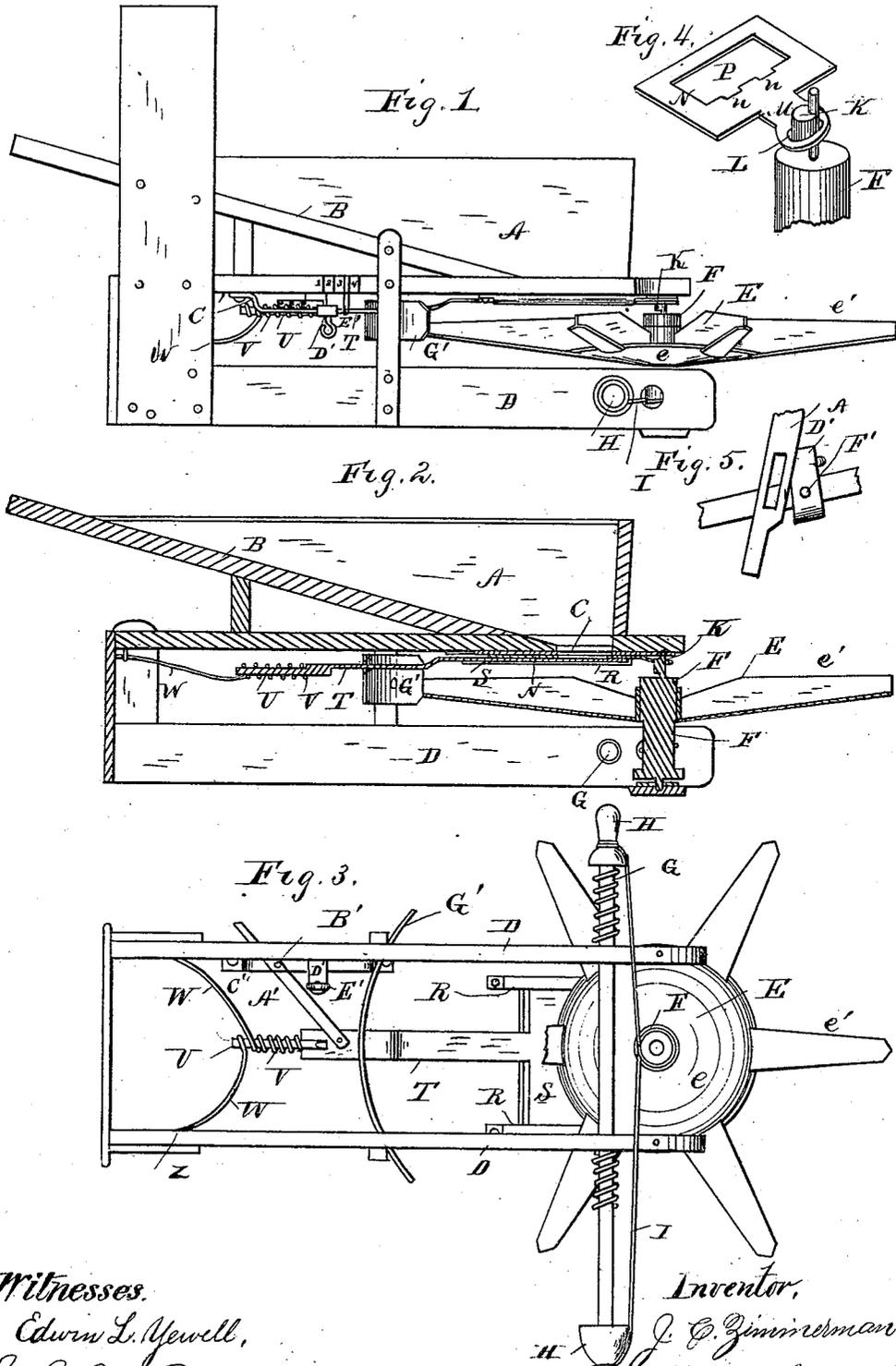


(Model.)

J. C. ZIMMERMAN.
CENTRIFUGAL SEED DROPPER.

No. 251,332.

Patented Dec. 20, 1881.



Witnesses.
Edwin L. Yewell,
J. J. McCarthy

Inventor,
J. C. Zimmerman
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UNITED STATES PATENT OFFICE.

