2 Sheets—Sheet 1.

M. L. & J. B. KISSELL.

Corn Planter.

No. 107,508. Patented Sept. 20, 1870.

FIG. 1

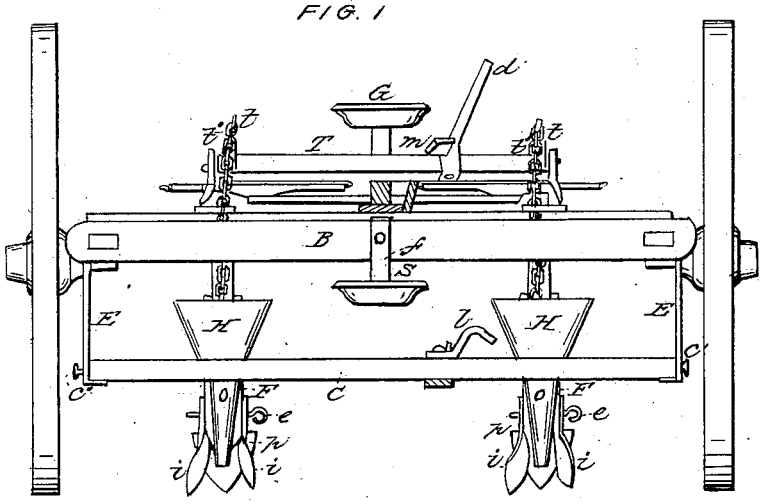
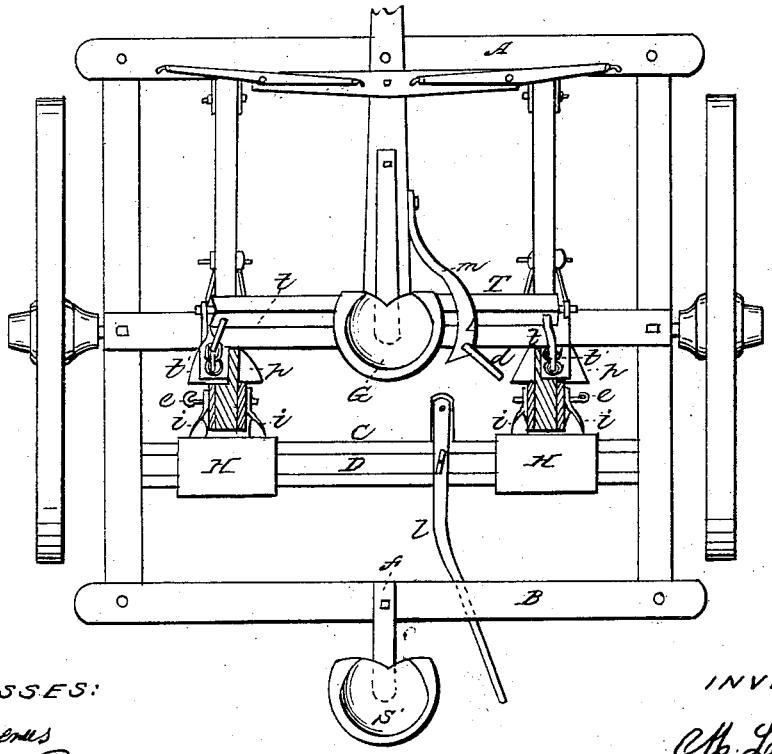


FIG. 2



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2 Sheets—Sheet 2.

