

(No Model.)

W. MARKS.

FEED CUP FOR FERTILIZER DISTRIBUTERS.

No. 353,570.

Patented Nov. 30, 1886.

Fig. 1.

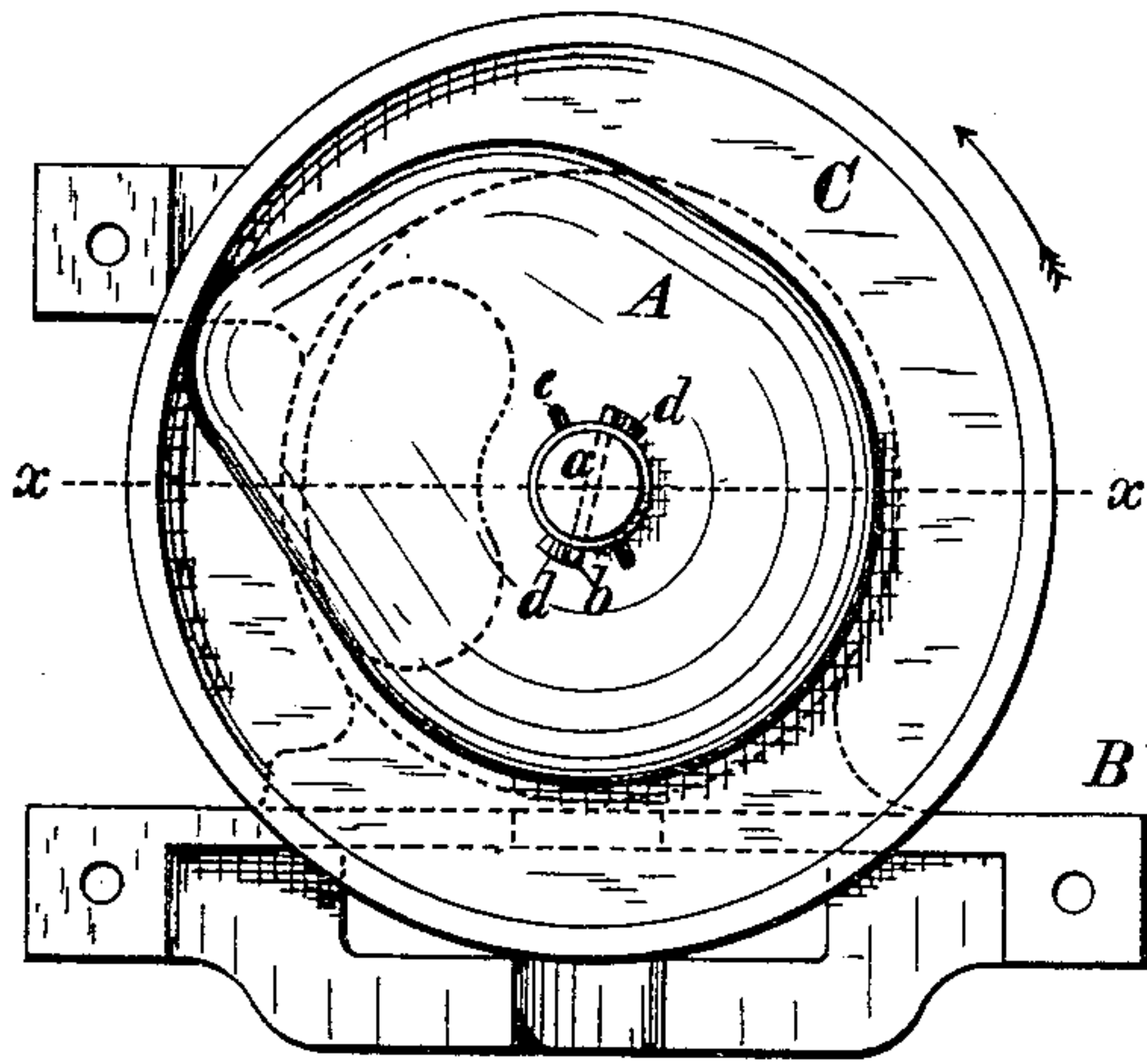


Fig. 2.

