S. Z. SHORES.

Hand Seeder.

No. { 1,721. / 32,725. }

Patented July 2, 1861.

Fig. 1

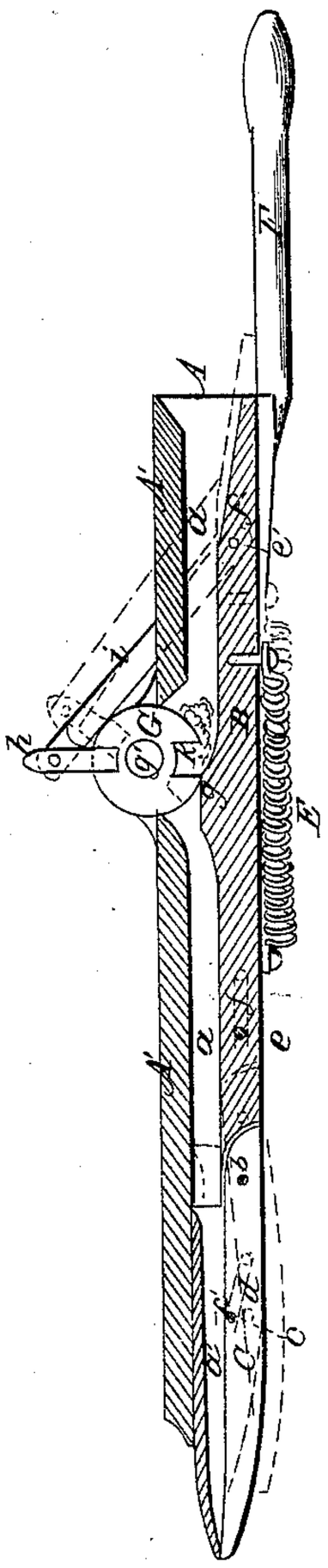
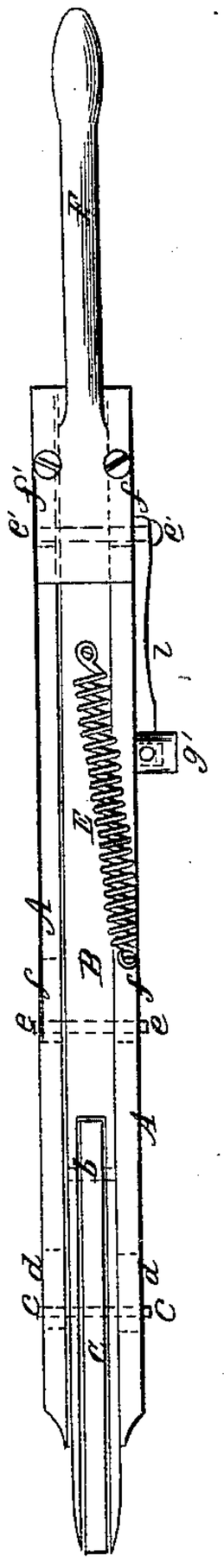


Fig. 2



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S. Z. SHORES, OF TOWANDA, PENNSYLVANIA.

IMPROVEMENT IN HAND CORN-PLANTERS.

Specification forming part of Letters Patent No. **32,725**, dated July 2, 1861.

To all whom it may concern:

Be it known that I, S. Z. SHORES, of Towanda, in the county of Bradford and State of Pennsylvania, have invented a new and Improved Hand Corn-Planter; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical transverse section through the improved planter, showing the interior thereof. Fig. 2 shows the back part of the planter.

Similar letters of reference indicate corresponding parts in both figures.

