

H. H. KOELLER.

Droppers for Seed-Planters.

No. 145,575.

Patented Dec. 16, 1873.

Fig: 1.

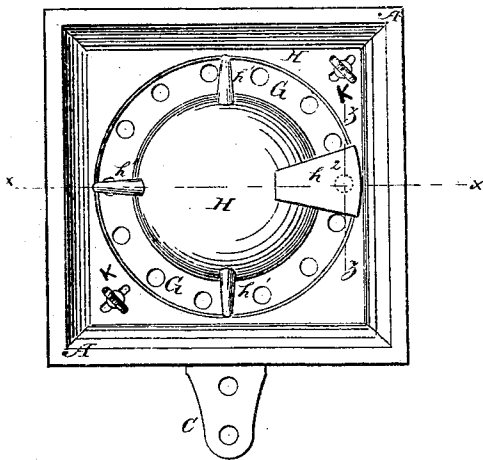


Fig: 2.

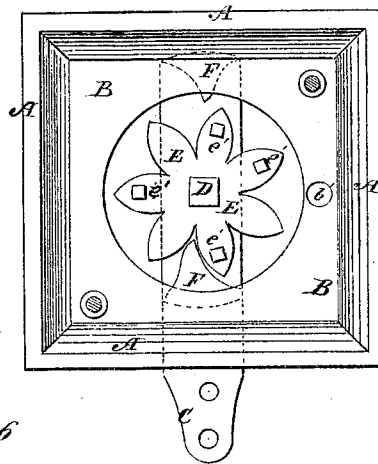


Fig: 6.

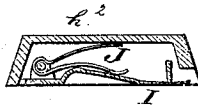


Fig: 3.

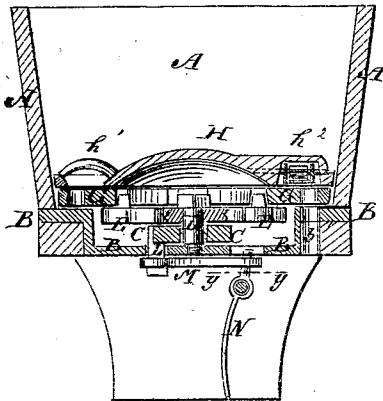


Fig: 4.

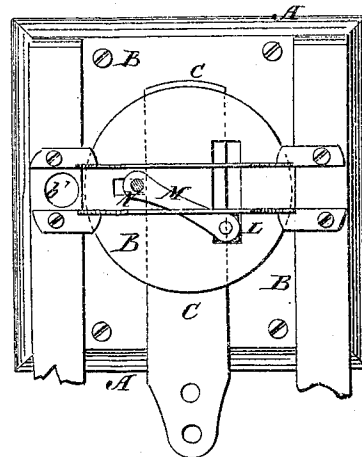
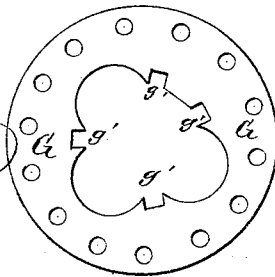


Fig: 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

HERMANN H. KOELLER, OF CAMP POINT, ILLINOIS.

IMPROVEMENT IN DROPPERS FOR SEED-PLANTERS.

Specification forming part of Letters Patent No. 145,575, dated December 16, 1873; application filed September 13, 1873.

To all whom it may concern:

Be it known that I, HERMANN H. KOELLER, of Camp Point, in the county of Adams and State of Illinois, have invented a new and useful Improvement in Dropper for Seed-Planters, of which the following is a specification:

Figure 1 is a top view of my improved dropper shown as applied to the seed-box of a planter. Fig. 2 is the same view as Fig. 1, with the distributing and dropping plates removed. Fig. 3 is a detail vertical section of my improved dropper, taken through the line *x x*, Fig. 1. Fig. 4 is a bottom view of the same, partly in section, through the line *y y*, Fig. 3. Fig. 5 is a detail view of the dropping-plate. Fig. 6 is a detail section of the cut-off, taken through the line *z z*, Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention relates to the construction and combination of a sliding bar having wedge points or blocks, a perforated and notched ring dropping-wheel, and a star-wheel, and in the combination of a vibrating plate pivoted within the seed-tube with the sliding bar which operates the mechanism for delivering the seed from the hopper, as hereinafter described.

