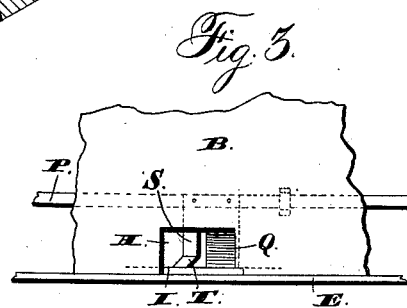
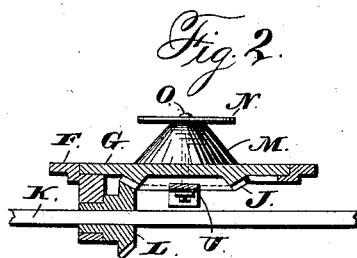
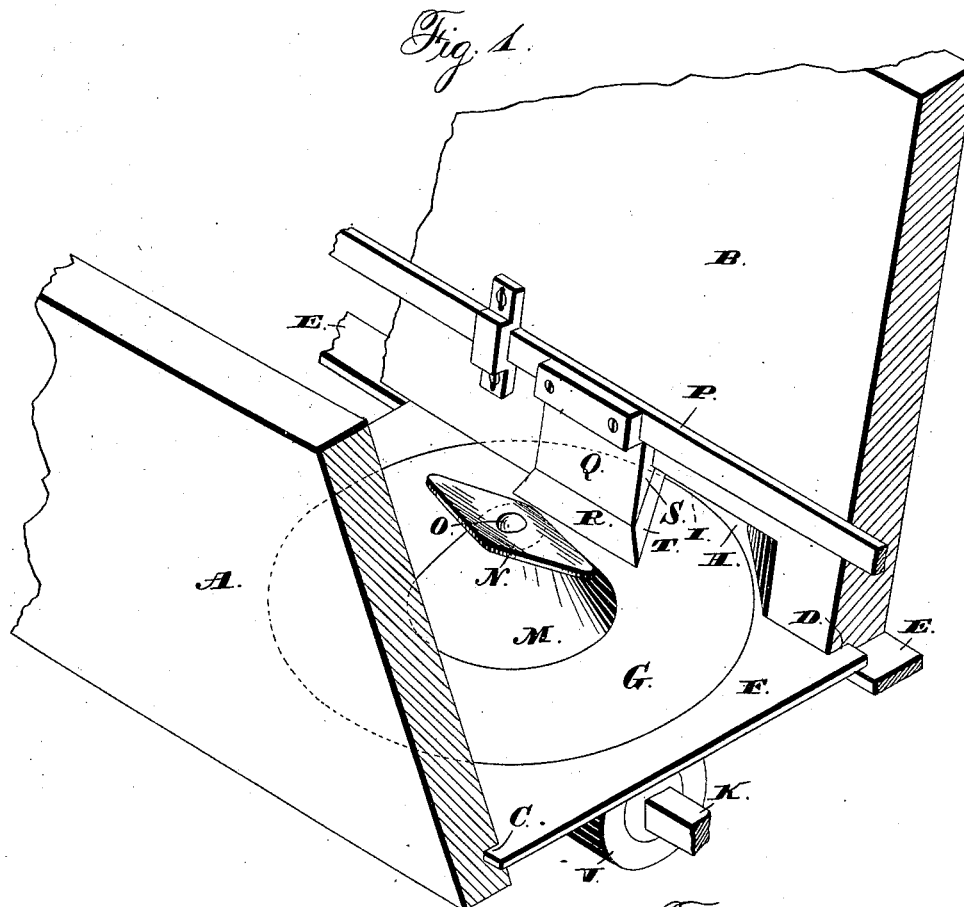


(No Model.)

J. L. RITER.  
FERTILIZER DISTRIBUTER.

No. 304,754.

Patented Sept. 9, 1884.



Witnesses:  
Jas. E. Hutchinson  
Geo. P. Downing.

