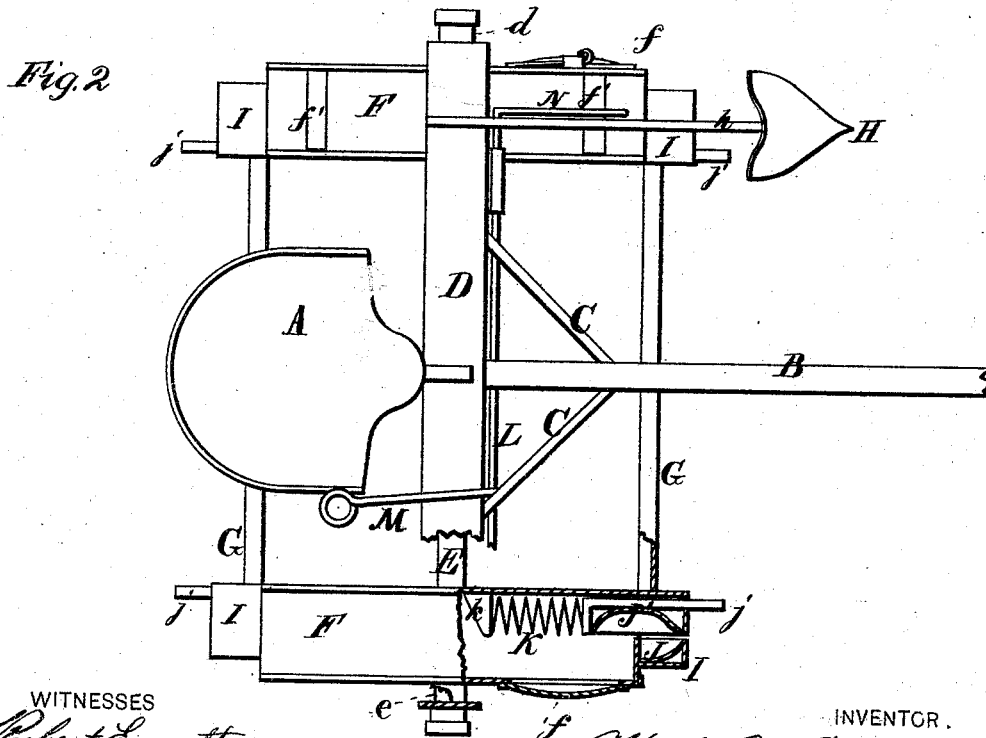
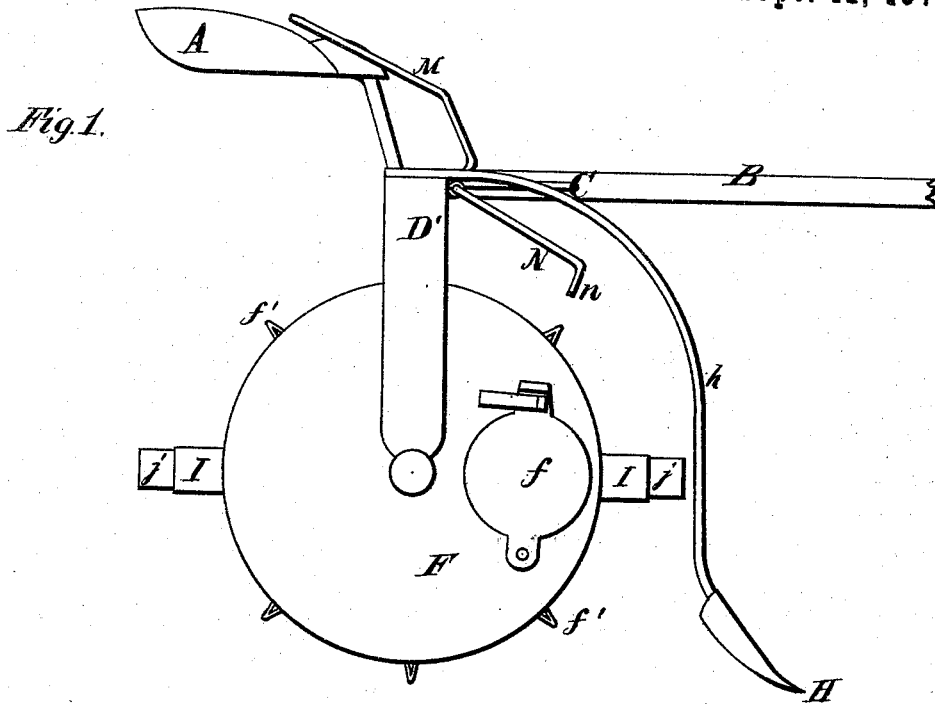


A. D. SMITH.
CORN-PLANTER.

No. 182,235.

Patented Sept. 12, 1876.



