(No Model.)

# S. & M. FREEMAN.

## SEED SOWER.

No. 386,699. Patented July 24, 1888.

Fig. 1.

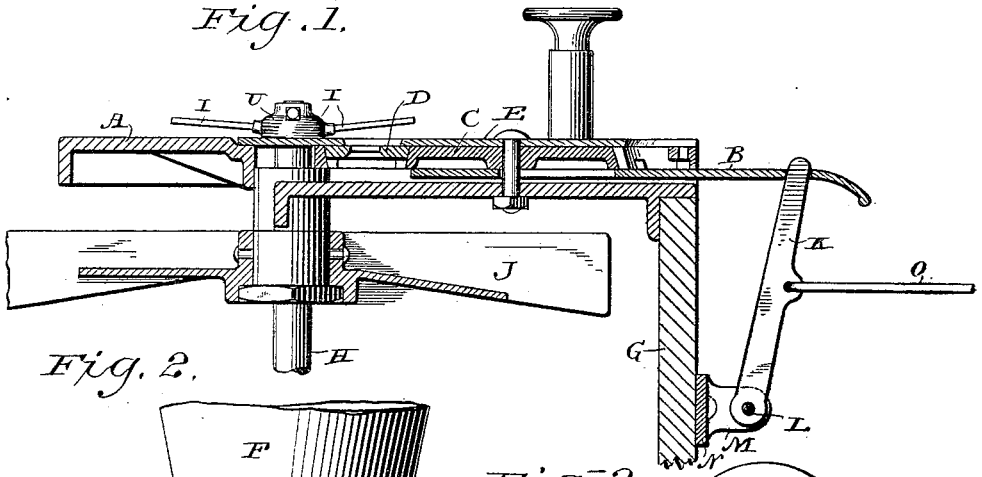



Fig. 2.

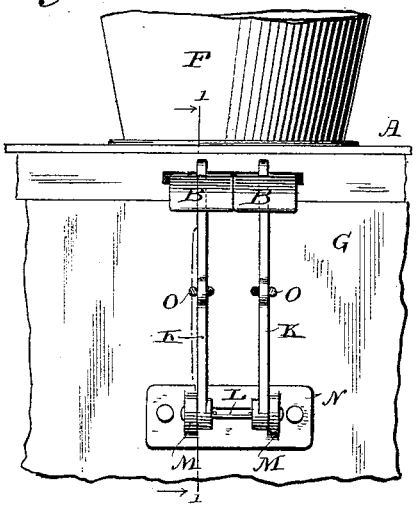



Fig. 3.

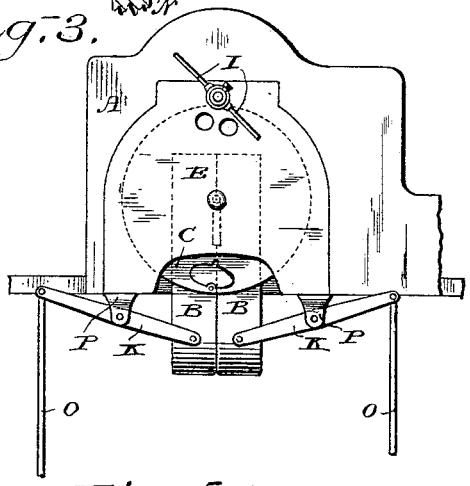



Fig. 4.

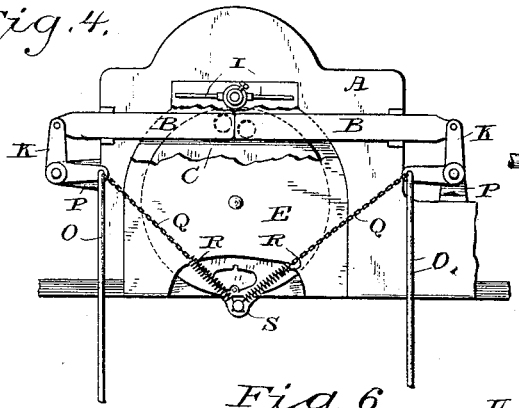



Fig. 5.

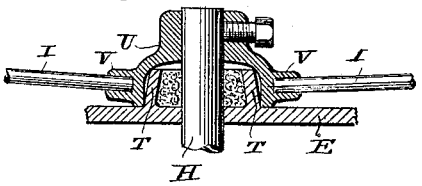
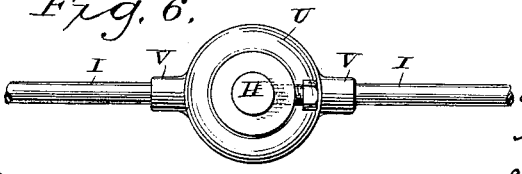



Fig. 6.




