

L. J. CORBIN.
CORN-PLANTER.

No. 180,702.

Patented Aug. 8, 1876.

Fig. 1.

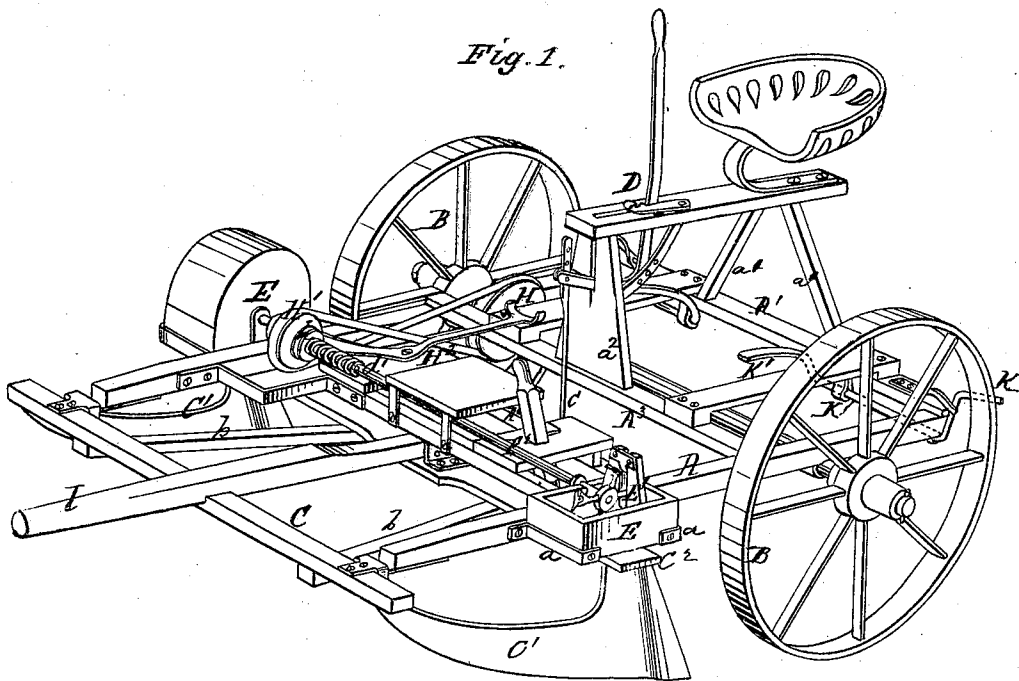


Fig. 2.

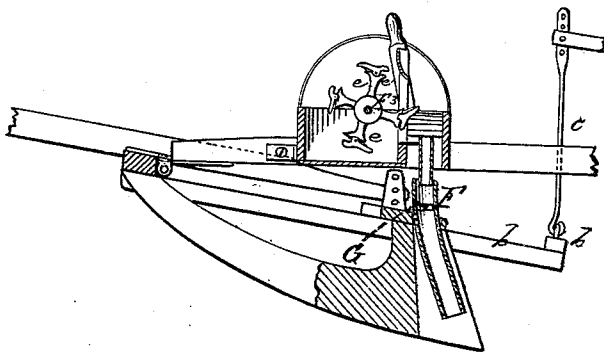
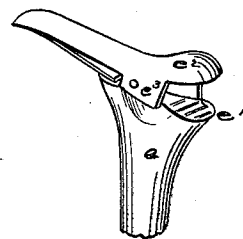


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

LYMAN J. CORBIN, OF WINNEBAGO, ILLINOIS.

IMPROVEMENT IN CORN-PLANTERS.

Specification forming part of Letters Patent No. **180,702**, dated August 8, 1876; application filed August 21, 1874.