The nature of my invention consists in constructing the seed-case with three sides movable and with a vibrating opener at the bottom of the stationary side of the case, which is operated by depressing the movable portion of the case, as will be hereinafter described, and in combining with that portion of the seed-case which is movable a seed-dropping device, which is connected with the stationary portion of the seed-case by means of jointed arms, the whole being so arranged that the desired number of grains of corn will be planted each time the lower end of the machine is pressed into the earth, as will be hereinafter described.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The seed-case is an oblong quadrilateral box, consisting of three movable sides, A A′ A, and a stationary side, B, the latter of which is somewhat longer than the former, and its lower end is tapered to a point, so as to readily enter the soil. The portion B is quite thick, and its inside surface is curved so as to form a channel, *a*, through the center of the case, through which the corn is dropped. The lower tapering end of portion B fills up the space in the lower end of the case, and a vertical hole, *a′*, through this end of portion B forms a communication with the lower part of channel *a*. The lower end of portion B is also slotted to receive a curved tongue portion, *c*, which is pivoted in its slot at *b*, Figs. 1 and 2, to the portion B. This curved tongue C serves as a kind of valve for shutting up the lower end of the hole *a′* when the machine is elevated from the ground, and for forming a suitable opening in the soil for the reception of the seed, at the same time allowing the seed to drop when the machine is depressed, as will be hereinafter explained. A pin, *c*, passes transversely through the tongue C, a suitable distance above its lower end, and through transverse slots *c′* in each side of the portion B, also through oblique slots *d d* through the sides of the side portions A A of the seed-case. Now, when the movable sides A A′ A of the seed-case are depressed, the oblique slots through the sides A A force the pin *c*, and consequently its tongue C, outward, as shown in red lines, Fig. 1 of the drawings. Then, when the machine is raised, so as to release the movable portion A A′ A of the case, the helical spring E raises the movable portion and causes the oblique slots *d d* to force the tongue C back again into its place, as shown in black lines, Fig. 1. The helical spring E, which returns the parts back to their places after the machine has been depressed, is attached at one end to the edge of one side A of the movable portion of the case, and at the other end spring E is attached to the back of the stationary piece B, as shown in Figs. 1 and 2. The pins *e e′* pass transversely through the portion B and through vertical slots *f f*, which are made through the sides A A of the movable portion of the case and keep the piece B in place, and at the same time allow the portion A A′ A of the case to receive a vertical play the length of the slots *f f*.

F represents a straight handle, which is attached to the back edges and at the upper ends of sides A A, as shown in Figs. 1 and 2. The side A′ is connected to the sides A A by nails or screws, so that the corn put into the channel *a* at the top of the case will not be allowed to escape, except at the lower end of the case, when the machine is depressed and the tongue C thrown out. The channel *a* curves toward the side A′ at *g*, where the portion B is slightly swelled, as shown in Fig. 1, and opposite to the swell *g* of side B a circular dropping device, G, is pivoted, which has a large and a small seed-cup formed into its periphery. This seed-dropper G is keyed to a short shaft, *g′*, which passes transversely across two ears formed on the edges of side pieces A A, and the dropper G is of such a diameter as to pass through a hole through the side A′ and nearly touch the upper edge of the swelled surface *g*. One end of the shaft *g′* projects out from the side of the case, and to this project-

ing end a short arm, *h*, is fixed, to the outer end of which arm a rod, *i*, is pivoted, which rod is again pivoted to the projecting end of pin *e'*. Now, by means of the arm *h* and connecting-rod *i* the circular portion G receives a rocking motion when the machine is depressed and raised, and this rocking movement given to portion G will cause it to drop seed from the upper portion of channel *a* into the lower portion of this channel. The seed-cup *k* in portion G is of a suitable size to contain the number of grains it is desired to plant at one time, and this seed-cup *k* receives the corn from the upper part of the seed-channel *a* and deposits it in the lower part of this channel *a*. The rocking portion G is furnished with two seed-cups, one of which is larger and will contain more seed than the other. Either one of these seed-cups may be used, according to the number of grains it is desired to plant at one time.

The operation of my improved machine is as follows: When the upper part of the channel *a* is filled with corn the machine is ready for use. The person who is to plant the corn takes hold of the handle F, and as he walks over the field he pushes the lower end of the machine down into the soil a suitable depth, and thus drops the corn at regular intervals over the field. When the machine is depressed and the tapering end of portion B pushed into the earth, the movable portion A A' A of the case is depressed and the tongue C forced outward at its lower end, so as to drop the grains of corn, which are at the same time dropped from the cup *k* in portion G. When the machine is raised the spring E draws the portion A A' A back to its place, and the tongue C is instantly closed. At the same time the portion G is turned until the cup *k* is in a position to be filled again with corn from the upper part of the channel *a*, to be dropped again into the lower part of channel *a* when the machine is depressed.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of vibrating tongue C, as described, with the rocking seed-dropping portion G, arm *h*, and rod *i*, arranged in the relation to swell *g* of side B, and operating in harmony with the tongue C, as herein described and shown.

S. Z. SHORES.

Witnesses:
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