

(No Model.)

2 Sheets—Sheet 1.

E. D. MEAD.
FERTILIZER DISTRIBUTER.

No. 570,490.

Patented Nov. 3, 1896.

Fig. 1.

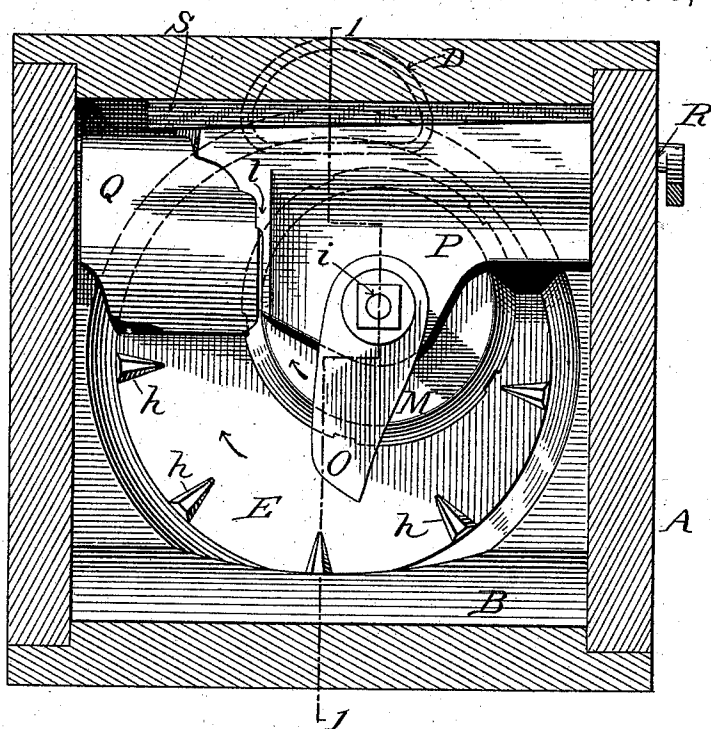
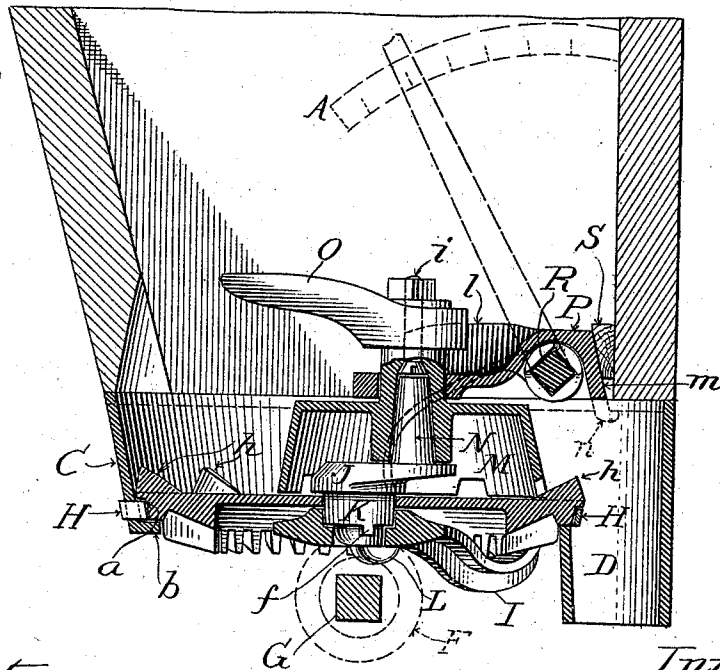
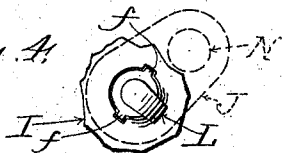


Fig. 2.



Attest
W. C. Burdine
D. E. Burdine

Fig. 4.



Inventor,
Edwin D. Mead,
by Dodge & Sons,
Attys.

(No Model.)

