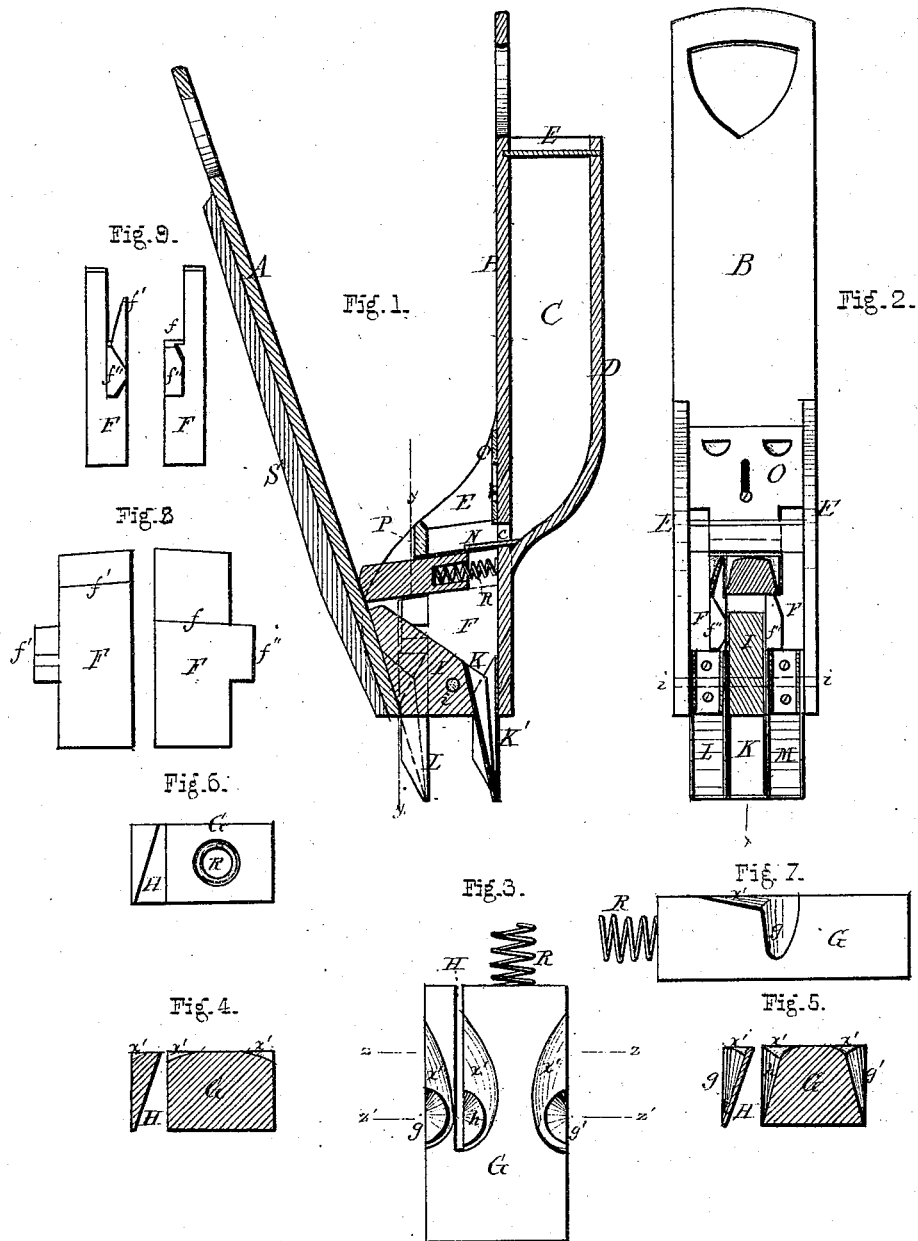


G. BURSON.

Hand Planter

No. 107,595.

Patented Sept. 20, 1870.



Witnesses.