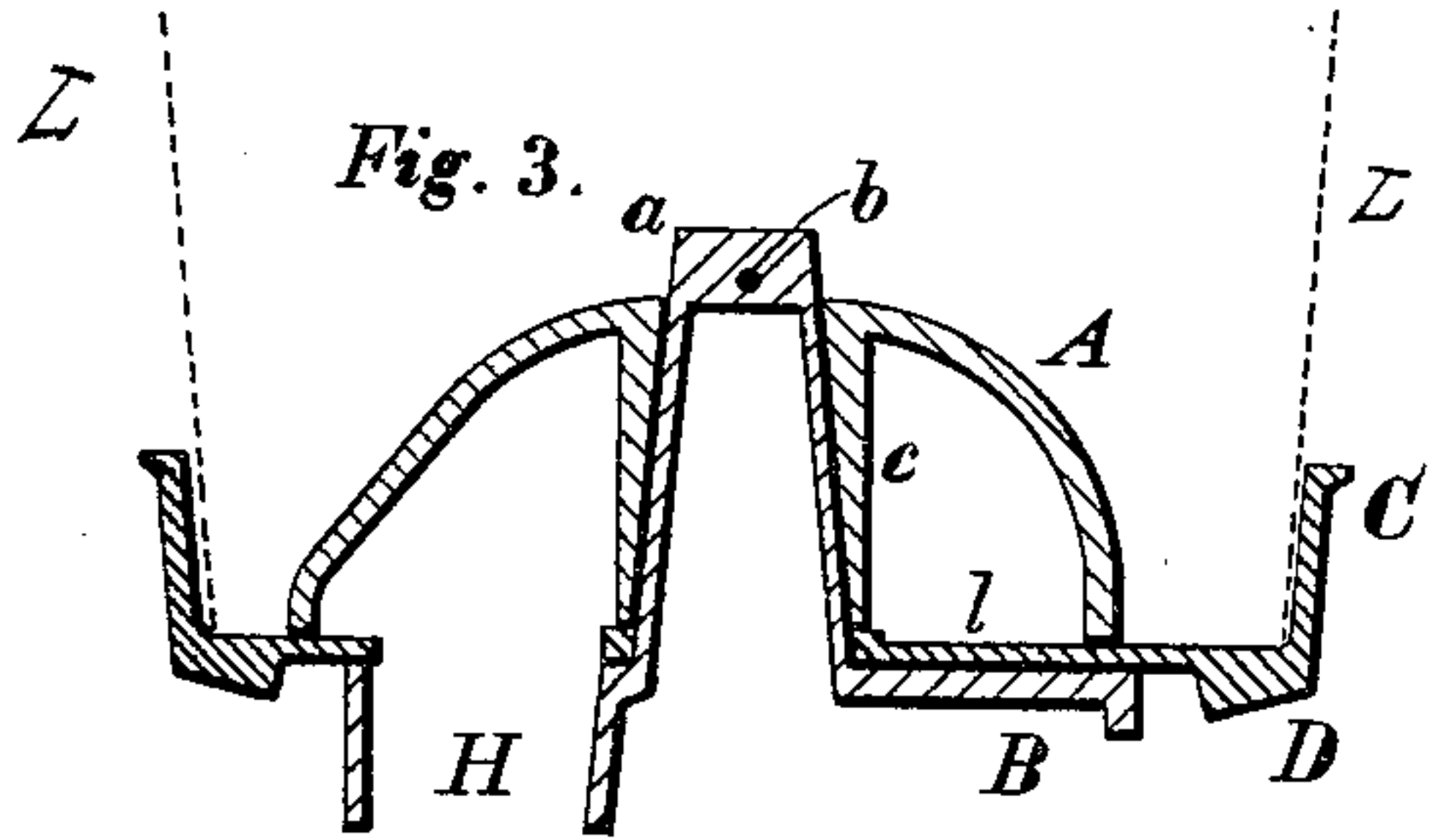
