W. W. S. KIME.

Seed-Dropping Attachment.

No. 220,154. Patented Sept. 30, 1879.

Fig. 1.

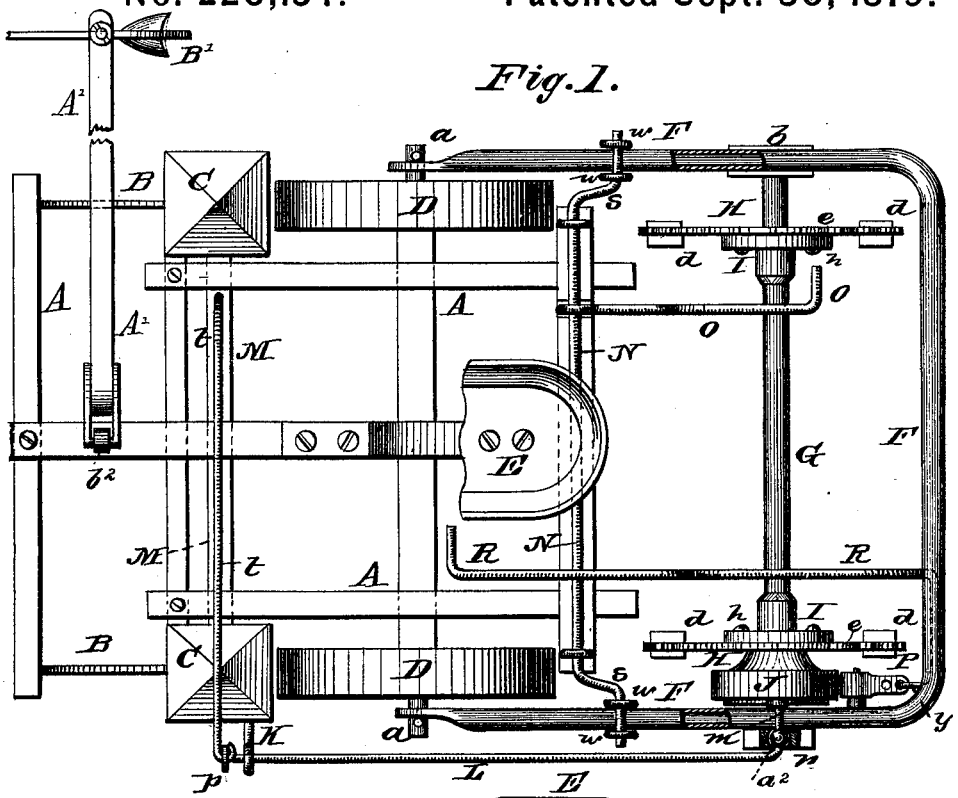


Fig. 2.

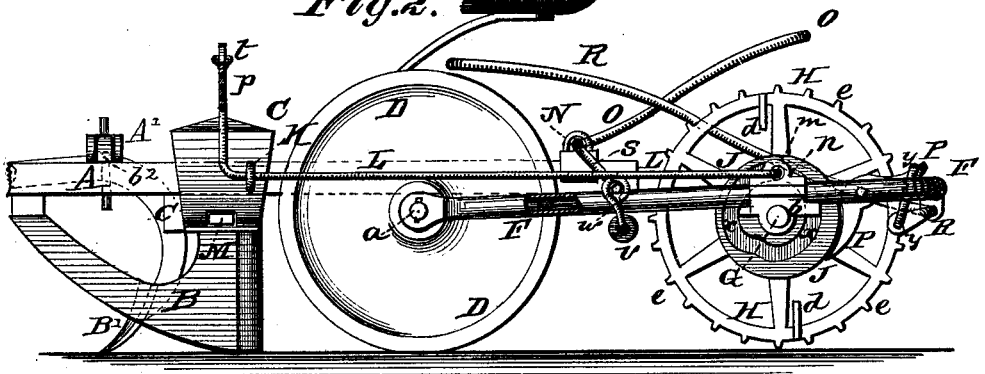


Fig. 3.

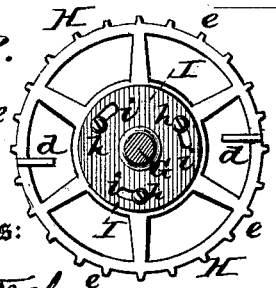
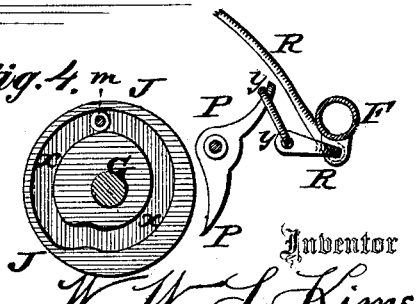


Fig. 4.



