2 Sheets—Sheet 1.

J. ARMSTRONG, Jr.

CORN PLANTER.

No. 95,068. Patented Sept. 21, 1869.

Fig. 1

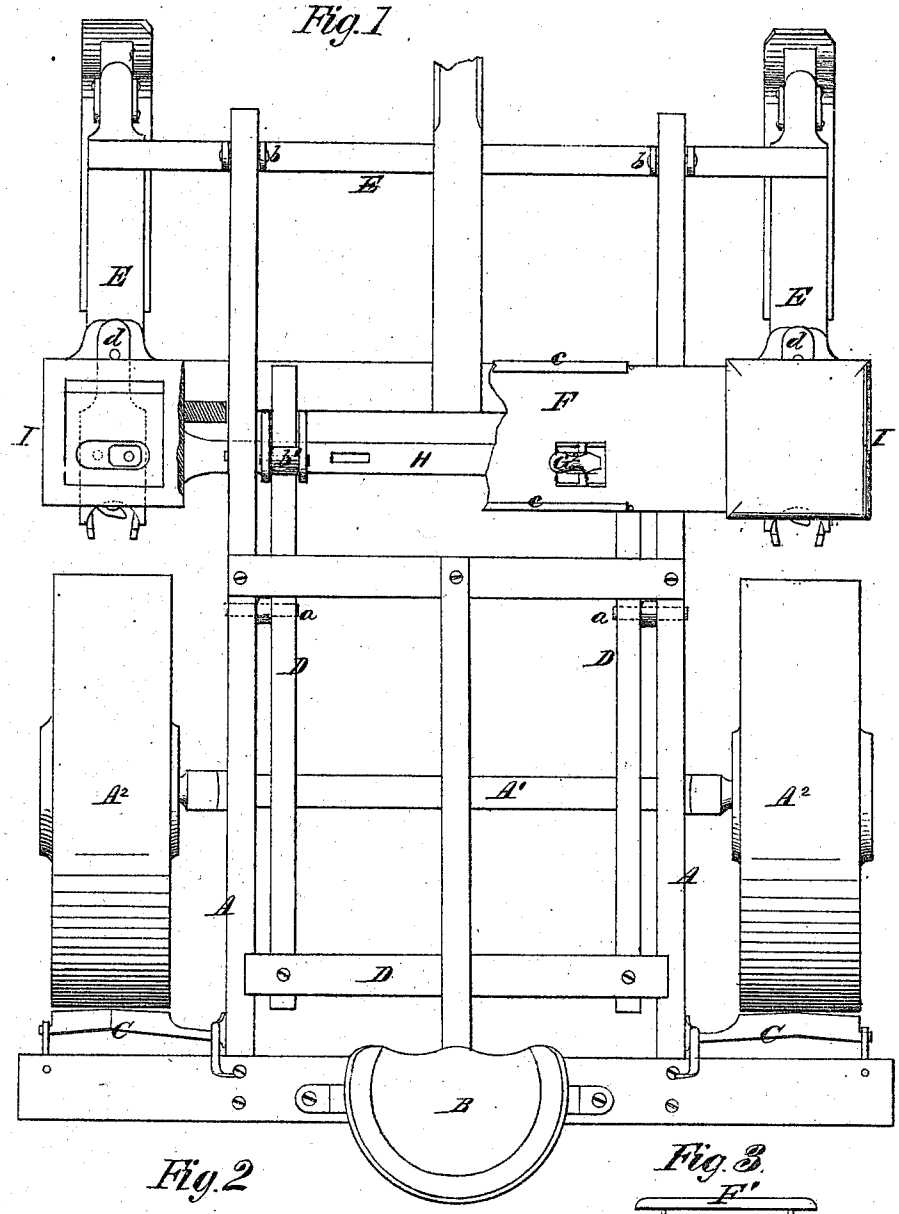


Fig. 2

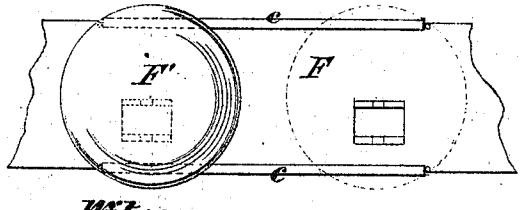
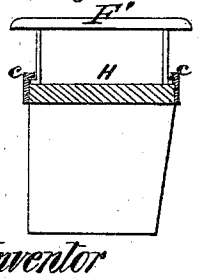


Fig. 3.



Witnesses
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Julius Hirsch

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by Munn Steinmetz & Lamm.

2 Sheets—Sheet 2.

J. ARMSTRONG, Jr.

CORN PLANTER.

No. 95,068. Patented Sept. 21, 1869.

