W. D. MILLER.

SEED-PLANTER.

No. 188,811. Patented March 27, 1877.

FIG. I.

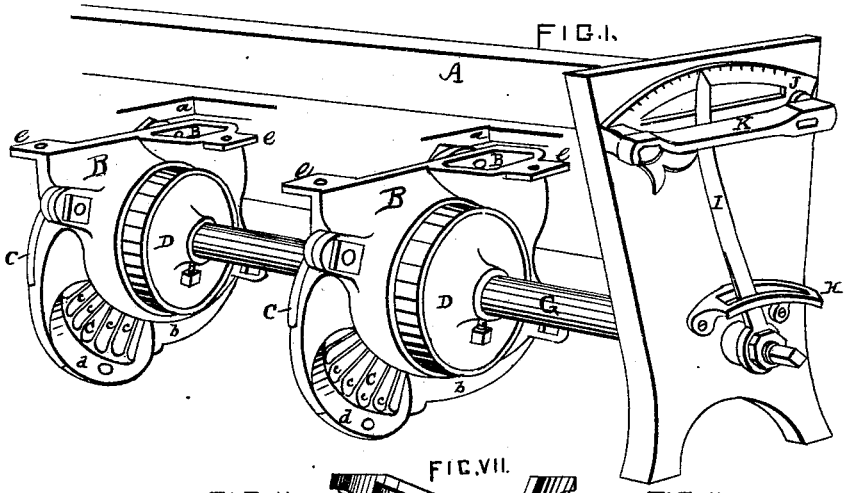


FIG. II.

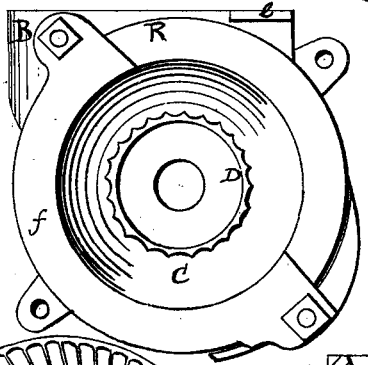


FIG. VII.

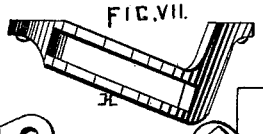


FIG. III.

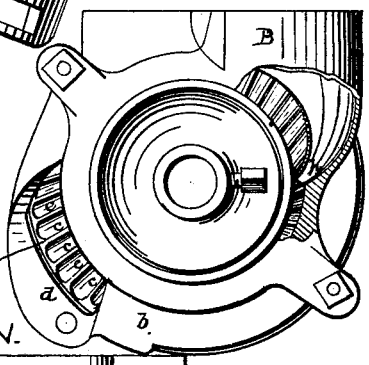


FIG. IV.

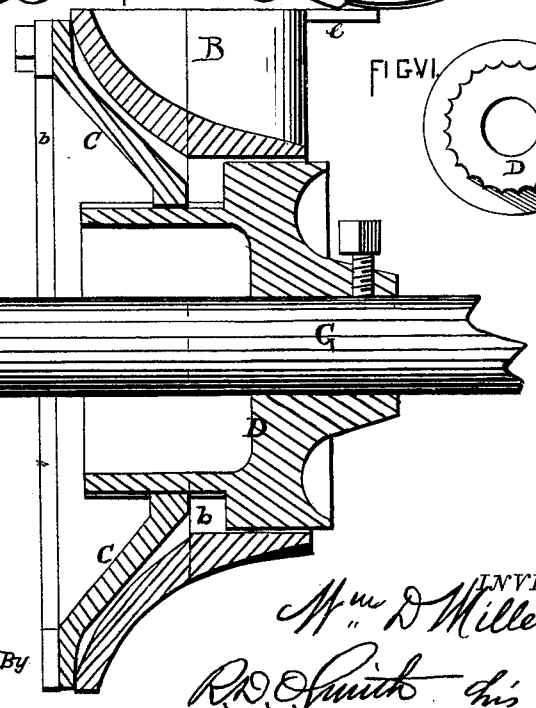


FIG. V.

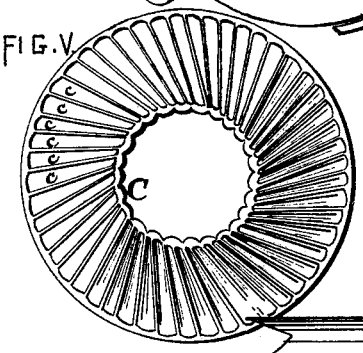
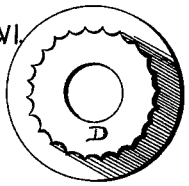


FIG. VI.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM D. MILLER, OF SPRINGFIELD, OHIO.

IMPROVEMENT IN SEED-PLANTERS.

Specification forming part of Letters Patent No. **188,811**, dated March 27, 1877; application filed August 5, 1875.