WITNESSES
Robert Everett
George E. Upham.

INVENTOR.
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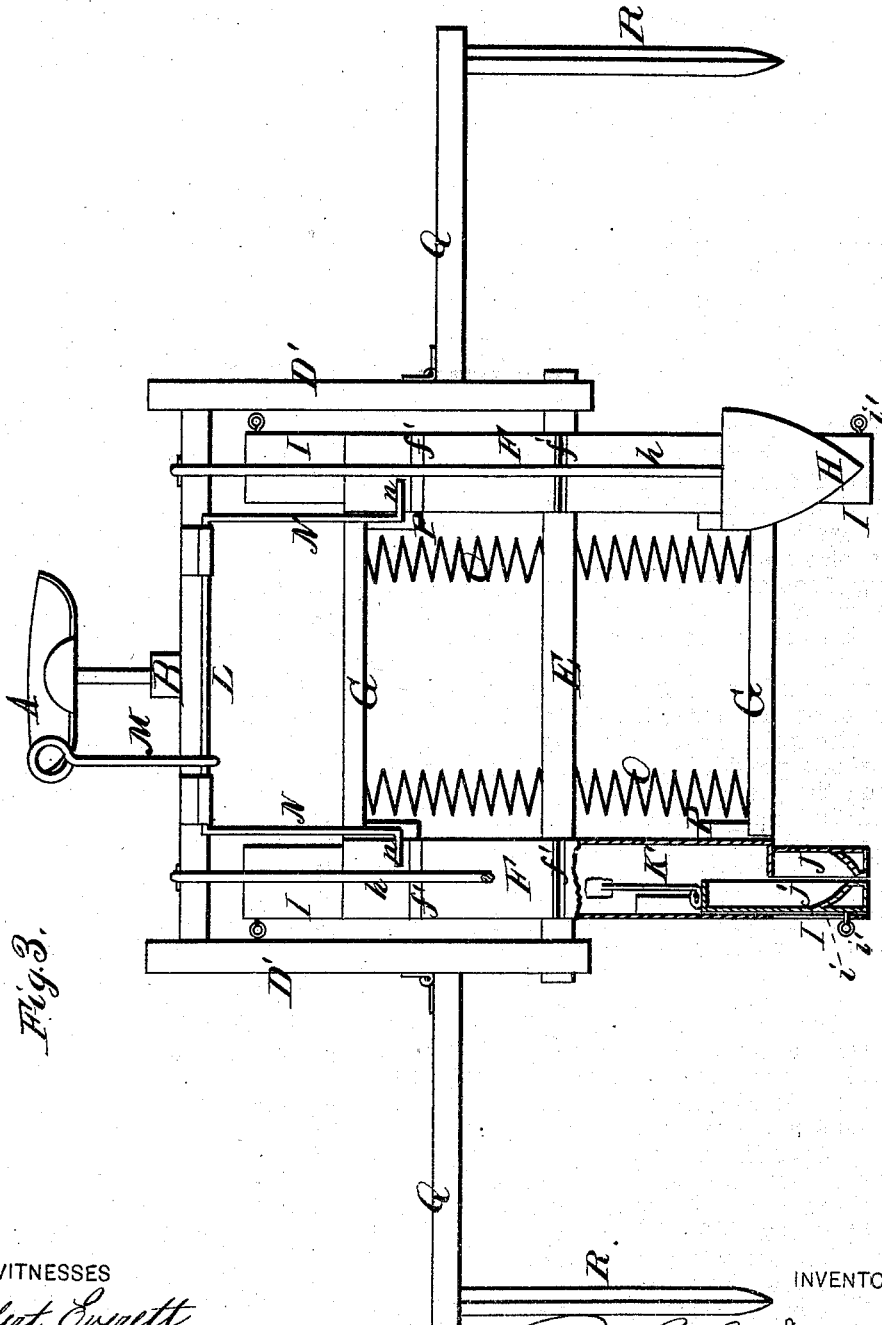


Fig. 3.

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UNITED STATES PATENT OFFICE.

ALBERT D. SMITH, OF NELSONVILLE, OHIO.

IMPROVEMENT IN CORN-PLANTERS.

Specification forming part of Letters Patent No. 182,235, dated September 12, 1876; application filed July 15, 1876.

To all whom it may concern:

Be it known that I, ALBERT D. SMITH, of Nelsonville, in the county of Athens and State of Ohio, have invented a new and valuable Improvement in Corn-Planters; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side elevation of my corn-planter, and Fig. 2 is a plan view of the same, part sectional. Fig. 3 represents a front elevation of a modification of my device, with a part cut away, showing one of the planters in longitudinal section.