A. S. Meek
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Inventor.

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United States Patent Office.

GEORGE BURSON, OF EAST PALESTINE, OHIO.

Letters Patent No. 107,595, dated September 20, 1870.

IMPROVEMENT IN HAND CORN-PLANTERS.

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, GEORGE BURSON, of East Palestine, in the county of Columbiana and in the State of Ohio, have invented certain new and useful Improvements in Hand Corn-Planters; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a vertical central section of my device on the line *xx* of fig. 2;

Figure 2 is a vertical section of the same on the line *yy* of fig. 1;

Figure 3 is a plan view of the upper side of the slide;

Figures 4 and 5 are cross-sections of the same on the lines *z* and *z'*, respectively, of fig. 3;

Figures 6 and 7 are a rear and a side elevation, respectively, of said slide;

Figure 8 is an inner side elevation of the blocks forming the dropper-frame; and

Figure 9 is a front elevation of the same.

Letters of like name and kind refer to like parts in each of the figures.

This invention is an improvement upon a hand corn-planter for which Letters Patent No. 88,607 were granted me on the 6th day of April, 1869; and

It consists, principally, in the peculiar shape and position of the hopper, as is hereinafter set forth.

It further consists in the construction and arrangement of the valve or dropper, and of the box for containing the same, as is hereinafter shown.

It finally consists in the arrangement of the bills, by means of which clogging of the same is prevented, as is hereinafter shown.

In the annexed drawing—

A and B represent two narrow strips of board, forming the operating levers of my device, to the outside of the latter of which is secured a box or hopper, C, having a length equal to about one-half that of said lever.

The front side D of the hopper curves inward to or against the lever B, while the sides E of the same extend inward across said lever, and then downward to its lower end, as shown in fig. 1.

Secured to the side pieces E, at and extending upward from their lower ends, are two blocks, F and F', having each a breadth equal to about two-thirds that of said sides, and a thickness equal to one-third of the space between the same, said blocks serving as a frame for the slide or valve G, and, also, to receive the bills.

As seen in the drawing, the slide G is formed of an oblong piece of wood, having in and through the same a slot, H, that extends forward from its rear end rather more than one-half of its length, and at a point about one-fourth of its width from its left side.

The inner side of the slot H is vertical, while its outer side slopes downward and outward, so as to bring its lower edge nearly to the outer edge of the slide.

Sloping downward and outward upon each side of the slide G are two semicircular cavities or grooves, *g* and *g'*, while a third, *h*, is provided within the inner or vertical face of the slot H, and also slopes outward.

Extending from the front of each groove, around the same and to the rear, is a beveled semicircular space, *x*, the object of which is to prevent the seed from wedging within the grooves, and thereby impeding the free motion of the valve.

In order to provide ways for the slide or valve to operate within or upon, a portion of the inner face of the block F' is removed from its upper end downward nearly to its center, lengthwise, so as to form a ledge, *f*, having a width equal to about one-half the thickness of said blocks, and sloping slightly upward from its front.

The inner face of the opposite block F is likewise removed upon a vertical line, and to a corresponding depth, but instead of the right-angled ledge formed upon the block F', a projection, *f'*, corresponding in shape with the slot H, within the valve, is left upon said block F, so that when said valve is placed in position between said blocks, said projection shall loosely fill said slot.

Extending forward from the face of each block, and forming a part of the same, is a projection, *f''*, the right-hand face of which is beveled from near the upper end, upward and toward the opposite side, as shown in fig. 8.

The lever A is provided with a block, I, having the general shape shown in fig. 1, and corresponding in thickness to the space between the blocks F and F', between which it is loosely fitted.

A pin, *i*, passing horizontally through said blocks F and I, and through the sides E, secures the levers together and serves as a pivot, upon which the lever A may turn.

Secured to and extending downward from the rear face of the block I is a section of a bill, K, which corresponds with and fits into another or the female portion of a bill, K', secured upon the inner face of the lever B, at its center, transversely.