To all whom it may concern:

Be it known that I, W. D. MILLER, of Springfield, Ohio, have invented a Seed-Planter, of which the following is a specification:

This invention relates to improvements in measuring and delivering wheels for seed-planters; and consists, first, in the form and construction of the delivery-wheel itself, whereby its capacity to deliver the seed with regularity and accuracy as to quantity, and without crushing, is secured; second, in the structure of devices and their peculiar operation; third, in the method of producing a simultaneous adjustment by a single movement of a lever.

That others may fully understand my invention, I will more particularly describe it, having reference to the accompanying drawings, wherein—

Figure 1 is a sectional perspective of the seed-hopper, with a portion of the seed-wheels. Fig. 2 is an obverse elevation of one of my seed-wheels. Fig. 3 is a reverse elevation of the same. Fig. 4 is a longitudinal section of the same. Fig. 5 is an elevation of one part of the seed-wheel. Fig. 6 is a similar elevation of the other part of said wheel. Fig. 7 is the cam whereby the adjustment is determined.

A is the seed-box, constructed as usual, and, if desired, provided with a suitable agitator. Through the bottom of the seed-box, and at proper intervals, are the ports *a*, through which the seed descends into the hopper of the case B, which incloses the seed-wheels. The seed-wheel is composed of two parts—a conical rim or disk, C, provided with slightly oblique or tangential grooves or corrugations on its face, and a sliding cylinder, D, with a hub at one end, and having similar grooves or corrugations arranged longitudinally along its surface. The case B is constructed with a ledge or dam, *h*, which limits the passage for the seed to the reservoir *b*, along which it is moved by the wheels C D as it revolves, and a delivery-lip or outlet, *d*, from which it falls to the ground, being deposited broadcast or in drills, as may be desired, and by the usual appliances.

The seed-wheel case B is provided with ears or lugs *e e*, for its attachment to the bottom of the seed-box A.

The part C of the seed-wheel enters the case from the back, and is secured in place by a plate, *f*, which is placed behind the end of the part C, and is secured to the case by bolts.

The part D is cylindrical, and longitudinally corrugated, with an enlargement or hub at one end. The corrugated portion is fitted to a central orifice of the part C, so that the revolution of the one causes the other to revolve also, and at the same time permits part D to slide freely in a lateral direction in said central orifice. The hub of the part D fits an opening in the case B. The delivering capacity of the seed-wheel is determined by the space between the face of the part C and the hub of the part D, and its adjustment is effected by the lateral movement of the part D, to diminish or enlarge said space.

When the seed descends into the hopper of the case B, and the seed-wheel is revolved, said seed falls over the dam *h* into the reservoir *b*, more or less rapidly, according to the position of the hub of wheel D, and is gently, yet positively, moved along the reservoir *b* until it reaches the outlet *d*. The corrugations or grooves in the faces of the parts C D are efficient to so move the grain without crushing it.

A seeding-machine is provided with a suitable number of said cases, and the seed-wheels arranged in line along the under side of the seed-box A at proper intervals. The several parts D are mounted upon and rigidly secured to a single shaft, G, which is caused to rotate by suitable gearing driven from one of the supporting-wheels of the machine, and the simultaneous adjustment of all the several seed-wheels is effected by moving said shaft endwise. This movement of the shaft G may be effected in a great variety of ways, which will immediately occur to the skillful mechanic; but I prefer to employ a lever, I, through one end of which the shaft G passes loosely, and a slotted segmental inclined plane or cam, H, so that a simple movement of said lever along said cam-surface will cause the said shaft to be moved endwise. The end of the lever I is made pointed, and moves over an index-arc, J, so that a definite gage of the adjustment of the feed-wheels is obtained at a glance, and without any examination of said wheels themselves. Also, when the adjustment has for

some purpose been temporarily changed, it may immediately and with certainty be recovered and restored. A clamp-bar, K, passes over the end of the lever, and when screwed down holds it firmly in position.

Having described my invention, what I claim as new is—

1. A seed-wheel composed of a conical disk, C, with tangential flutes *c* and fluted cylinder D, adjustable thereon, provided with a hub, combined with a suitable case provided with a hopper, chute, and delivery-mouth, as described.

2. The shaft G, to which are attached the adjustable parts of the several feed-wheels, and a lever, I, loosely attached to the shaft, combined with the slotted segmental cam H, secured to the frame, as set forth.

3. The lever I, cam H, and shaft G, whereby all the seed-wheels are adjusted simultaneously, combined with the index-scale J and clamp-bar K, as set forth.

4. The conical disk C, provided with tangential flutes or grooves *c*, combined with the sliding longitudinally-fluted hub D, and the case B, constructed with the reservoir-chute *b*, as described and shown.

5. Combined with a fluted seed-wheel C, the expanding chute-reservoir *b*, separated from the hopper by the dam *h*, the seed being fed from said reservoir by the action of the fluted disk.

WM. D. MILLER.

Witnesses:
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