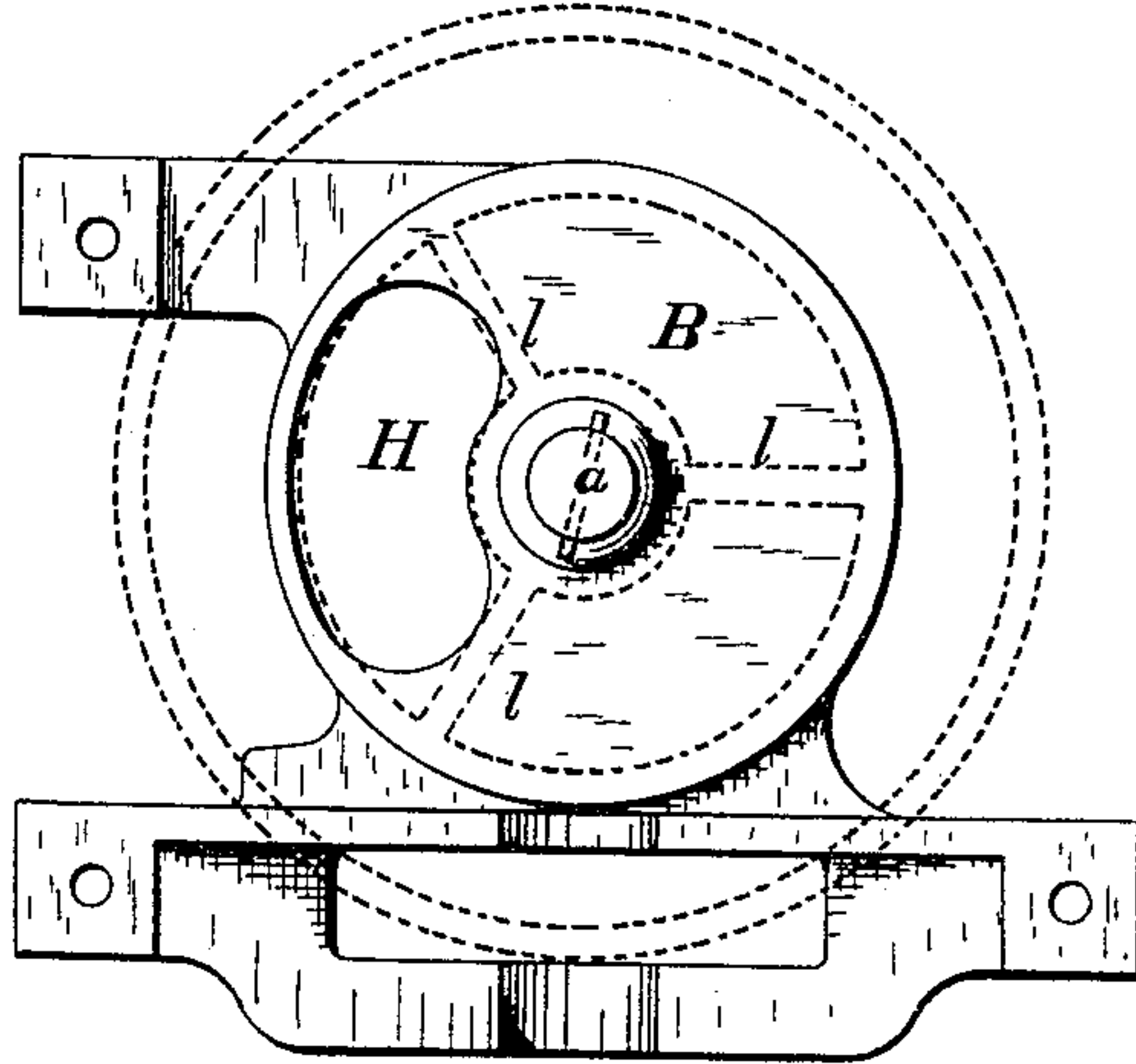