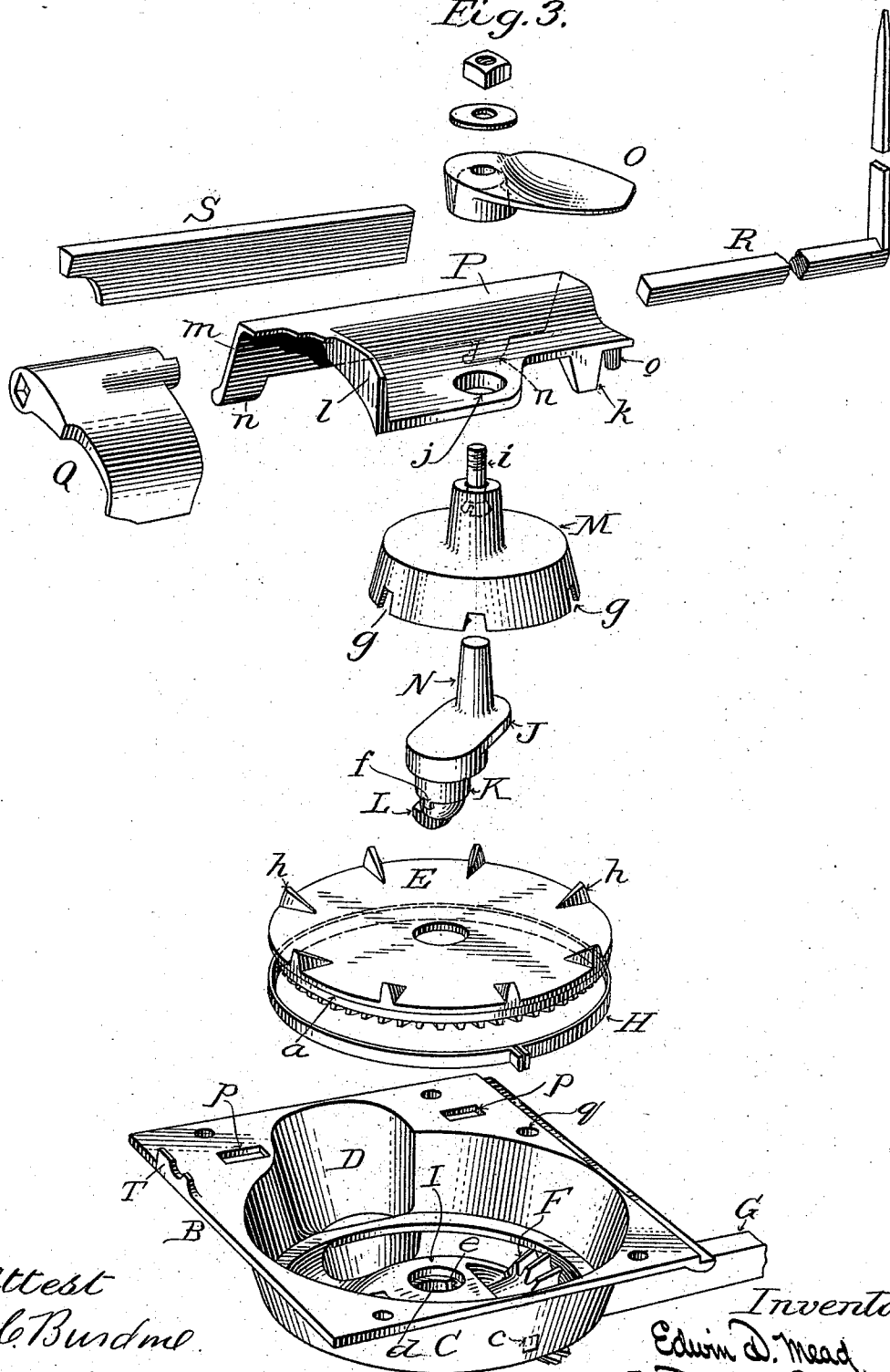
2 Sheets—Sheet 2.

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Fig. 3.



Attest
C. E. Burdine
P. E. Burdine

Inventor
Edwin D. Mead,
by Dodge & Sons,
Attys.

UNITED STATES PATENT OFFICE.

EDWIN D. MEAD, OF PHELPS, NEW YORK.

FERTILIZER-DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 570,490, dated November 3, 1896.

Application filed June 20, 1896. Serial No. 596,335. (No model.)

To all whom it may concern:

Be it known that I, EDWIN D. MEAD, a citizen of the United States, residing at Phelps, in the county of Ontario and State of New York, have invented certain new and useful Improvements in Fertilizer-Distributers, of which the following is a specification.