Two other bills L and M are secured to the front edges of the blocks F and F', and in corresponding positions upon the inner face of the levers A, at its outer edges, said bills being so arranged as that the female section of one and the male section of the other are attached to said levers, by which means, as the levers are operated, the contiguous faces of said bills move in opposite directions, and thereby prevent the soil from clogging between.

The upper face of the valve G comes immediately

below the lower end of the hopper C, so that the seed contained within the latter may pass outward upon said valve, through a slot, *c*, provided in and through the lever B.

Directly beneath the opening *c*, and immediately above the slide, is a strip of sheet metal, or other suitable material, *N*, which extends forward to a distance equal to about one-half the length of said valve, and, filling the space laterally between, is secured to the sides *E*, the object of which is to prevent the passage of grain in rear of said slide, when the latter is drawn out.

A gate, *O*, secured to and made vertically adjustable upon the lever B, immediately above the opening *c*, furnishes a means whereby the size of said opening may be increased or decreased, and the flow of the grain regulated.

A cross-bar, *P*, secured to the front edge of the blocks *F* and *F'*, immediately above the valve *G*, holds said valve in position vertically, and prevents the grain from passing outward.

A spiral spring, *R*, secured at one end within the rear end of the slide *G*, and pressing against the lever B, so as to throw outward said slide and the lever A, and a brace, *S*, secured upon and extending lengthwise of said lever, completes the device, the operation of which is as follows:

The hopper being filled with grain, a portion of the same passes outward through the opening *c*, and rests upon the slide. By pressing together the levers A and B, the slide or valve will be carried inward until its grooves or cavities are beyond the cross-bar *P*, and receive a charge of grain.

Upon throwing said levers apart, the slide is forced outward by means of the spring *R*, until the cavities are beyond the blocks *F* and *F'*, when the grain, being liberated, will pass downward into the bills, that from the outer cavities passing freely downward into the outer bill, while the contents of the center cavity passes through the slot *H*, against the sloping face of the projection *f''*, from whence it is thrown upon the inclined edge of the block *I*, and, passing down the same, enters the middle bill.

The bills being charged, the device is ready for the operation of planting, which is accomplished by thrusting the bills into the ground, and pressing together

the levers, by which means the corn contained within said bills is discharged, and the cavities within the valve recharged, the contents of the latter being deposited, as before, within said bills, by moving apart the levers.

The advantages possessed by this device are—

First, the peculiar construction and arrangement of the hopper leaves the dropping devices unobstructed, so that their operation may be readily observed, and any derangement easily remedied.

Second, the frame for the valve is constructed in so simple a manner as to be not only much less expensive than those ordinarily used, but also more durable.

Third, the shape of the seed-cavities within the valve is such as to prevent any obstruction to the free operation of the latter by the catching of seed.

Fourth, the arrangement of the bills, so that their contiguous surfaces move in opposite directions when the machine is operated, entirely prevents the usual annoyance arising from the clogging of damp soil between the bills.

Having thus fully set forth the nature and merits of my invention,

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

The hopper C, constructed as shown, and arranged with reference to the lever B and the dropping devices, substantially as and for the purpose specified.

Also, the valve or slide-box, formed of and within the blocks *F* and *F'*, and consisting of the ledge *f*, the projections *f* and *f''*, substantially as and for the purpose set forth.

Also, the valve or slide *G*, provided with the slot *H* and the beveled cavities *g g'* and *h*, substantially as shown and for the purpose described.

Also, the arrangement of the bills, by means of which their contiguous faces are caused to move in opposite directions, when the planter is operated, as is hereinbefore set forth.

In testimony that I claim the foregoing, I have hereunto set my hand this 26th day of March, 1870.

GEORGE BURSON.

Witnesses:

BENJAMIN P. BURSON,

GEORGE JORDAN CHURCHILL.