Fig. 4.

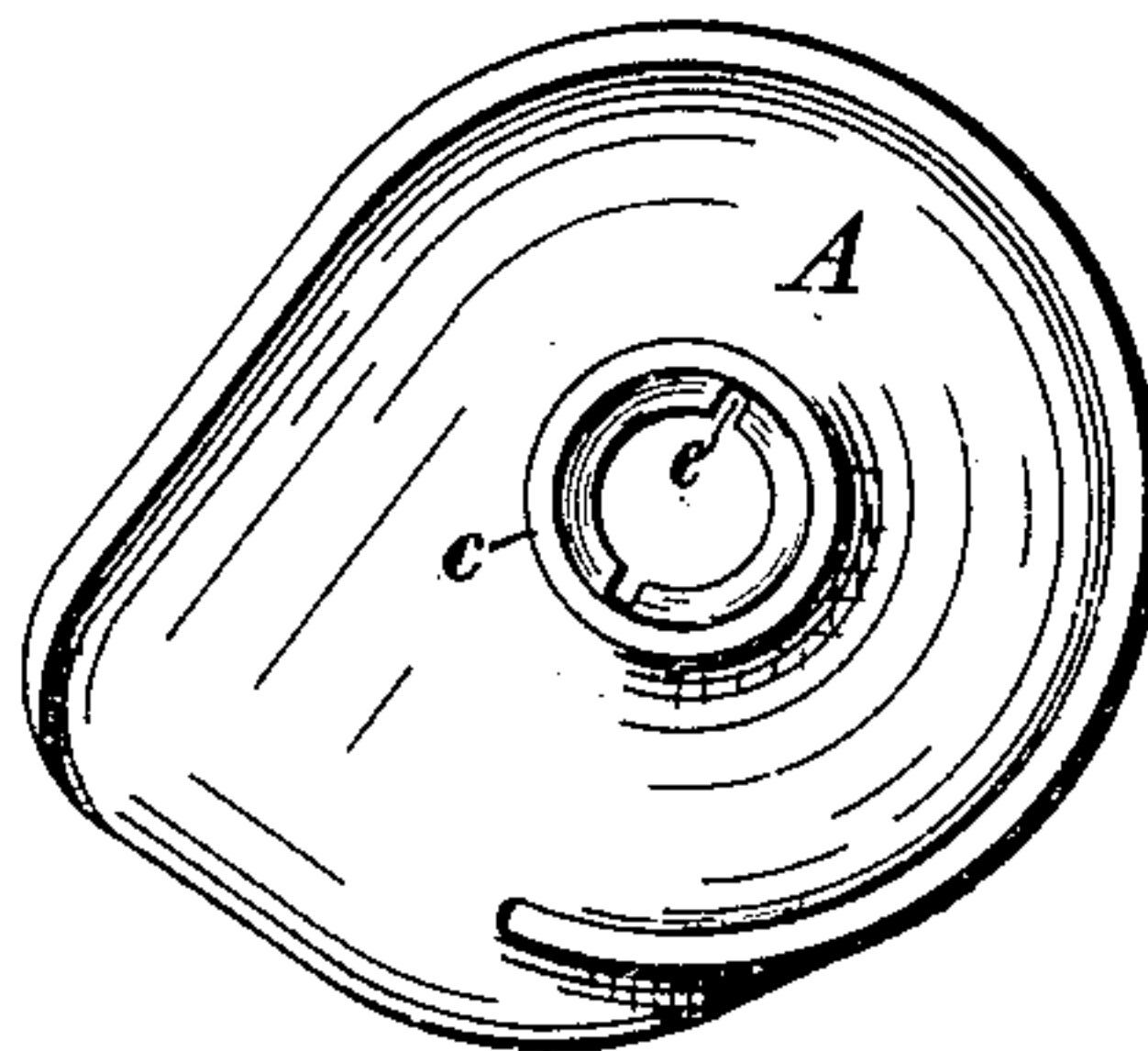