This invention relates to corn-planters; and consists in cross-bars, extending from wheel to wheel, which make the cross-furrows; also, in hollow wheels provided with sliding doors for receiving the grain, and with planters so constructed that the pressure of the ground causes them to receive one charge and deposit another at the same time; also, in a braking or locking device supported on a frame which rests upon the axle-spindles outside of the wheels; also, in auxiliary devices, as hereinafter set forth.

In the annexed drawings, A indicates the seat for the driver of a corn-planter; B, the draft-tongue, all of which parts are supported by a frame, D, the vertical standards D' D' of which are provided with sleeves *d*, which slip over the spindles *e e* of axle E. Thus the frame D and attached parts are supported by the spindles of said axle outside of wheels F F. Said wheels are made hollow, and provided on their outer sides with sliding doors *f f*, through which the corn is introduced. On their peripheries, said wheels have broad bars or cogs *f' f'*, for increasing the traction of said wheels, and affording a good hold to the braking device hereinafter described. G G are cross-bars, extending from wheel to wheel across the line of draft, and shaped like the letter V, the sharp angle being presented to the ground. Their office is to make the cross-furrows. H H are the plow-points, suspended

from frame D by rods *h h*, and employed to make the longitudinal furrows in advance of the planters. I I are small radial casings, projecting from the periphery of wheels F F. One half of the end of each of said casings is covered, containing a fixed discharging-box, J. In the other half of each of said casings I slides a feeding-box, J', which is provided with an extension, *j*, that strikes against the ground as the wheel is rotated. K is a spiral spring, secured at one end to lug *k*, which is rigidly attached to the inside of the wheel, and secured at the other end to sliding feeding-box J'. When wheel F is rotated, sliding box J' is forced back, by the pressure against the ground, sufficiently far to allow the charge of box J to be deposited, while at the same time the sliding box J' is fully charged, and cuts off the supply to box J. The spring K operates to project sliding box J' again as soon as the external pressure is removed, thereby transferring a charge from box J' to box J, and at the same time cutting off the exit from box J, so as to retain said charge until the next planting. L is a rock-shaft, pivoted on the front of frame D, and provided with a handle, M, within reach of the driver's seat, and with arms N N, which extend down over the wheels F F, and are provided with hooks *n n*. When handle M is thrown forward, hooks *n n* engage with cogs *f' f'*, effectually locking the wheels until released by throwing the handle M back again. By thus locking the wheels, the planting may be suspended at any time, and for as long as may be desired. In this way the operator may compensate for any irregularity in the planting caused by obstacles, &c.

Instead of having my cross-bars G G rigidly connected to the wheels F F, I may make them automatically adjustable to and from the ground, as shown in Fig. 3, by means of guide plates or flanges P P and spiral springs O O. Whenever any hard object is encountered, said springs yield, allowing said cross-bars to be forced up toward the axle, their ends sliding over said guide-flanges. Said guide-flanges are rigidly attached to the inner sides of the said wheels, and the inner ends of said spiral springs are secured to axle E. When the obstacle is past, said springs restore the bar, that

has been forced back, to its proper place again. This improvement effectually prevents damage to the apparatus arising from the cause named.

To standards D' D' I hinge, Fig. 3, gage-arms Q, extending at right angles therefrom when let down as far as said gage-arms will fall. Said gage-arms carry on their outer ends markers R R, which mark the rows for subsequent planting.

Casings I, in the modification shown in Fig. 3, are each of them slotted longitudinally, at *i*, to receive a guide stud or projection, *i'*, which is attached to sliding feeding-box J'. The extension *j'* of the other figures is, in this modification, dispensed with as unnecessary.

I may also substitute for spiral springs K (shown in the other figures) bar-springs K', which are curved so as to form a semicircle, the ends being attached to the sliding feeding-box, (or bearing thereon,) and the middle of the curve attached to or bearing against the inside of the hollow wheel. They are less likely to become clogged with grain and inoperative than the spiral springs.

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

1. In a corn-planter, the hollow transporting and feeding wheels F F, provided with doors *f f*, in combination with radial casings I I, feeding-box J', having extension *j*, spring

K, and discharging-box J, substantially as described, and for the purpose set forth.

2. The V-shaped bar G and spiral springs O O, in combination with the guide-flanges P P, and plow-points H H, adapted to make both longitudinal and cross furrows, substantially as described, and for the purpose set forth.

3. In combination with wheels F F, having cogs *f' f'*, the locking device L M N, provided with hooks *n n*, substantially as and for the purpose set forth.

4. The frame D, lying in the same vertical plane with the axle, and attached thereto outside of the wheels, said vertical frame carrying the driver's seat, tongue, and locking devices L M N *n*, substantially as described, and for the purpose set forth.

5. The combination of V-shaped bar G, adapted to cut cross-furrows, with guide-flanges P P and spiral springs O O, substantially as and for the purposes set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ALBERT D. SMITH.

Witnesses:

W. C. HICKMAN,
J. B. COLLISON.