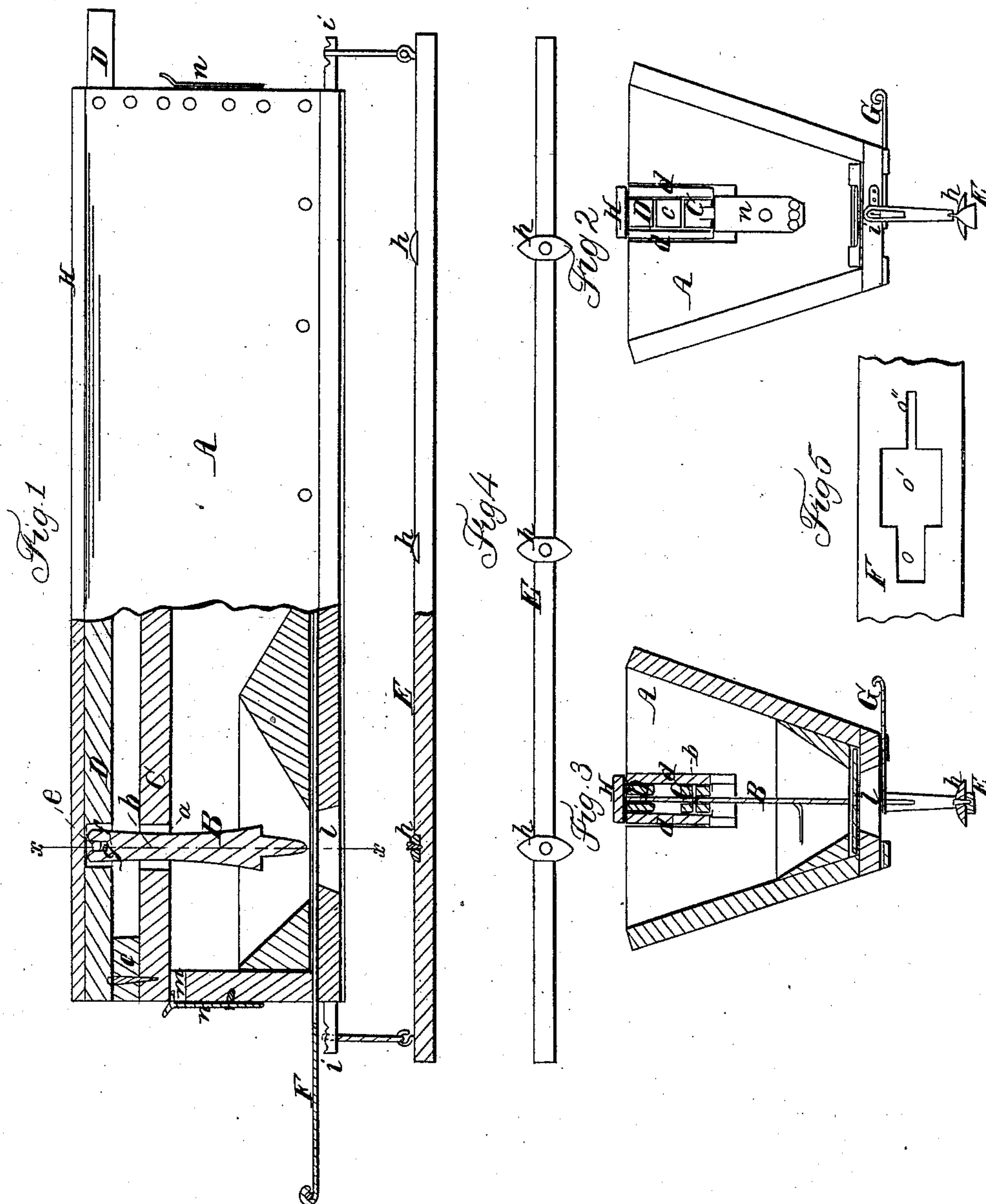


## Seed Dropper.

No. 16,219.

Patented Dec. 9, 1856.



# UNITED STATES PATENT OFFICE.

MOSES D. WELLS, OF MORGANTOWN, VIRGINIA.

