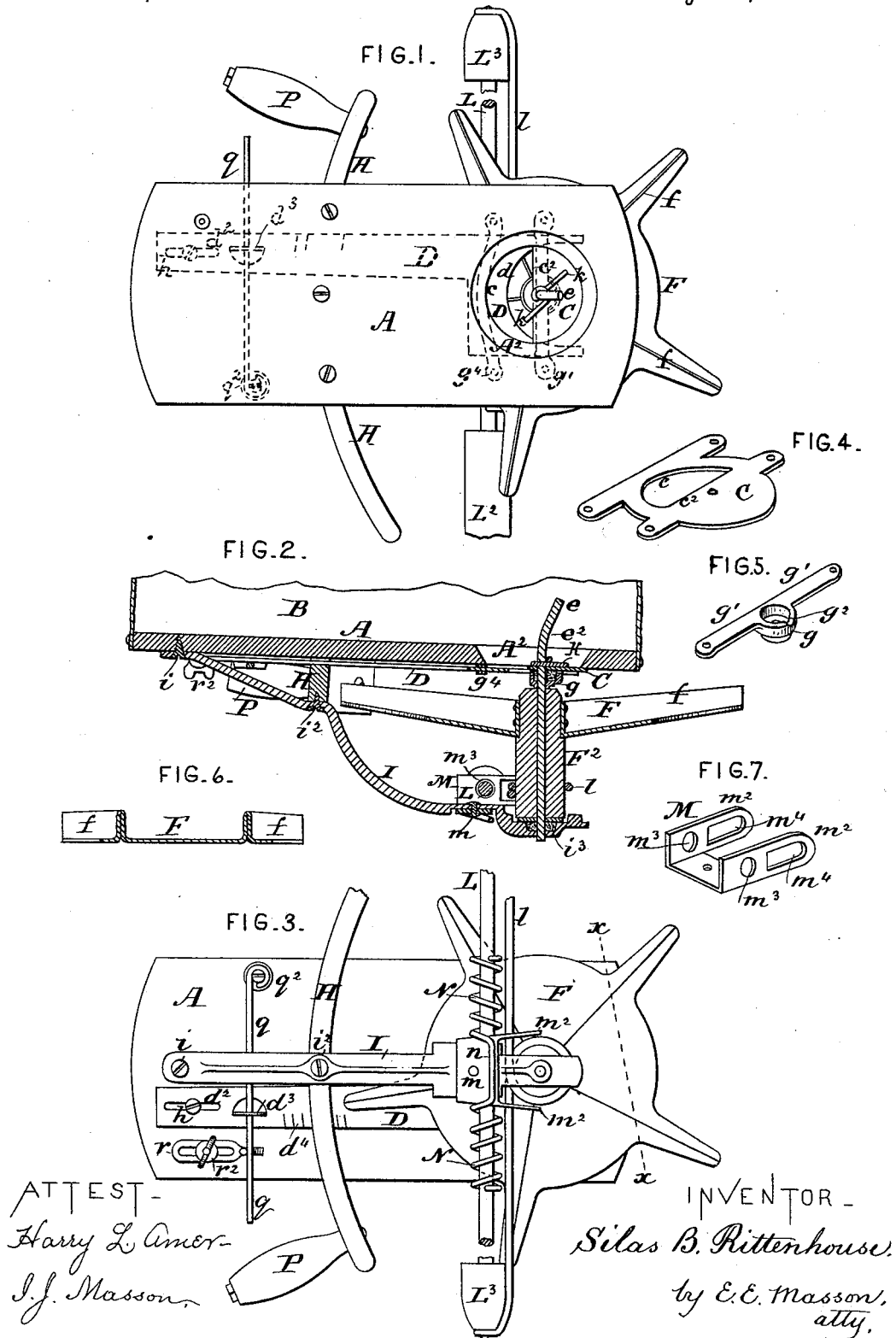


(No Model.)

S. B. RITTENHOUSE.
HAND SEEDER.

No. 386,497.

Patented July 24, 1888.



UNITED STATES PATENT OFFICE.

SILAS B. RITTENHOUSE, OF LIBERTY MILLS, INDIANA.

HAND-SEEDER.

SPECIFICATION forming part of Letters Patent No. 386,497, dated July 24, 1888.