JOHN C. ZIMMERMAN, OF WABASH, INDIANA.

CENTRIFUGAL SEED-DROPPER.

SPECIFICATION forming part of Letters Patent No. 251,332, dated December 20, 1881.

Application filed September 17, 1881. (Model.)

To all whom it may concern:

Be it known that I, JNO. C. ZIMMERMAN, of Wabash, in the county of Wabash, and in the State of Indiana, have invented certain new and useful Improvements in Centrifugal Seed-Droppers; 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, making a part of this specification.

This invention relates to certain improvements in hand broadcast seed-sowers of that class in which a rotary distributor is employed; and it has for its objects to provide an improved means for feeding the seed to said distributor, as more fully hereinafter specified. These objects I attain by the apparatus and mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents a side elevation of my improved apparatus; Fig. 2, a longitudinal vertical section thereof; Fig. 3, a bottom view of the apparatus; Fig. 4, a detached view of a portion of the feed mechanism; Fig. 5, a detached view, showing the lever and connections for operating the regulating-slide, and Fig. 6 represents a detached view of the regulating-slide.

The letter A indicates the body of the apparatus, which is provided with a bottom, B, inclining downward from the rear to the front, where there is a rectangular opening, C. The letter D indicates a frame located below the body of the apparatus, and properly secured thereto.

E indicates the rotary seed-distributor, consisting of a concave disk, *e*, provided with a series of radial wings or distributors, *e'*, mounted upon a vertical drum, F, the journals of which have their bearings in the forward part of the body of the apparatus and the frame above mentioned.

The letter G indicates a transversely-reciprocating rod extending through suitable apertures in the frame D and provided with handles H, by which it may be operated. The said rod has attached to it near its opposite ends a cord, I, which passes around the drum and serves to give the same a rotary move-

ment alternately in opposite directions as the rod is reciprocated.

The upper journal of the drum F is provided with an eccentric, K, which works in a slot, L, in the extension M of the reciprocating feed-plate N. The said plate N is provided with a rectangular opening, P, and with seed-distributing recesses *n* at one edge, for the purpose hereinafter described. The plate is located and adapted to reciprocate in ways R, directly below the opening in the bottom of the body of the apparatus.

The letter S indicates a slide located in the ways R, and capable of being moved back and forth and adjusted therein. The said slide is provided with recesses at its forward end, similar to the recesses *n* of the plate N. From the rear of the plate extends backward a bar, T, the extremity of which is provided with a pin, U, which is surrounded by a short spiral spring, V, against the rear end of which bear the ends of the springs W, the said ends being looped and surrounding the pin, as shown. The said springs are secured to the body of the apparatus, as indicated by the letter Z, and, with the spiral spring, tend to press the slide S normally forward.

The letter A' indicates a lever fulcrumed at B'. One end of said lever is pivoted to the bar T and the other end projects at one side of the apparatus, whereby the slide may be moved backward for the purpose of adjustment. The lever works between a bracket, C', attached to the bottom of the apparatus, and said bottom. The said bracket is provided with a sliding index, D', which may be fixed in any desired position (indicated by the lines 1 2 3 4) to regulate the adjustment of the slide to adapt the apparatus to plant seed of various sizes, as may be desired. The base of the index embraces the bracket C', and may be clamped thereon by means of the clamping-screw E'. The said base is provided with a pin, F', Fig. 5, which is adapted to engage a slot in the lever A', in order to hold the parts when properly adjusted.

The letter G' indicates a guard to prevent the seed from being thrown to the rear of the apparatus.

It will be perceived that as the transverse

rod is reciprocated and the distributor rotated back and forth the sliding feed-plate will be reciprocated longitudinally, alternately opening and closing the recesses *n n*, thus feeding
5 the seed to the distributor.

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

10 In combination with the body of the apparatus, having an opening at its bottom, and the distributing-disk, the reciprocating seed-feeding plate and its operating mechanism,

and the regulating-slide *S*, having an extension, *T*, provided with a pin, *U*, and spiral spring *V*, the springs *W*, and lever *A'*, all arranged to operate substantially as specified. 15

In testimony whereof I affix my signature, in presence of two witnesses, this 8th day of September, 1881.

JOHN C. ZIMMERMAN.

Witnesses:

J. J. MCCARTHY,
CHAS. D. DAVIS.