## IMPROVEMENT IN SEEDING-MACHINES.

Specification forming part of Letters Patent No. 16,219, dated December 9, 1856.

*To all whom it may concern:*

Be it known that I, MOSES D. WELLS, of Morgantown, in the county of Monongalia and State of Virginia, have invented a new and useful Improvement in Seed-Sowers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, forming part of this specification, in which—

Figure 1 is a side elevation of the hopper and scatterer, showing a vertical longitudinal section of a portion thereof. Fig. 2 is an end elevation of the machine. Fig. 3 is a transverse section on line *x x*. Fig. 4 is a top view of the scatterer. Fig. 5 is a plan of seed-discharge openings in the movable bottom.

Similar characters of reference in the several figures denote the same parts.

The nature of my invention consists in constructing the agitating mechanism of a series of vibrating stirrers swung in slots of a longitudinal bar and vibrated by the reciprocation of a rod having pins embraced by slots in the upper ends of said stirrers, the bar in which the stirrers are swung and the reciprocating rod being inclosed in a case susceptible of vertical adjustment and effectually excluding the seed from the agitating mechanism.

The details of construction and operation of the above-stated features will readily be understood from the following description and reference to the drawings, in which the several parts are thus represented.

A is the hopper, with bottom made up of a series of cells having discharge-opening at bottom.

B is the stirrer or agitator, swung in slot *a* of bar C on pin *b*. There will be an agitator over each discharge-opening.

C is the bar in which the agitators are swung, which I denominate the "fulcrum-bar."

D is a reciprocating rod, movable upon blocks *c* and between sides *d*, and connected with the agitators by reason of the pin *e*, crossing slot *f*, being embraced by slot *g* in the head of the agitator, so that the reciprocation of this rod vibrates the series of agitators.

E is a scatterer, consisting of a curved surface having at intervals corresponding with the discharge-openings, cross-pieces *h*, with convex upper surfaces. This scatterer is loosely hung from the notched studs *i*.

F is a movable bottom, having openings *o* or *o'*, any one of which can be placed over opening *l* in hopper-bottom to suit the character of seed to be sown. These openings can also be diminished, so as to regulate the quantity sown.

G G are slides for cutting off any of the openings *l*.

H is a top piece upon sides *d*, and constituting therewith the case inclosing the agitating mechanism. This case is held by slots in the ends of the hopper, and may either rest on the bottom of the slot or upon the flanges *m* of the springs *n*, as in the drawings. In the former case the points of the agitators will be within the discharge-openings, and by moving within them insure a regular discharge from all the openings. This is important in sowing small seed, where, if the point of the agitator be bent and not pass directly over the discharge-slot, there will be a variation in the discharge. This low position of the case is therefore employed when small seed is to be sown. The position of the drawings is for large grain.

The operation of the machine is as follows: The reciprocation of rod D produces the vibration of agitators B sufficient to produce the discharge without the risk of the moving parts being choked by seed. As the seed leaves the discharge-opening it falls upon the scatterer, which has been hung so as to bring the cross-pieces *h* under the middle of the discharge-slots. The longitudinal convex surface deflects the seed toward the front and rear, and the surfaces of the cross-pieces *h* tend to deflect it in the direction of the length of the hopper, thereby fully covering the ground passed over. The loose hanging of the scatterer enables it to conform to any motion of the hopper from inequalities of ground, and the serrated studs on the ends of the hopper admit of its being so hung that the cross-pieces *h* shall be under the middle of the discharge-slot, however it may vary.

The advantages of this machine may thus be stated: Choking of the moving parts is effectually prevented by means of the combination composing the agitating mechanism, and by the peculiar form and adjustment of scatterer an even distribution of the seed is insured.

I make no claim to the use of reciprocating bars for causing the movement of either rigid



or elastic clearers over discharge-apertures of seed-planters, as such constitutes no part of my invention; but

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

The combination of the case with the swinging protruding agitators thereof and the reciprocating bar contained within the case and

actuating the vibrating agitators, substantially as and for the purposes set forth.

In testimony whereof I have hereunto signed my name before two subscribing witnesses.

MOSES D. WELLS.

Witnesses:

GEO. PATTEN,

JOHN S. HOLLINGSHEAD.