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WARREN W. S. KIME, OF VICTOR, IOWA.

IMPROVEMENT IN SEED-DROPPING ATTACHMENTS.

Specification forming part of Letters Patent No. **220,154**, dated September 30, 1879; application filed August 14, 1879.

To all whom it may concern:

Be it known that I, WARREN W. S. KIME, of Victor, in the county of Iowa and State of Iowa, have invented certain new and useful Improvements in Seed-Dropping Attachments; and I 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, which form part of this specification.

My invention relates to seed-dropping attachments for seed-planters; and it consists in certain peculiarities of construction, as will be hereinafter more fully set forth, and pointed out in the claims.

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, and Fig. 2 a side elevation, of my machine. Figs. 3 and 4 are detailed views of parts thereof.

A represents the frame of a planter, with the runners B B, seed-boxes C C, covering-wheels D D, and driver's seat E, the same being all constructed in any of the known and usual ways. The covering-wheels are, however, placed upon spindles *a a*, outside of the planter-frame A, as shown.

The dropping attachment is constructed as follows: F is a bail or frame, made of a single piece of gas-pipe or other tubing, having its ends flattened and perforated, to be placed on the ends of the spindles *a a*, outside of the covering-wheels, as shown.

Under the side arms of the frame F are secured suitable boxes *b b*, in which the axle G is placed, said axle being provided with two wheels, H H, having projecting teeth *e e* on their rims, and also suitable markers *d* attached to the rims.

Each wheel H is made loose and attached to a hub, I, fast on the axle, said hub having curved slots *i*, through which set-screws *h* are passed for securing the wheel. By this means the wheel can be adjusted on the axle so as to bring the markers in proper place when starting a row.

To one of the hubs I is attached a disk, J, having in its outer face an eccentric or cam groove, *x*, in which works an arm, *m*, upon the rear end of a rod, L. This arm *m* extends inward at right angles from the rod, and passes through a box, *n*, attached to the frame. The inner end of the arm *m* is provided with a friction-roller to work in the cam-groove *x*.

The rod L extends forward and passes through a bearing, K, at the corner of one of the seed-boxes. Immediately in front of this bearing the rod L forms a vertical arm, *p*, and this arm is, by a rod, *t*, connected with the slide M of the planter. The arm *p* has a series of holes, as shown, so that the point of connection with the rod *t* can be changed at will to regulate the stroke.

As the eccentric-disk J rotates with the axle the arm *m* is operated in such a manner as to throw the vertical arm *p* alternately inward and outward, thus giving the proper reciprocating movement to the slide.

On the rear cross-bar of the planter-frame, in suitable bearings, is placed a shaft, N, having a crank, *s*, formed at each end. On each crank is suspended a stirrup, *w*, which passes around the side arm of the frame F, and carries a roller, *v*, to bear against the under side of said frame.

The shaft N is provided with a lever, O, whereby it may be turned so as to raise and lower the dropping attachment as required.

On a stud on the frame, in rear of the disk J, is hung a shoe, P, to rub against the periphery of the disk. This shoe is made in the angular form shown, and its rear end is, by a rod or link, *y*, connected with a crank-lever, R, which is pivoted under the rear of the frame F, and extends forward to the driver's seat.

The object of this device is to control the dropping correctly. There should be two or more holes in the rear end of the shoe for changing the link *y*, whereby the pressure can be changed from hard to moderate, and vice versa.

Near the point where the arm *m* projects from the rod L, said arm is formed with a ball, a^2, which works in the box *n*, to make a free and easy movement of the rod.

A′ is an arm, which is provided with a swivel-pin, b^2, at one end, to be inserted in the tongue of the planter. In the other end of the arm A′ is swiveled a small plow, B′, for marking

the row or furrow in which the horse is to travel.

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

1. In a dropping attachment for corn-planters, the hub I, secured on the axle and provided with curved slots *i*, and the wheel H, adjustably secured to said hub by set-screws *h*, all substantially as and for the purposes herein set forth.

2. The rod L, with arm *m*, having a ball, a^2, formed thereon to work in the box *n*, in combination with disk J and hinged frame, all substantially as described.

3. In a dropping attachment for corn-planters, the hinged frame F, furnished with axle G, on which are wheels H H, said wheels being furnished with projecting teeth *e e* and markers *d d*, in combination with disk J, rod L, arm *m*, ball a^2, and box *n*, all constructed and arranged to operate substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

WARREN W. S. KIME.

Witnesses:

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