A represents the sides of a seed box or hopper, which are secured to the metallic bottom B. The bottom B is formed with a circular recess or depression in its center, as shown in Fig. 3, in the opposite sides or shoulders of which are formed slots to receive the sliding bar C, by the movements of which the dropper is operated. To the center of the bottom B is attached, or upon it is formed, a projection, D, which passes up through a longitudinal slot in the sliding bar C, and through the center of the star-wheel E, to form a pivot for said wheel. The star-wheel E is secured upon the pivot D by a screw. The star-wheel E is made with seven rays or arms, the outer ends of which are made more inclined upon one edge than the other, so that the point or extreme end of the arms may be at one side of the radius passing through the centers of the said arms. To the upper side of the sliding bar C are attached, or upon it are formed, two wedge-shaped projections, F, of such a form as to fit into the space between the rays or arms of the

star-wheel E, and at such a distance apart that, when one of the said blocks F may be in the space between two of the arms of the star-wheel E, the other block may be out of the sweep of the said arms as the wheel E turns. The point of the blocks F is made more inclined upon the side next the more inclined side of the ends of the arms of the wheel E, so that, as the sliding bar C moves back and forth, the blocks F will, alternately, strike an arm of the wheel E, and turn it through half the space of one arm. G is the dropping-plate, which is made in the form of a circle with its middle part cut away. In the inner edge of the plate G are formed four notches, *g'*, to receive four projections, *e'*, formed upon four of the arms of the star-wheel F, so that the dropping-plate may be carried around by and with the star-wheel E. In the dropping-plate G, near its outer edge, are formed fourteen holes, arranged in a circle and at equal distances apart, as shown in Figs. 1 and 5, which holes receive the seed from the hopper and carry it to the discharge-hole *b'* through the bottom B, through which it falls into the guide-spout that conducts it to the ground. H is the guard-plate, which fits into the lower part of hopper, and is made with a ring-slot directly over the circle of holes in the dropping-plate G. The parts of the guard-plate H are connected by three arched arms, *h¹*, and by the cut-off case *h²*, as shown in Figs. 1 and 3. The circular middle part of the plate H is made convex upon its upper side, so that the corn may readily pass to the holes of the dropping-plate G. I is the cut-off plate, which is pivoted in and to the case *h²*, and is held down upon the drop-plate G by a spring, J, as shown in Fig. 6, so as to prevent the dropping-plate G from carrying out any more seed than enough to fill the dropping-holes. The guard-plate H is secured to the bottom B by two or more cross-headed screws, K, which pass through short slots in the said plate H, and screw into the said bottom B. By this construction, by turning the cross-head of the screws into line with the slots of the plate H, the said plate H may be removed, allowing the dropping-plate G to be removed and replaced with one having larger or smaller dropping-holes, according as more or less seed is required to be dropped for

a hill. Upon the lower side of the sliding bar C, at its edge, is formed a projection, L, which passes through and works in a slot in the bottom B, and to the end of which is pivoted the end of the bar M, the other end of which is pivoted to the upper end of the bar or plate N, which is pivoted to the conductor-spout or other support, so as to detain the corn in the conductor-spout, and which is operated at each movement of the sliding bar C to allow the corn to drop to the ground.

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

1. The combination of the sliding bar C, beveled or wedge blocks F, the star-wheel E e', and the perforated ring dropping-wheel G, having notches g', as shown and described, for the purpose specified.

2. The combination of the pivoted bar or plate N, connecting-bar M, and projections L with the bar, arranged to reciprocate and operate the seed-delivery mechanism.

HERMANN H. KOELLER.

Witnesses:

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