Application filed March 29, 1888. Serial No. 368,817. (No model.)

To all whom it may concern:

Be it known that I, SILAS B. RITTENHOUSE, a citizen of the United States of America, residing at Liberty Mills, in the county of Wabash and State of Indiana, have invented certain new and useful Improvements in Hand-Seeders, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in broadcast hand-seeders in which a wheel is revolved alternately in opposite directions by means of a rod and a cord wrapped around its hub; and the objects of my improvement are to provide a hand seeder with a slide having a curved segment removed from its operating end; second, to provide means on the wheel-shaft for stirring the grain in the hopper; third, to provide the bearings of said shaft with oil-chambers containing absorbents; fourth, to provide a distributor-wheel, of sheet metal, made in one piece with its wings, and, fifth, to provide means for guiding the operating-cord and for grasping the device, as will be hereinafter described, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a top view of a hand-seeder having the seed-bag removed, but otherwise constructed in accordance with my invention. Fig. 2 is a longitudinal vertical section of the same, showing a portion of the seed-bag. Fig. 3 is a bottom view of the same seeder. Fig. 4 is a perspective view of the bottom plate of the hopper. Fig. 5 is a perspective view of the upper bearing of the wheel-shaft. Fig. 6 is a vertical section of the distributor-wheel on line *x x* of Fig. 3. Fig. 7 is a perspective view of the guide for the operating-cord.

In said drawings, A represents the board forming the bottom of the seed holding bag B and the support for the operating mechanism. This board has a circular perforation, A², near the front end for the seed to pass through. One-half of this opening is closed by a plate, C, secured to the under side of the board A, the opening in said plate being in the form of a half-cylinder having its curved portion *c* toward the rear, and its straight edge *c*² at the front, and undersaid plate is placed the seed-regulating slide D, having a curved segment removed from its front portion, and thereby

producing a curved concave edge, *d*, to operate in connection with the straight edge *c*² of the opening in the plate C to regulate the passage of the seed, so that whatever may be the size of the delivery-opening or the distance between the concave edge *d* and the straight edge *c*², the widest portion of said opening will be adjacent to the shaft *e* of the distributor wheel F. The upper portion of this shaft passes through the plate C and through an oil-box, *g*, that is filled with cotton waste to prevent the escape of the oil introduced therein through the oil-hole *g*² on the side thereof. This box has two arms, *g*¹, perforated at the ends to receive screws, by which it is fastened to the under side of the board A, these arms *g*¹ serving also as supports and guides for the slide D. A metal strap, *g*⁴, is also placed under the slide, close to the curved edge *c* of the plate C, to support the slide at that point. The slide D is supported and guided at the rear by the said shield H and by the head of a screw, *h*, passing through a slot, *d*², in said slide.

The lower end of the shaft *e* is guided by a bracket, I, preferably of metal, secured at *i* to the bottom of the board A and at *i*² to the lower edge of the shield H. In the forward end of said bracket an oil-cup, *i*³, is formed and filled with absorbent material to retain the oil, the shaft *e* passing therethrough. The upper end of said shaft is bent to one side at *e*² to stir the seed in the bag B, and below said bent portion, and nearly in contact with the plate C, a pin, *k*, passes through said shaft and is sufficiently wrapped around it to prevent its escape. The ends of said pin *k* project sufficiently over the segmental opening in said plate C to prevent its becoming clogged by the passing seeds, whatever may be their nature. Upon the shaft *e* is secured the hub F² of the distributor-wheel F. This wheel is of peculiar construction. Heretofore it has generally been made of a disk suitably cut at the edges with ribs or ledges soldered thereon, and required many soldered seams that often come apart under the blows they receive from the grain projected thereby; but this wheel F is pressed from one piece of tin with its ribs or ledges *f* integral, the latter being a part of the same piece doubled and bent over in a suitable press, and therefore the ribs cannot fall apart

from the wheel. There is no sharp edge at the top of the rib, no flanged edge at the bottom, and therefore much less danger of mutilating or damaging seeds and grain.

