

J. M. FORDEN.
Seed-Droppers.

No. 144,327.

Patented Nov. 4, 1873.

Fig 1

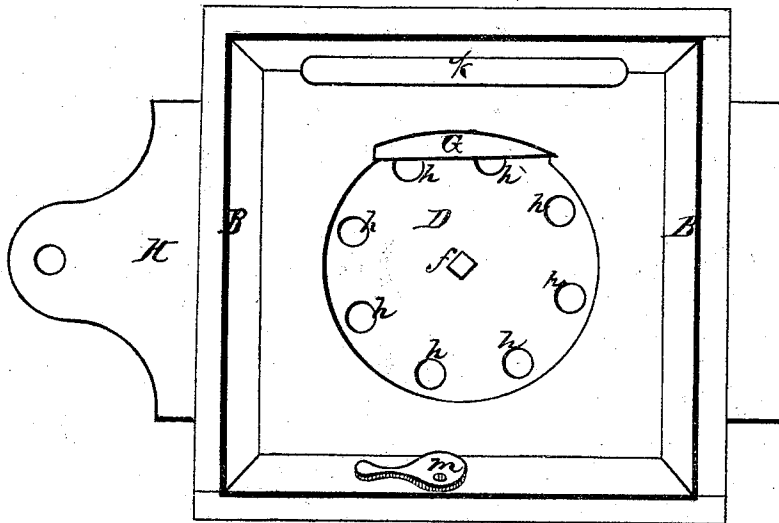


Fig 2

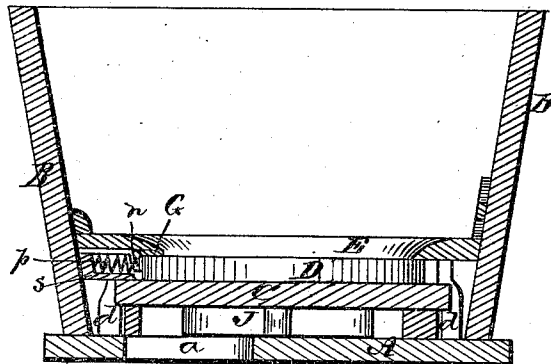
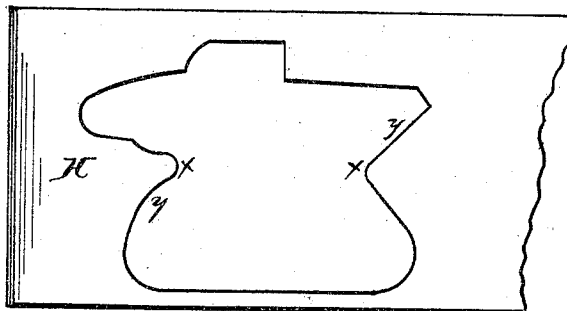


Fig 6



WITNESSES
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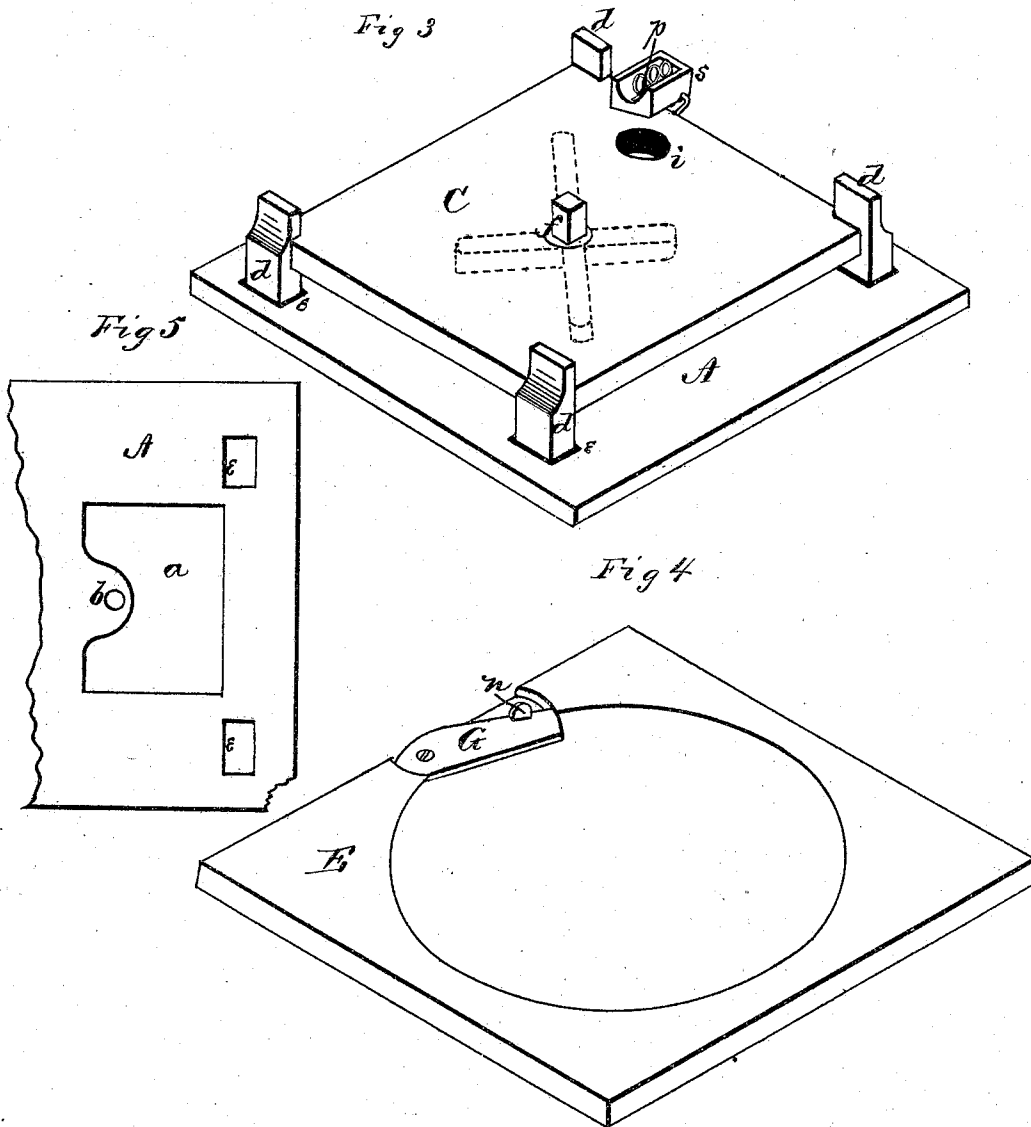
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UNITED STATES PATENT OFFICE.