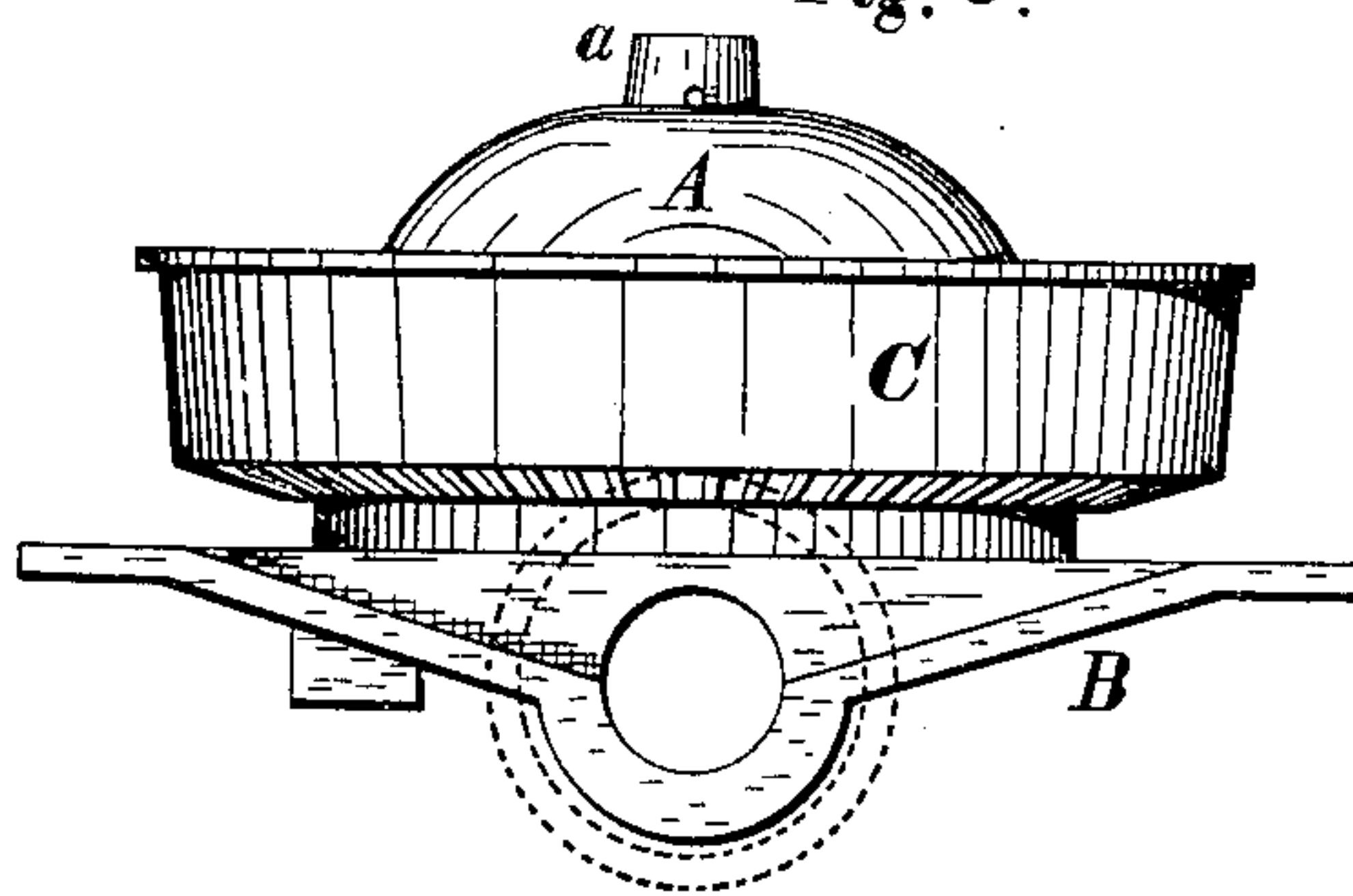