To all whom it may concern:

Be it known that I, LYMAN J. CORBIN, of Winnebago, in the county of Winnebago and State of Illinois, have invented a new and useful Improvement in Corn-Planters; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

Figure 1 is a perspective view of my improved corn-planter. Fig. 2 is a longitudinal section of the forward part of the machine, showing the seed-box, the rotating bills, seed-tube, and runner in section; and Fig. 3 is a perspective view of one of the jaws for picking up the corn, showing the cheek-pieces, which, with portions of the jaw, form the pocket for retaining the seed until the same is deposited in the seed-tube.

Similar letters of reference denote corresponding parts in all the figures.

The invention has for its object the improvement of that class of corn-planners on which a patent was granted to me January 13, 1874, No. 146,321; and consists in an improved construction of the jaws or bills by which the corn is picked up, one kernel to each grasp of the jaw, and carried until released and deposited within the seed-tube, as was fully described in my former patent, above mentioned; but in the said patent the improvement made by the addition of side or cheek pieces, by which a pocket is formed, was not shown, explained, or claimed, but is shown in Fig. 3 in this application. This feature will be hereinafter explained. It further consists in the construction and arrangement of the wheel and runner-frames, whereby the depth of the furrow may be gaged without interfering with the dropping or picking-up devices, all of which will be hereinafter explained.

In the drawings, A represents the two side beams of the frame, resting upon the driving-axle at the rear end, and hinged to the cross-bar C at the forward end, and upon which are mounted the seed-boxes and the seed-distributing wheels. A¹, A², and A³ are the rear, front, and center cross-bars, these composing

the main frame of the machine. B B' represent the driving and carrying wheels, the one B being mounted loosely on the axle, for facilitating the turning of the machine, while the one B' is keyed or otherwise secured to the said axle for driving the pulley thereon.

The side beams A extend forward of the cross-bar A¹, and are hinged at their forward ends to the cross-bar C, and to which, also, the forward ends of the runners or furrow-openers are secured, the rear ends of the said runners being connected together by a wider cross-bar, C², located directly underneath the seed-boxes, which, in connection with the runners, form the forward or runner frame.

b b are diagonal braces, secured at their forward ends to the bar C, at their longitudinal centers with bar C², and are at their converging or rear ends united together by the cross-bar b¹. To this bar b¹ is hinged, by an eye-bolt connection, an upright rod, c, having perforations at its upper end for the purpose of making a vertically-adjustable connection with the elbow-lifting lever D. This lever D is, at the elbow-joint, pivoted to circular-shaped braces, running from the seat-plank to the forward vertical post a², and by means of which, in connection with the lever-locking dog on the top of said seat-plank, the runners may be held in any desired position vertically within the scope or throw of the said raising-lever, and thus enabling the driver at his will to raise the runners sufficiently high to clear the ground when turning the team around, or when transporting the machine from field to field, or from one part of the field to another part of the same.

About midway of the length of the center cross-bar A² and the rear cross-bar A¹, upright standards a¹ a² are secured, upon which is mounted the seat-plank, having the driver's seat thereon. Near the forward end of the said seat-plank a slot is made, and within the same, through which passes the lifting-lever D, within reach of the driver, by which, from his seat, he can raise and lower the runner-frame, as may be desired. E are seed-boxes, mounted upon the beams A, and at ends of

the bar A¹. Within these seed-boxes, and at their rear ends, are transverse partition-pieces E¹, behind which piece a funnel or spout is placed for conveying the grain to the conductor-tube in the heel end of the runner. E² is a shaft, lying parallel with and above the bar A¹, and mounted in bearings in the seed-boxes. This shaft extends into the seed-boxes to about their centers, and upon the ends are mounted disks E³, having portions cut away in the circumference, so as to form arms or spokes, upon the ends of which are placed spring-jaws e¹ e².

It is obvious that these disks may be made without cutting away the portions between the arms, and, if desired, the said disks may be full to the extreme periphery, or in any manner so that the operation of the spring-jaws may not be interfered with.

To the upper part of the jaws, designated e², are attached lips or cheek-pieces e³. The said cheek-pieces may, however, be attached to the under portion of the jaw, and not depart from the spirit of the invention. As these cheek-pieces perform an important mission in the picking up and retaining the seed until the time for depositing the same within the receptacle from which the seed is carried to the ground and discharged within the earth, they will now be more fully described.