JOHN M. FORDEN, OF SPRINGFIELD, ILLINOIS.

IMPROVEMENT IN SEED-DROPPERS.

Specification forming part of Letters Patent No. **144,327**, dated November 4, 1873; application filed July 22, 1873.

To all whom it may concern:

Be it known that I, JOHN M. FORDEN, of Springfield, in the county of Sangamon and in the State of Illinois, have invented certain new and useful Improvements in Seed-Dropper; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a seed-dropper, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a plan view of my seed-dropper. Fig. 2 is a vertical section of the same. Fig. 3 is a perspective view of the bottom plate of the dropper. Fig. 4 is a bottom perspective view of the upper plate of the same. Fig. 5 is a view of a part of the shoe of the planter, and Fig. 6 shows a part of the reciprocating slide which operates the dropping mechanism.

A is a plate, which represents a part of the shoe of the planter, and to this plate the box B is secured. In this plate A is a suitable aperture, *a*, for the passage of the seed down into the shoe, and a central hole, *b*, to form a bearing for the shaft of the dropping mechanism. This plate is also, at each inside corner of the box B, provided with a recess, *c*, in its upper side, for the reception of a post or leg, *d*, at the corners of a bottom plate, C, of the dropping mechanism. This dropping mechanism is composed of a bottom plate, C, with a post or leg, *d*, at each corner, and a single aperture, *i*, near one side, through which the seed is dropped. Through the center of the bottom plate C passes a short shaft, *f*, the lower end of which passes into the center hole *b* of the plate A, and the upper end is square for the reception of the dropping disk or wheel D. This wheel is provided with eight circular holes, *h h*, near the edge, and at equal distances apart, and it is rotated by means that will be hereinafter more fully set forth. The disk or wheel D rests upon the bottom plate

C, and can readily be lifted off from the square end of the shaft *f*, and another substituted with larger or smaller seed-holes *h h*, thus readily regulating the amount of seed to be dropped. Above the wheel B is a top plate, E, with a circular opening a trifle smaller than the wheel D. The edge of this opening is beveled downward, as shown in Fig. 2, so that the seed will fall easily down onto the wheel D. This top plate E is held on one side by a cleat, *k*, and rests upon the upper ends of the posts or legs *d d*, and held in place by an eccentric, as shown. In a recess made in the under side of the top plate E is pivoted a cut-off, G, provided near its free end, on the outer edge, with a downward-projecting lug, *n*, which bears against a spring, *p*, secured in a box, *s*, formed on the bottom plate C. The spring *p* forces the cut-off inward, so as to cover each hole *h* in the wheel D as they are in succession brought around to this side. The hole thus covered by the cut-off G is the one above the hole *i* in the plate C, so that the seed will drop down into the shoe of the planter and be conveyed to the ground.

The cut-off, being flexible, will readily yield to any seed that may project upward from the seed-holes in the disk D.

This disk is revolved by the following means: Between the plates A and C is placed a slide, H, which is moved back and forth by any suitable mechanism forming part of the planter. This slide H is cut out, as shown in Fig. 6, having two points, *x x*, and stops *y y*. On the lower end of the shaft *f*, immediately below the plate C, is a four-armed wheel, J, operated upon by the points *x x* of the slide H. For each stroke of the slide one of the points strikes one of the arms of the wheel J, and revolves the same with the disk D one-eighth of a revolution, or until one of the arms of the wheel J comes against the stop *y* at the side of the point *x*, which was moving the wheel. At the return stroke the wheels are again turned another one-eighth of a revolution, and so on, each time bringing one of the holes *h* in the wheel D under the cut-off, and immediately above the hole *i*.

I am well aware that a reciprocating slide operating a rotating dropping-wheel and a

flexible cut-off are not new; hence I do not claim such, broadly, as my invention; but

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

1. The cut-off G, pivoted in a recess on the under side of the plate E, and provided with the lug *n*, to be operated upon by a spring, *p*, as and for the purposes herein set forth.

2. The combination, with the box B, of the fixed plates C E, supported on the bottom A, and separated by the corner posts *d d*, the

wheels D J, arranged upon one shaft, and in the spaces above and below the plate C, and the slide H with opening *x y*, as shown.

In testimony that I claim the foregoing I have hereunto set my hand this 27th day of June, 1873.

JOHN M. FORDEN.

Witnesses:

J. K. WELTER,

JOHN A. DE WITT.