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Fig. 3

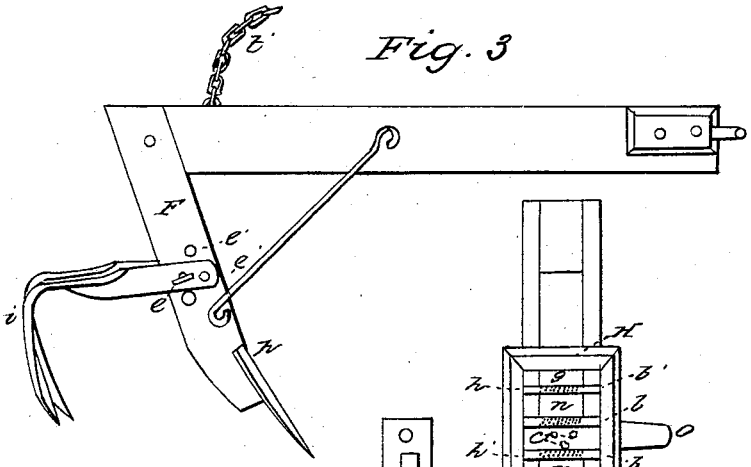

Fig. 4

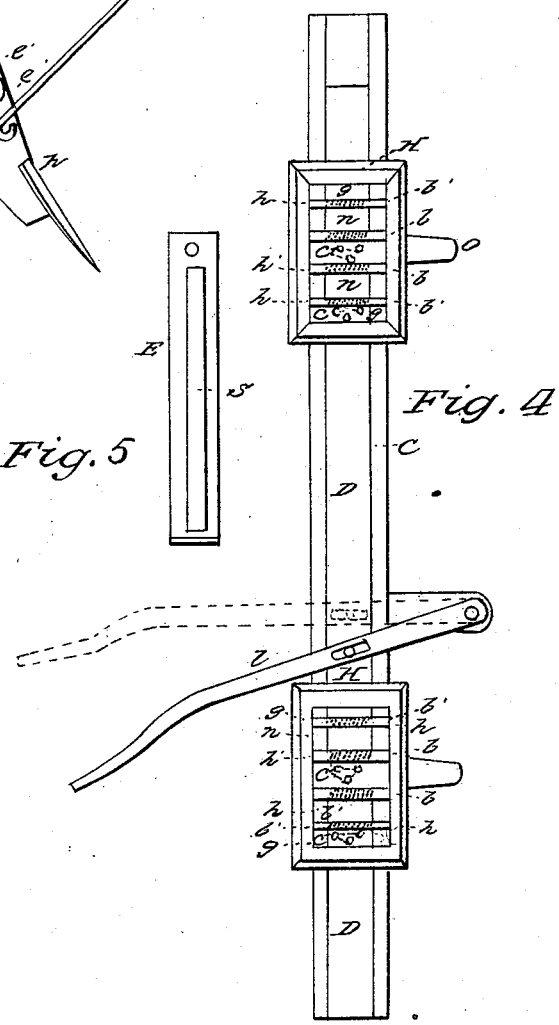

Fig. 5

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MARTIN L. KISSELL AND JACOB B. KISSELL, OF SPRINGFIELD, OHIO.

Letters Patent No. 107,508, *dated September* 20, 1870.

IMPROVEMENT IN CORN-PLANTERS.

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

We, MARTIN L. KISSELL and JACOB B. KISSELL, of the city of Springfield, county of Clark and State of Ohio, have invented certain Improvements in Corn-Planters, of which the following is a specification.

Our invention relates to a planter constructed with a frame, supported upon wheels, with markers or furrowing-plows attached under the bed-frame. In the rear of the markers, and attached to the same standards, are covering-shovels, set at such an angle as to take the fine dirt from the insides of the furrow, and deposit it evenly upon the corn or other seed. The plows are attached by chains and pins to a turn-bar, which is worked by a lever in raising and lowering them.

Another part of our invention is in the construction of the droppers, and the manner of their attachment. A cross-piece reaching from one side of the frame to the other, and suspended to the same by slotted guides at each end, is swung under the rear of the machine. A thin sliding bar works in a groove in the top of this, pierced with three or more holes in a group, and two groups in each end of it. Hoppers for the reception of the grain are mounted upon the cross-piece, the distance apart required for the width of the rows to be planted, the slide forming the bottom of these hoppers. In the middle of the hopper-boxes is a partition box, for the reception of the seed to be dropped, which is conveyed into it by the holes in the slides. These holes are made only large enough to contain one kernel of corn in each, so that the number of grains of corn dropped corresponds exactly with the number of holes in each group in the slide. In addition to the brushes on each side of the partition box, two other brushes (one on each side) are placed equidistant from the middle ones, to insure certainty in laying the kernel of corn flat in the hole in which it is conveyed over the pipe of the dropper-box. The cross-piece to which the droppers are attached can be adjusted to any required height by means of the screws at each end, which project through the slots in the suspending-bars. The covering-shovels are made to adjust to the proper height to allow the markers to be used without them, by means of the holes in the standard and the pin which passes through them. A seat is suspended from the rear of the bed-frame, for the person working the droppers.