In my former patent, before mentioned, these cheek-pieces were not shown, (ears for forming the hinges only being used,) and in the practical use it was found that the kernel of corn, after having been caught in the hills, and, while passing through the mass of grain, was extremely liable to become displaced laterally, as it will be observed the kernel is caught when the bill first enters the seed, and must be carried through the mass in the line of the revolution of the jaws; hence necessitating the protection afforded by the said cheek-pieces, and by means of which a pocket is formed when the jaws are open, but none when the jaws are empty and closed. With these cheek-pieces the seed can only be discharged from the mouth of the jaws, and lateral displacement prevented, and the correct and timely delivery of the grain assured. The upper portion of the jaw e¹ also extends back at an angle of about forty-five degrees to the face extension, and to the heel end of the same is placed a spring, to hold the forward ends of the jaws together.

It will be seen that, by this arrangement of jaws above described, as the disk or spider E² revolves, and the rear end of the portion of the jaw e² comes in contact with the seed in the box, the jaw, by this rear extension striking or pressing against the seed, will cause the pocketed mouth to open and receive a single grain of corn, and the spring will hold the same, by the closing of the said mouth, until the funnel or place of deposit is reached, when

the tripper, for that purpose provided, will, by pressing the extension-piece, cause the mouth to open and discharge the seed, after which the spring acts upon the jaw, causing it to close until again opened by the rotation or movement before set forth.

To the bar which supports the rear end of the runner is secured a conductor or tube, F, which extends up and around the funnel in the seed-box, also down through the heel end of the shoe, for conducting the grain to the ground.

G is a slide or dropper, which is connected to the bar e² by loops or staples, under which it slides.

The slide is operated by means of two levers pivoted to it, and passing up through two planks connected to the frame for holding the levers in place, and between these two levers the operator's seat is located. The operator is enabled by these levers to plant any number of kernels of corn in a hill, by operating the valve at one or more revolutions of the disks or spiders. Or by removing the valve the corn may be dropped into the seed-tube directly as received from each pocketed mouth of the picker or jaws. The slide may be operated automatically by the spider or picker-shaft, if desired.

The wheel B' is keyed to the axle, and upon the axle is also keyed a band-wheel or pulley, H, from which motion is communicated to the second band-wheel or pulley H¹, feathered upon the shaft E², which drives the picker-wheels.

The band-wheel H¹ is provided with a clutch having lugs or teeth on its side face, which mesh into corresponding indents made in a collar, L, which is keyed to the shaft E², the two being held in mesh by spring d', and held out of mesh by means of a lever, H¹, connected with the band-wheel H through a grooved collar formed on said wheel.

The lever H² is pivoted to the frame, and extends back to within reach of the driver's foot, so that he is enabled to throw the shaft out of gear from the driving-wheel, and thus control the movements of the picker-wheels E².

I is the tongue connected to the forward cross-bar C of the runner-frame, and which extends back and is secured between two upright lugs or ears mounted on the rear bar of the runner-frame. These lugs or ears are perforated, and by means of a pin passing through the lugs, and through a perforation in the rear end of the tongue, the said tongue may be vertically adjusted, as desired.

Under the lower face of the rear frame-bar A¹, and mounted on brackets secured thereto, are two arms, one at each end of said bar, and connected thereto are scrapers K, by means of which the driver may clean the rim of the carrying-wheels when desired.

Having now described my invention, what

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

In a corn-planter adapted to grasp and retain one kernel of seed in each grasping-jaw, the cheek-pieces *e*³ attached to spring-jaws, as described, whereby, when open, a pocket is formed, for the prevention of lateral displacement, substantially as described, and for the purpose set forth.

This specification signed and witnessed this 1st day of August, 1874.

LYMAN J. CORBIN.

Witnesses:

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G. W. FORD.