Fig. 5

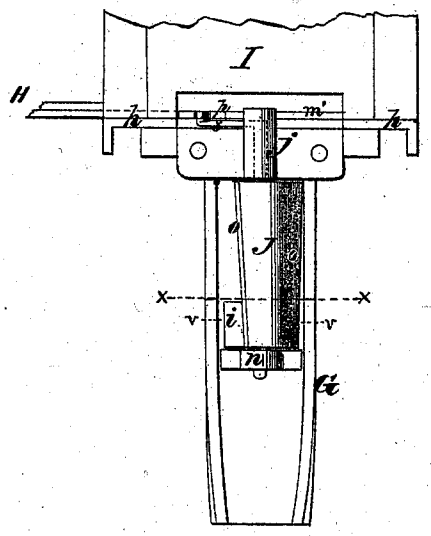

Fig. 4

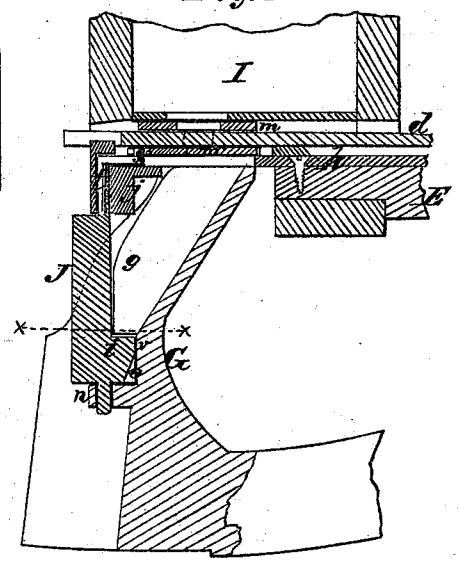

Fig. 6

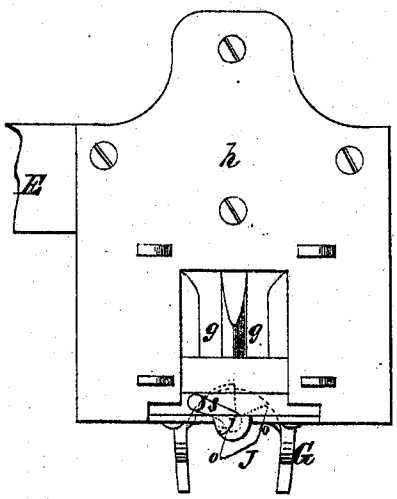

Fig. 7

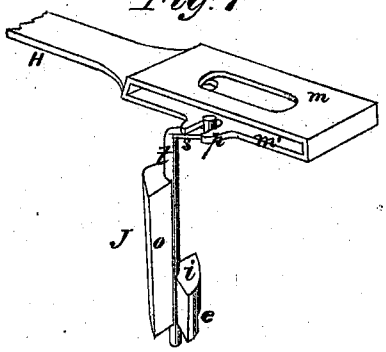

Fig. 8

Witnesses.
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United States Patent Office.

JAMES ARMSTRONG, JR., OF ELMIRA, ILLINOIS.

Letters Patent No. 95,068, *dated September* 21, 1869.

IMPROVEMENT IN CORN-PLANTER.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES ARMSTRONG, Jr., of Elmira, in the county of Stark, and State of Illinois, have invented certain novel Improvements on Corn-Planters; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1, plate 1, is a top view of a corn-planter, having my improvements applied to it.

Figure 2, plate 1, is a top view of a portion of the front seat-board, having a laterally-movable seat for the dropper applied to it.

Figure 3, plate 1, is a cross-section of the seat-board, with seat applied.

Figure 4, plate 2, is a longitudinal section, taken in a vertical plane through the seed-dropping devices, beneath one hopper, and also through the seed-discharging tube and the improved oscillating valve.

Figure 5, plate 2, is a rear view of a seed-discharging valve, its oscillating valve on a portion of the seed-slide.

Figure 6, plate 2, is a top view of a seed-tube, its valve, and the horizontal plate to which these parts are applied, and on which the double slide works.

Figure 7, plate 2, is a perspective view of an oscillating valve, and one end of the seed-slide.

Figure 8, plate 2, is a section through an oscillating valve and a seed-discharging tube, taken in the horizontal plane indicated by dotted lines *x x* in figs. 4 and 5.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to certain novel improvements on the corn-planters for which Letters Patent of the United States were granted to me, July 22, 1862, and September 20, 1864, wherein the seed-tubes, through which the seeds were discharged from the hoppers, were provided with oscillating valves, working on horizontal shelves, so as to alternately sweep the seeds from the shelves into the furrows beneath. The tubes were permanently closed at their backs, except at the points where the valves were arranged, and, for this reason, the channels were liable to become clogged, and, when clogged, were difficult to clear.

The nature of my invention consists—

First, in wings upon an oscillating valve.

Second, in a notch or recess in the said valve, whether made with or without the wings.

Third, in a double-channelled or twin seed-discharging tube, open at its back, in combination with a winged valve.

Fourth, in a laterally-adjustable dropper's seat.