Figure 1 is a rear elevation of our machine.

Figure 2 is a plan view of the same.

Figure 3 is a side elevation of one of the marking-plows, and shows the shape and manner of attaching and adjusting the covering-shovels *i*.

Figure 4 is a plan view of the cross-piece C, slide D, (which is operated by lever *l*,) and the interior view of dropper-boxes or hoppers H.

Figure 5 is the slotted bar by which the cross-piece, droppers, and attachments are suspended.

In fig. 1—

B is the rear rail of the bed-frame, from which is suspended the seat S', by the angular bar *f*, for convenience in working the hand-lever *l*, which operates the droppers.

C is the cross-piece supporting hoppers or dropper-boxes H. This is suspended at each end by slotted bars E.

By means of the screws *c'* the cross-piece can be adjusted in height.

i i are the covering-shovels attached to the standard F, by a bolt, (see fig. 3,) and adjusted by pin *e* and holes *e' e'* in the standard F.

The covering-shovels have a parallel arm, projecting them back far enough to allow the dropper-tubes *o* to be introduced between them and the marking or furrowing-plow *p*.

If it is desired to furrow out without planting at the same time, the covering-shovels can be raised and held up out of the way by the pin *e*, and the dropping attachments be taken off.

G is the driver's seat. He can raise and lower the plows by the hand-lever *d*, which is attached to the turn-bar T, which has pins *t* projecting from holes in it, and connected by chains *t'* to the rear of the plow-beams, for raising and lowering the plows.

A ratchet, *m*, holds the lever in position.

In fig. 2 these parts are shown more fully, the plan view of ratchet-plate *m* showing the notches into which the hand-lever *d* slips in operating it.

By reference to figs. 2 and 3, it will be seen that the covering-plows *i* are twisted and bent at an angle, to give them the proper shape for attaching to the plow-standard F, and reaching in rear of the dropper-tubes *o*. Their blades are set at the proper angle, also, for taking the finer dirt from the insides of the furrow, and depositing it upon the corn.

In fig. 4 the interior arrangement of the dropper-boxes H is seen, with four brushes, *b b' b'*, in each. In the full-sized machine these are placed about one and a half inches apart.

The holes *c* in the slide D are seen open in one of the end spaces, while the group *c'* is discharging in the partition box over the pipe *o*.

The object in putting in the two additional brushes can be readily seen in operating the lever *l*, and observing that each group of holes which contain the corn passes from the space *g*, where is first filled, under brush *b'*, and, in case the holes are not all filled, they are supplied from grain in space *n*, pass under the brush *b* (which adjusts the kernels in place on their sides, in case any should be sticking endwise in their holes,) into the partition box *h'*, where they are dropped.

We are aware that one and two brushes have been used for the purpose of regulating the number of ker-

nels to be dropped, but the two additional brushes, *b' b'*, constructed and applied as shown, we believe to be new; also, the construction of slide D, with a hole for each kernel, instead of for a number, as in the usual form. We use slides of different thicknesses, according to the thickness of the kernels of the different kinds of corn. We also make the holes of different sizes, to correspond with sizes of the grains.

The slide D can be easily drawn out by taking out the screw in the slot of lever *l*. The outside brushes, *b' b'*, are made much thinner than the inner ones, *b b*. By this arrangement the greatest certainty in the number of kernels of corn dropped for each hill is attained, while the mechanism is of the most simple construction, and in no way liable to get out of order.

We claim in our invention—

The arrangement of holes *c* in slide D, and brushes *b b* and *b' b'*, substantially as shown and described, for the purpose hereinbefore set forth.

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