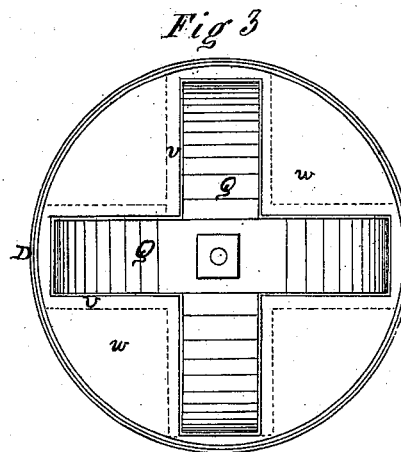
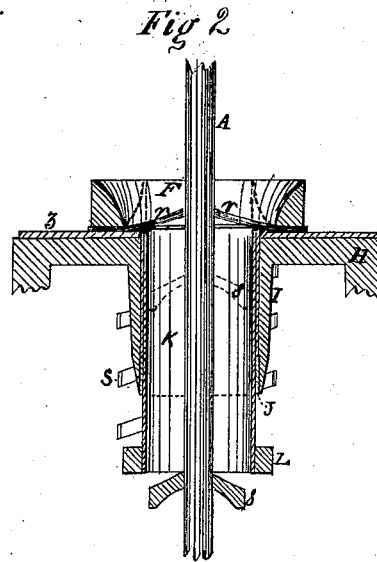
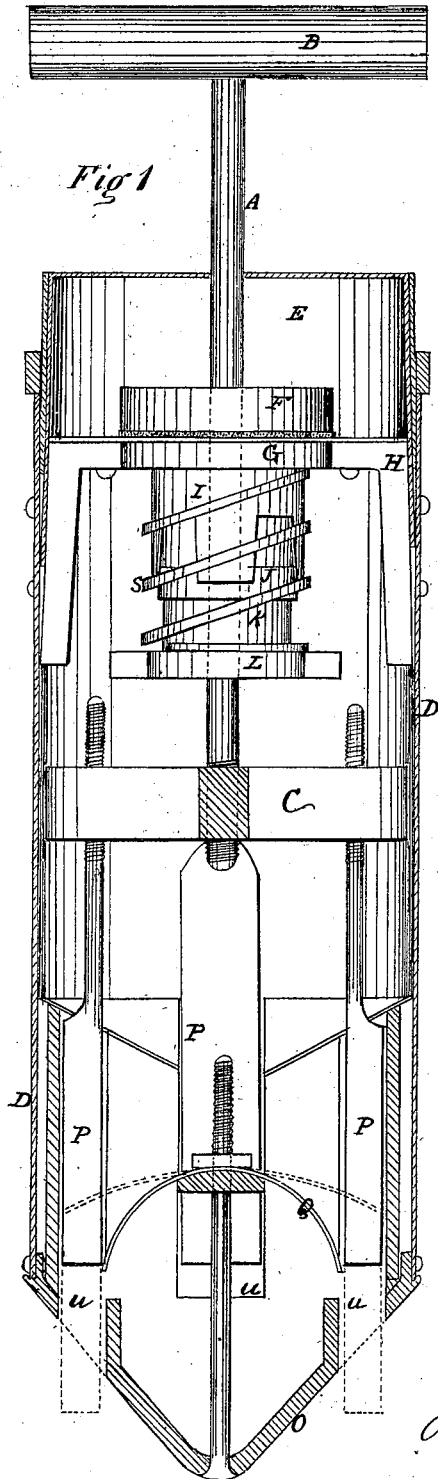


P. SOULE.
Hand Planter.

No. 107,302.

Patented Sept. 13, 1870.



Witnesses
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United States Patent Office.

PETER SOULE, OF WINDSOR, NEW YORK.

Letters Patent No. 107,302, dated September 13, 1870.

IMPROVEMENT IN CORN-PLANTERS.

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

To whom it may concern:

Be it known that I, PETER SOULE, of Windsor, Broome county, in the State of New York, have invented certain new and useful Improvements in Corn-Planters; and I hereby declare the following to be a full and exact description thereof, reference being had to the accompanying drawing forming part of this specification.

The nature or essence of my invention consists in providing a hand corn-planter with a conical or spherical head, to make a depression in the surface of the ground where the seed is deposited, it being deposited by plungers or slides traversing through said head, and in certain devices by means of which the seed is adjustably fed from above, so as to be taken by the plungers and carried down into the ground, as will be fully set forth below.

In the drawing hereinbefore mentioned—

Figure 1 is an elevation or side view of my improved corn-planter, the outer case and certain other parts being shown in section, so as to exhibit the interior parts;

Figure 2 is a sectional elevation of the adjustable feeding apparatus; and

Figure 3 is a top view of the head or lower part, with the flat curved springs contained therein.