Witnesses.
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Michael Freeman.
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# UNITED STATES PATENT OFFICE.

STEPHEN FREEMAN AND MICHAEL FREEMAN, OF RACINE, WISCONSIN.

## SEED-SOWER.

SPECIFICATION forming part of Letters Patent No. 386,699, dated July 24, 1888.

Application filed February 28, 1888. Serial No. 265,533. (No model.)

*To all whom it may concern:*

Be it known that we, STEPHEN FREEMAN and MICHAEL FREEMAN, of Racine, in the county of Racine, and in the State of Wisconsin, have invented certain new and useful Improvements in Seed-Sowers; and we do hereby declare that the following is a full, clear, and exact description thereof.

Our invention relates to seed-sowers; and it consists in certain peculiarities of construction and combination of parts, to be hereinafter described with reference to the accompanying drawings, and subsequently claimed.

In the drawings, Figure 1 represents a sectional view of a portion of a broadcast seed-sower having our improvements applied thereto; Fig. 2, a front end view of the same; Figs. 3 and 4, detail plan views showing different forms of lever mechanism for operating the gage-plates; Fig. 5, a detail sectional view of the top plate, distributer-shaft, and stirrer; and Fig. 6, a detail plan view of the parts shown in the preceding figure.

Referring by letter to the drawings, A represents the floor of our seeder; B, the gage-plates; C, the rotary adjustable disk provided with detachable seed-plates D; E, the top plate; F, the hopper; G, the vertical board to which said floor is attached; H, the distributer-shaft; I, the stirrer, and J the distributer.

The parts above enumerated are similar in their arrangement and operation to like parts shown and described in Letters Patent No. 364,005, dated May 31, 1887, and our present invention relates more particularly to the gage-plates and stirrer.

As shown in Figs. 1 and 2, those ends of the gage-plates B that project beyond the front of the seeder are slotted to engage the upper ends of levers K, that are fulcrumed on a horizontal rod, L, the latter having its bearings in ears M on a plate, N, that is rigidly secured to the vertical board G of said seeder. Connected to the levers K are the rear ends of rods O, the latter being designed to terminate near the driver's seat on the vehicle to which our seeder may be attached, so that the operator may control the gage-plates without dismounting.

In Fig. 3 we show the levers K as fulcrumed to ears P on the front edge of the floor A and pivotally connected to the gage-plates B, this arrangement of said levers being horizontal instead of vertical, as previously described.

In Fig. 4 we show the gage-plates B as entering from the sides of the seeder, or, in other words, at right angles to the position shown in the preceding figures, and the levers K in the form of bell-cranks. Connected to the rod-arms of the bell-cranks are cords or chains Q, that in turn connect with springs R, secured at their meeting points to an ear, S, projecting from the front edge of the seeder-floor. The tension of the springs R compensates for the jarring of the vehicle to which our seeder may be attached, and thereby automatically prevents lateral movement of the gage-plates B. The springs also automatically bring back the plates when the rods O are released by the operator, and it is obvious that springs may be connected to the levers in any of the previously-described mechanisms.

Heretofore the stirrer has usually consisted of a pin passed transversely through the distributer-shaft H; but in sowing plaster and some other materials it has been found that said shaft will become heated and cause the material to clog. To prevent the distributer-shaft from heating, we provide the top plate, E, with an annular flange, T, and between said shaft and flange we insert a packing of oily waste or other lubricant. Detachably connected to the distributer-shaft, so as to fit over the annular flange T on the top plate, E, is a cap, U, the latter being provided with bosses V, in which are cast or otherwise suitably secured the stirrers I, said cap serving to keep dust and other foreign material away from the lubricant.

Having now fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a sower, the combination of the sliding gage-plates, levers connected to said gage-plates, springs arranged to draw upon the levers, and pull-rods united at their rear ends to said levers, substantially as set forth.

2. In a sower, the combination of the distributer-shaft, a cap-piece arranged on the shaft, and stirring-pins secured to the cap-piece, substantially as set forth.

3. In a sower, the combination of the dis-

tributer-shaft, a cap-piece arranged on the shaft, stirring-pins secured to the cap-piece, and a lubricating substance confined between said shaft and cap-piece, substantially as set forth.

4. In a sower, the combination of the distributer-shaft, the top plate provided with a flange that surrounds the shaft, a cap-piece arranged on said shaft to cover the top-plate flange, stirring-pins secured to the cap-piece, and a lubricating substance inclosed by said flange and cap-piece, substantially as set forth.

In testimony that we claim the foregoing we have hereunto set our hands, at Racine, in the county of Racine and State of Wisconsin, in the presence of two witnesses.

STEPHEN FREEMAN.
MICHAEL FREEMAN.

Witnesses:
J. E. DODGE,
GEORGE BROTHERTON.