5 To revolve the distributor-wheel, a rod, L, provided with a handle, L², and tip L³, of usual form, is used in connection with a cord, l, secured to these parts at both ends, said cord being wrapped at least once around the hub F²,
10 said rod and cord being moved back and forth under the wheel F across the path traveled by the operator. To direct the rod L and the cord l, so that the latter will remain nearly centrally of the height of the hub, a belt-guide, M,
15 is secured to the bracket I, preferably pivotally, by means of a rivet, m, so as to give some latitude to the swing of said rod and cord. This belt-guide M has two branches, m², that extend on the side of the hub F², and
20 these branches have perforations m³ for the passage of the rod L and slots m⁴ for the passage and guidance of the cord l. These slots are preferably closed at the ends; but they may also be open at their outer end, and the
25 metal may also be removed between said slots and the perforations m³; and although I prefer to make the belt-guide pivotally connected to the bracket I, it may be rigidly attached to or form part of said bracket.

30 To prevent any shock of the handle L² or of the lip L³ against the bracket I or the belt-guide M, a double spring, N, is placed upon the rod L adjacent to said bracket. The two coils of said spring are united by a link, n, made
35 integral therewith and passing under said bracket, so that neither one can be misplaced and separated.

To facilitate the retention of the device against the body of the operator, it is provided with a handle, P, that is secured thereto,
40 preferably by a bolt passing through the shield H. Within convenient distance of the thumb of the operator, grasping said handle, extends the end of a rod, g, connected with the seed-regulating slide D, so as to close the discharge-
45 opening when the operator stops operating the wheel. This rod is pivoted at q² to the bottom of the board A, and passes through a lug, d³, pendent from said slide, and adjacent
50 to its free end it enters in a notch formed in the bottom of a stop and guide, r, that is adjustably secured to the bottom of the board A by a thumb-screw, r², passing through a slot therein. The slide D is provided with a di-
55 vision-scale, d⁴, as usual, to properly set it for any seed that may be used in the machine.

Having now fully described my invention, I claim—

1. The combination of the bottom board of
60 a seeding-machine, having the opening A² therein, the bottom plate, C, having a semi-circular opening, and the slide D, having its front edge, d, concave, with the distributor-wheel, its shaft passing through the plate C,

and the stirrer k thereon, substantially as and 65 for the purpose described.

2. The combination of the bottom board, A, having an opening therein, the bottom plate, C, and the seed-controlling slide, with the distributor-wheel and its shaft, having the
70 stirrer k thereon, and its upper end bent to one side at e², substantially as and for the purpose described.

3. The combination of the bottom board, A, the bottom plate, C, the oil-cup g under said
75 plate, the distributor-wheel and its shaft, and the bracket I, having an oil-cup therein for said shaft, substantially as and for the purpose described.

4. The distributor-wheel F, of sheet metal, 80 having the ribs or ledges f, of two thicknesses, bent up and folded together therefrom and integral therewith, the angles formed by said ribs with the body being the same on both
85 sides of said ribs, whereby the soldering of ribs upon the body of the wheel is dispensed with, and said wheel can be revolved alternately in opposite directions and identical results obtained from said ribs, substantially as described.

5. The combination of the distributor-wheel, its shaft and supporting-bracket, with the operating cord-guide slotted for the passage of
90 said cord and secured to said bracket, substantially as and for the purpose described.

6. The combination of the distributor-wheel, its shaft and supporting-bracket, and its operating-rod L and cord l, with the rod and cord-guide M, pivotally secured to said bracket, sub-
95 stantially as and for the purpose described.

7. The combination of the distributor-wheel, its shaft and under bracket, and the operating-rod L and rod-guide, with the double coil-spring N upon said rod on the sides of said
100 guide-rod, and a connecting-link, n, integral with both coils of said spring and passing under the bracket and rod-guide to unite said springs, substantially as described.

8. The combination of the distributor-wheel, the shield, and the bottom board of a hand-
105 seeder, with a handle, P, secured to the shield of said seeder, substantially as and for the purpose described.

9. The combination of the bottom board, A, and handle P on one side thereof, the grain-
115 controlling slide D, having lug d² integral therewith, and the rod g, pivoted to the board A, and passing through said lug and extending beyond the board A toward the handle P, with the adjustable stop-guide r, substantially
120 as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

SILAS B. RITTENHOUSE.

Witnesses:

E. E. MASSON,
HARRY L. AMER.