The operating-rod A is provided with a handle, B, and extends downward through the feeding apparatus so as to be screwed into the four-armed cross C, as shown.

The outside case D may be made in one or in several pieces, as may be preferred, and, in practice, should be about two and a half feet in length, more or less, so as to be conveniently used without much stooping.

The upper portion E is to receive the grain or seed; next to this comes the feeding apparatus, to form which the ring G, provided with the bent arms H, is secured within the case by screws or otherwise, and the ring or hopper F having an interior diameter somewhat greater than that of the ring G, is screwed down upon it so as to be concentric with it, as shown in fig. 2.

Between these rings I place bristles, (seen at *r*), or other suitable fibrous and elastic material, the same pointing toward and nearly reaching the rod A, a ring of India rubber being placed beneath them and close to the inner edge of the lower ring, so as to cause their inner ends to project obliquely upward and receive support from the rod A should the weight of the grain above render such support necessary.

From the inner edge of the ring G a cylinder, I, (being a part of the same piece,) extends downward, and has within its lower edge a thin ring or short cylinder, J, attached to it. The ring I may be a com-

plete cylinder or be made lighter by having vacant spaces, as shown.

Within this ring J, and also within the ring G, traverses the cylinder K, through which the seed falls, or is fed, to be planted by the apparatus below.

When the rod A is down, the cylinder K is pressed down by the spiral spring S bearing upon the ring L, on the bottom of the cylinder, and the bristles *r* projecting over its top no seed will enter it; but, as often as the rod A is drawn up by the operator, the cross C, striking the ring L, drives the cylinder K upward, and its upper end passing through the yielding bristles, as shown by dotted lines in fig. 2, is open to receive the seed contained in the case above.

The quantity received at each stroke will depend on the depth of the cup, which has the upper part of the cylinder K for its sides, and the bottom or disk *s* for its bottom, this disk being fastened upon the rod A and traversing in the cylinder K; and as the upward motion of the rod and disk is arrested when the ring L meets the ring or cylinder J, the depth of the cup, formed as above, may be adjusted by screwing the rod A in, or turning it out of the cross C, and more or less seed fed through at each stroke, as desired.

In the downward stroke the disk *s* passes out of the cylinder K at the bottom, and the seed falls upon the planting apparatus below. As soon as the descent of the rod A allows the spring S to depress the cylinder K the bristles close over the top of the cylinder and prevent the entrance of any more seed until the cylinder is again forced up.

In the lower end of the case D, I secure the head O, its exterior portion being made conical, spherical, or otherwise rounded, so as to form a hollow or depression in the surface of the ground where the grain is planted, to receive the moisture or rain that may fall. It may be made of cast or other metal or of any other suitable material. It is provided with four vertical openings, *u*, in which the plungers P traverse, said plungers being screwed into the arms of the cross C, as shown, so as to be operated by the rod A and handle B, and their effective length or the depth to which they will penetrate the ground may be adjusted by screwing them up or down in the arms of the cross C.

From the interior of the head O, and at the sides of the openings *u*, rise the walls *v*, indicated by dotted lines in fig. 3, forming the cross spaces occupied by the flat curved springs Q, as shown in fig. 3, and one of which is also seen edgewise in fig. 1. These spaces correspond with the arms of the cross C, and the plungers P traverse in their outer portion. When the plungers are raised they are closed by the springs Q, as shown in fig. 3, and also by the dotted lines in fig. 1, but when the plungers descend to carry down

the seed which falls upon the outer ends of springs Q from the feeding apparatus, as before described, the springs being thin and light give way, as shown in fig. 1, and the plungers passing by their ends and through the head O deposits the seed in the ground.

The springs Q are held by a bolt in the head O, as shown, and they not only, by their curved form, direct the falling seed to the proper place and hold it till the plunger comes down to deposit it in the ground, but they clear the plunger from mud or sticky soil as it ascends.

It is obvious that the disk s may be made adjustable on the rod A, if preferred.

The spaces within the head O, exterior to the walls v, may be covered or closed by a plate, w, shown in fig. 3, and the space within the case D, around the ring G, by a ring-plate, z.

The foregoing being a description of my improved corn-planter,

What I claim as of my invention, and desire to secure by Letters Patent, is—

1. In a corn-planter, the conical or rounded head O, substantially as and for the purpose specified.

2. In combination with the bristles r, arranged as described, the traversing cylinder K, operated by means of the rod A, and by the spring S, substantially as and for the purpose set forth.

3. In combination with the cylinder K, the disk s on the rod A, for forming an adjustable cup to receive the seed, substantially as described.

4. The arrangement of the plungers P, openings u, and rounded head O, constructed and arranged to operate substantially as described.

PETER SOULE.

Witnesses:

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