My invention relates to fertilizer-distributers, the present construction being designed primarily as an improvement upon the construction set forth in Letters Patent No. 265,529, which were granted to me on the 3d day of October, 1882.

One object of the present invention is to so construct the device as to simplify the assembling of the parts and consequently to render more easy the operation of taking the sower apart.

A further object of the invention is to provide means whereby leakage and consequent waste of material is prevented.

Other novel features are embodied in the present structure and will be fully set forth in the following specification, reference being had to the annexed drawings, in which—

Figure 1 is a top plan view of the distributor; Fig. 2, a vertical sectional view on the line 1 1, Fig. 1; Fig. 3, a perspective of the various parts shown in a separated relation, and Fig. 4 is a bottom plan view of so much of the structure as is necessary to show certain details of construction.

Referring to said drawings, A indicates the hopper, and B a plate or casting secured to the lower part thereof, and from which extends the feed-cup C, said cup being provided with a discharge-outlet D.

E indicates the rotating disk or feed-wheel seated in a specific manner within the lower part of the cup C, as will be hereinafter set forth. It is provided on its lower face with a series of gear-teeth adapted to mesh with a pinion F, said pinion receiving its motion from a shaft G, connected with the driving-wheel of the machine.

The feed-wheel E is formed on its periphery with an undercut recess or seat *a*. Fitting around this seat, and between it and the side face and projecting ledge *b* of the cup C, is a packing ring or band H. This band will be preferably formed of brass and as shown in the drawings; that is, it will occupy the space

formed between the feed-wheel and the cup, its ends projecting through an opening *c* in the side of the cup, firmly holding it in place and in its proper relation to the other parts. Instead of employing brass as the material of which to form the packing other substances may be employed, for instance, any other metal, leather, rubber, or any textile substance. The principal object is to employ some material which will prevent leakage of the fertilizer from between the parts. The feed-wheel is provided with a central opening which registers with an opening *d*, formed in a spider-arm I, which extends across the bottom of cup C and beneath the feed-wheel. The recess *d* is of two diameters, the lower reduced portion being formed with two sockets or seats *e e*, while the under face of the spider at one side of said recess is slightly cut away or rounded, as shown in Fig. 2.

J indicates the cranked axle, its lower arm K being formed to fit within the opening *d*, and having studs or lugs *f f*, adapted to be seated in the sockets *e e* when the parts are assembled. Extending from the lower end of the arm is a hook or finger L. That portion of the arm K opposite the hook is slightly rounded, which permits of the arm being worked down into the recess *d*, and allows the hook or finger to engage the under face of the spider. No direct pull will separate the parts, but they may be readily dismantled when it becomes necessary so to do. It will be noted that this construction does away with all bolts or loose parts which would be liable to come loose by the continued vibration of the machine.

M indicates the clearer or scraper wheel, mounted upon the upright stud N of the crank K. It is formed with a series of openings or slots *g* in its lower edge, which engage with teeth *h*, formed upon the upper face of the feed-wheel C at or near its periphery. The central portion of the scraper-wheel, which receives the stud N, is continued above said stud, and within its upper end is seated a bolt *i*, to which is secured the stirrer O.

A shield or guard P is secured over the scraper or clearer wheel and is of such form as to effectually prevent the escape of the material around the wheel. It also permits of a better or more advantageous location of

the gate Q with relation to the discharge-spout in that the gate may be placed at a greater distance from the spout and the spout made larger and left free from all obstruction. The shield or guard is formed with an opening *j*, designed to embrace the upright projection of the scraper-wheel before the stirrer O is secured in place. It is also provided with a downwardly-projecting portion *k*, designed to close the space between the feed-cup and the scraper-wheel on the side opposite the gate. An upturned lip *l* is provided, against which the gate Q bears. It is of such height that no matter what may be the adjustment of the gate the lip will prevent the material from finding its way around the gate at this point. To properly hold the guard in place, it is formed with a downwardly-projecting flange *m*, which in turn is provided with two lugs or toes *n*. A downwardly-projecting stud *o* is formed at the forward right-hand side of the guard. The toes take in recesses or openings *p p*, formed in the plate B, and the stud *o* in an opening *q*. It will be seen upon reference to Figs. 2 and 3 that the guard is curved slightly upward along its upper face near the rear, and this is to provide for the shaft R, upon which the gate Q is mounted. This curved portion tends to hold the shaft in its proper position. The outer end of the shaft is provided with the usual index finger or arm and is journaled in one side of the frame or hopper to which the index-plate is attached, its inner end resting upon a seat T, formed upon the plate B. The shaft being square and the opening in the gate through which it passes being of like form the gate must of necessity turn with said shaft.