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

WALTER MARKS, OF CHAPINVILLE, NEW YORK.

FEED-CUP FOR FERTILIZER-DISTRIBUTERS.

SPECIFICATION forming part of Letters Patent No. 353,570, dated November 30, 1886.

Application filed April 8, 1886. Serial No. 198,180. (No model.)

To all whom it may concern:

Be it known that I, WALTER MARKS, of Chapinville, county of Ontario, and State of New York, have invented certain Improvements in Feed-Cups for Fertilizer-Distributers, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to certain improvements on my Patents No. 236,900, dated January 25, 1881, and No. 243,716, dated July 5, 1881, which improvements are fully described and illustrated in the following specification and accompanying drawings, the novel features thereof being specified in the claims annexed to the said specification.

In the accompanying drawings, representing my improved feed-cup for fertilizer-distributers, Figure 1 is a plan view. Fig. 2 is a plan view of the supporting-frame. Fig. 3 is a section on the line *x x*, Fig. 1. Fig. 4 is an inverted view of the feeding-shell. Fig. 5 is a side elevation.

In the accompanying drawings, A is the feeding-shell. B is the supporting-frame, and C the revolving feed-cup, which is driven in the direction of the arrow in Fig. 1 by means of a pinion meshing with the bevel-gear D on the bottom of the cup. The feed cup is extended upward by means of the sheet-metal cylinder indicated by the dotted lines L in Fig. 3, the feed-cups being connected with the hopper of a grain-drill in numbers corresponding with the number of drill-holes used in any particular case. Each feed-cup supplies fertilizing material to its corresponding drill-hole.

From the supporting-frame B there rises a tapering spindle, preferably cast hollow or recessed for lightness, as shown in the sectional views, to which the feeding-shell A is detachably secured by means of the pin *b*. The feed-shell A is provided on the under side with a hollow hub, *c*, the opening through which is made tapering, so as to fit the spindle *a*, and give a bearing for the whole length of the hub, thus making the shell perfectly rigid when locked in place in the cup. The lower end of the hub *c* bears upon the upper surface of the feed-cup immediately outside of the spindle, as shown in Fig. 3, when the shell is secured in place.

Suitable slots, *e e*, are formed lengthwise on the inner surface of the opening through the hub of the feeding-shell, allowing the ends of

the cross-pin *b* to pass through them as the shell is placed on the spindle *a*, after which the shell is given a partial rotation in the direction of the arrow, Fig. 1, until the pin *b* bears against the stop or stops *d d*, cast on the upper surface of the shell, thus locking it firmly in place. The surface of the feed-shell between the slot *e* and the lug or stop *d* is preferably inclined slightly upward from the slot toward the stop, so that when the shell is turned the pins will force the shell downward, so that it is firmly secured on the spindle. This method of construction enables me to attach the shell securely to the supporting-frame with the least amount of labor and expense, as the spindle and hollow hub can be formed by casting, while I secure a large bearing between the two.

The frame is provided with an orifice or perforation, H, through which the fertilizer is delivered to the spout or drill-hole, the feeding-shell being provided with an opening in a projecting lip, through which the fertilizer passes, as shown and described in my former patents.

The feed cup is provided with the radial arms *l l*, through the openings between which the fertilizer is delivered to the discharge-orifice H.

The improvements herein described enable me to cheapen the cost of the manufacture of my fertilizer-distributers, and at the same time serve to hold the feed cup and frame firmly together, and to prevent any vibration or jar of the feed-shell, while the feed-cup is permitted to revolve freely between the frame and the cup.

I claim—

1. The combination, with the perforated supporting frame B, provided with the tapering spindle *a* and pin *b*, of the feed-shell A, having hollow tapering hub *c* and slot *e*, and the rotating feed-cup D, substantially as described.

2. The combination, with the perforated supporting-frame B, provided with the recessed tapering spindle *a* and pin *b*, of the feed-shell A, having hollow tapering hub *c*, and slot *e*, substantially as described.

WALTER MARKS.

Witnesses:

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