond shape.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the two frames A and F, of the tongue I, elbow-lever J, rod *b*, foot-lever K, and the slotted seat-supporting

bar M, with roller *e*, substantially as and for the purposes herein set forth.

2. The combination, with the frames A and F, of the lever P, with double-acting hinge, the links *i*, tongue I, and latch *k*, substantially as and for the purposes herein set forth.

3. In a corn-planter having two dropping mechanisms, the arrangement of the independent shafts *m m*, with the dropping and ratchet wheels secured thereon, the rocking shafts *p p*, and the pawls *r r*, substantially as described, whereby the dropping mechanisms are caused to drop alternately, for the purposes set forth.

4. The combination, with two dropping mechanisms, of the separate shafts *m m*, with ratchets *n n*, the rocking shafts *p p*, with pawls *r r*, the crotches *s s'*, and connections, as shown and described, substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 14th day of March, 1879.

AUGUST NORLING.

CHARLES ALFRID NORLING.

Witnesses:

C. L. EVERT,

J. J. MCCARTHY.