The following description of my improvements will enable others skilled in the art to construct and use them.

In the accompanying drawings, fig. 1, I have represented a form of corn-planter similar to that described in my Letters Patent numbered 44,273, which consists of a main transporting-frame, A, mounted upon wheels, A^2 A^2, provided with a driver's seat, B, scrapers, C C, and having hinged to it, at *b b*, a secondary frame, E, carrying the hoppers I I, the seat-board F, the seed-dropping devices, and the coulters and sled-runners.

The treadle-frame D, which is used for lifting the rear end of the secondary frame, is pivoted, at *a a*, to the longitudinal bars of frame A, and has said secondary frame suspended from it by means of rollers *b'* and straps, as shown.

Instead of making the rear sides of the hoppers i i inclined, as heretofore, I now make these sides vertical or perpendicular to the bottoms of the hoppers, so that the person who drops the seed can see the same as it falls from the shelves *n n* into the furrows made by the coulters.

To the front and rear edges of the transverse seat-board F, which connects the two hoppers I I, flanged ways or guides, *c c*, are firmly fixed, which receive, beneath their inwardly-turned edges, the outwardly-turned edges of standards, upon which a seat, F', is secured.

At the extremities of the parallel guides *c c*, stops may be applied, which will prevent the seat from being casually detached from the ways.

This seat F' is for the dropper, who operates the seed-slide H through the medium of the hand-lever G^2, and who can adjust the seat to any desired point.

By reference to plate 2 of the drawings, the mode of constructing the oscillating valves J, and the movable backs to the seed-distributing tubes G, will be seen.

The tube G is secured at its upper end to a stationary platform or hopper-bed, *h*, which is secured upon the frame F.

Through the rear portion of this bed *h* an opening is made, through which the seeds drop into the seed-tube G from seed-cells made through a perforated plate *d*.

This plate *d* is arranged between two perforated sliding plates, *m m'*, on the seed-slide H, and the seeds are delivered into the seed-tube G precisely as described in my Letters Patent numbered 44,273, and above referred to.

The seed-tube G is constructed with a central vertical partition, which forms two channels through which the seeds fall from the cells in plate *d*.

These channels, *g g*, terminate at their lower ends in a semicircular chamber, *r*, having for its bottom a horizontal shelf, *n*.

Below this shelf, and on both sides of it, is a vertical channel, formed by side flanges or wings, through which the seeds fall into the furrow beneath as they are swept off the said shelf *n*.

J represents a winged valve, which is constructed with stems upon both ends, one of which stems passes through the shelf *n*, and the other, *t*, passes through the bearing *j*, and has a crank-arm, *s*, formed on its upper end.

The wrist-pin of crank-arm *s* is received in a notch, *p*, made in the rear edge of the lower slide-plate *m'*, as shown in fig. 7, so that when the slide H is reciprocated in one endwise direction for discharging the seeds from the hopper I, the winged valve J will receive an oscillating motion.

The winged valve is clearly shown by the several figures on plate 2.

It consists of two angular wings, *o o*, having a segmental valve, *i*, formed on them.

The valve *i* is supported upon the shelf *n*, and alternately sweeps the seeds which fall on this shelf horizontally therefrom, and drops them into the furrow beneath.

Valve *i* is fitted to work in the chamber *v*, at the lower termini of the two channels *g g*, as shown in figs. 4 and 8, and into the inner side, or that side of it which works over the shelf *n*, a notch, *e*, is made, which will prevent dirt or other matters from collecting beneath this valve.

The wings *o o* extend above the valve *i*, and form an oscillating back to the seed-tube G, as shown in figs. 5 and 7. Thus it will be seen that one branch or channel, *g*, of the tube G, will, when the machine is dropping, be closed by one wing, *o*, while the seeds are falling through this channel from a measuring-cup or cell, *d*, upon the stationary shelf *n*, and in the act of sweeping the seeds thus dropped from the shelf *n* into the furrow, the other branch or channel *g* will be closed at its back by the opposite wing *o*.

By this means the channels *g* will be alternately opened and closed at their backs nearly all the way from the shelf *n* to the seed-cells, and there will be no liability of the channels *g g* being choked with seed or foreign substances. At the same time, ready access can be had to these channels *g g*, for cleaning them of anything which might become lodged in them.

If desirable, the inner portion of the valve could be extended up to the bottom of the hopper I, so as to dispense with the two channels in the tube G.

Having described my invention,

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

1. The wings *o o*, upon the oscillating valve *i*, substantially as described.

2. The valve *i*, with or without wings *o*, when provided with a notch or recess, *e*, substantially as described.

3. A double-channelled or twin seed-distributing tube, G, open at its back, and in combination with a winged valve, J, or the equivalent thereof, substantially as described.

4. The laterally-adjustable dropper's seat F', substantially as described.

JAMES ARMSTRONG, JR.

Witnesses:

DAVID J. WALKER,

JAS. D. HEATH.