The lower end of the gate is of such form as to fit down over the feed-wheel and between the cup and clearer or scraper wheel, while the upper portion of the gate closes the space between the side wall of the hopper and the lip *l* of shield or guard P.

The gate is shown closed in dotted lines in Fig. 2, and when in such position approximately all exit from the hopper is cut off. By raising the gate more or less the desired quantity of material may be fed out, but there is no leakage between any of the parts.

Under some conditions it may be found desirable to interpose a wedge, as S, between the flange *m* of guard P and the wall of the hopper. This wedge securely holds and prevents the parts from displacement while in use, but may be easily and readily withdrawn when it is desired to take the machine apart.

In assembling the device the upright projection of wheel M is passed through the opening *j* and the stirrer secured in place. When once this is done, it need not be removed except for replacement of broken or worn parts. The shaft and pinion being in place, the bushing or packing H is secured within the cup, after which the feed-wheel is put in place. The arm K of the crank J is

then passed through the opening in the feed-wheel, the studs or lugs *f* entering the recess *e e* and the finger L taking under the spider-frame. This prevents the crank from turning and secures the parts in their proper position. Next the scraper-wheel and guard P are put in place, the lugs *n* entering the openings *p* and the stud *o* the opening *q*, the scraper-wheel in the meantime fitting down over the axle N. Finally the wedge S is put in place.

In the operation of the device the gate is adjusted to the proper point and motion is imparted to the shaft G. Thence it is transmitted to the feed-wheel through the pinion and from the feed-wheel to the scraper-wheel and the stirrer, the direction of rotation being indicated in Fig. 1 by arrows.

Having thus described my invention, what I claim is—

1. In a fertilizer-distributor, the combination of the feed-cup, a feed-wheel seated within said cup, and a packing interposed between said parts.

2. In a fertilizer-distributor, the combination of the feed-cup, a feed-wheel seated within the cup and provided with a recess formed on its periphery; and a packing-ring seated within said recess.

3. In a fertilizer-distributor, the combination of the feed-cup provided with an inwardly-projecting flange; a feed-wheel seated within said cup and provided with a recess on its periphery; and a packing-ring fitting within said recess and bearing against the cup.

4. In a fertilizer-distributor, the combination of the feed-cup provided with a discharge-opening; a feed-wheel mounted within the cup; a scraper-wheel secured above the feed-wheel; a gate; a guard-plate above the discharge-opening; and a wedge fitting between said plate and the hopper.

5. In a fertilizer-distributor, the combination of the feed-cup provided with a discharge-opening; a feed-wheel mounted within said cup; a scraper-wheel mounted above said feed-wheel; a gate; and a guard-plate secured above the feed-opening, and provided with a projection *k* to fit between the scraper-wheel and the periphery of the cup, substantially as and for the purpose set forth.

6. In a fertilizer-distributor, the combination of the feed-cup provided with a discharge-opening; a feed-wheel mounted within said cup; a scraper-wheel mounted above said feed-wheel; a gate; and a guard-plate secured above the feed-opening, and having toes *n* adapted to fit into openings in the bottom of the hopper or plate B, and a lug *o* also adapted to fit within the base of the hopper or plate B.

7. In a fertilizer-distributor, the combination of the feed-cup provided with a discharge-opening; mechanism for causing the material to travel toward said opening; a gate; and a guard-plate provided with a lip *l* designed to fit against the side of the gate, substantially as described.

8. In a fertilizer-distributor, the combination of the feed-cup; a spider-frame extending across the lower end of said cup, provided with an opening having seats or sockets
5 formed in the side thereof; a feed-wheel seated within the cup, and also provided with a central opening; and a crank-axle provided with a downwardly-projecting arm, a curved finger L secured to the lower end thereof, and
10 lugs or ears *ff*, the parts being designed to

fit together substantially as described when the arm is passed through the openings aforesaid, and brought into a vertical position.

In witness whereof I hereunto set my hand in the presence of two witnesses.

EDWIN D. MEAD.

Witnesses:

JAMES BARBER,
W. H. COMFORD.