Inventor:  
J. L. Riter.  
R. H. Sumner.

# UNITED STATES PATENT OFFICE.

JOHN L. RITER, OF BROWNSVILLE, INDIANA.

## FERTILIZER-DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 304,754, dated September 9, 1884.

Application filed April 10, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN L. RITER, of Brownsville, in the county of Union and State of Indiana, have invented certain new and useful Improvements in Fertilizer-Distributers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to details of construction involved in that class of fertilizer-distributers in which a box or trough for holding the fertilizing material is provided with a flat bottom having a longitudinal series of revolving disks whose upper surfaces form portion of the floor of the box and whose peripheries project outside of the box through a discharge-opening.

The improvements will be understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a perspective view of a section of a fertilizer-box, exhibiting one of the distributing devices embodying my improvements; Fig. 2, a vertical longitudinal section of the distributing-disk and its immediate accessories, and Fig. 3 a side view of the fertilizer-box at one of the discharge-openings.

In the drawings, A represents one of the side pieces of the fertilizer-box of an ordinary distributor; B, the opposite side piece of the box; C, a groove in the inner side of the side piece A at the bottom of the box; D, a rabbet at the inner lower corner of the side piece B; E, a strip of wood or metal secured to the lower edge of the side piece and projecting inward from the shoulder of the rabbet D, so as to form, in connection with the rabbet, a groove similar to the groove C; F, a cast-iron plate fitted with its side edges in the groove of the side piece, and having a length representing one division of the fertilizer-box—that is, there are to be as many of the plates F as there are to be distributors arranged in the machine. The usual rotatory distributing-disk, G, is seated in a circular rabbet in the plate F, with its upper surface flush with the upper surface of that plate.

H is the discharge-notch through the side piece B, through which the fertilizer is to be

carried by the disk, I, that portion of the periphery of the disk which projects outward through the notch H, as usual; J, the usual bevel-gear formed upon the under surface of the disk; K, the usual motion-shaft which serves to revolve the entire series of distributing-disks; L, a bevel-pinion for transmitting motion from the shaft K to the gear of the disk; M, a cone concentrically mounted upon the upper surface of the disk; N, a double-ended stirring-arm secured at the top of the cone; O, a bolt serving to bind the stirrer, the cone, and the disk firmly together, and serving also to prevent the disk from rising out of its seat in the plate; P, a rod secured in guides to the side piece B, and fitted to partake of a longitudinally-adjusting motion; Q, a cut-off projecting from the rod P downward to the surface of the disks, set against the inner surface of the side pieces of the box, and serving to cover more or less of the discharge-notch, according as the bar P is adjusted endwise.

R is a scraper at the foot of the cut-off Q; S, an outward projection from the cut-off Q, through the notch. T is a scraper at the foot of the projection S, similar to the one at the foot of the cut-off Q; U, a bridge-piece across the plate F, below the disk, serving to receive the bolt O, and V a lug hanging from the under side of the plate F, and serving, as usual, to support the pinion L.

The fertilizer-box is floored by the plates F, of which there are, as usual, a series. The plates of the series abut endwise and complete the floor. The plates are secured in place by engagement with the groove in one of the side pieces of the box, one of the grooves being formed partly by the strap E, which shoes the bottom of the side piece B, and serves as a bottom margin for the discharge-notches cut into the lower edge of the side piece. The disk in its rotation serves, in the usual manner, to carry the fertilizing material out through the discharge-notch, the material carried outward into the notch being scraped off of the plate by that end wall of the notch against which the material is carried by the rotation of the plate. In my construction this scraping end wall of the notch is formed by the projection S. The longitudinal adjustment of the bar P serves to bring this projection closer to

or farther from the opposite end wall of the notch, and thereby adjust the discharge-area of the notch. The flaring scrapers R and T serve to present keen self-sharpening cleaning-edges to the surface of the disk, whereby fertilizing material is prevented from working outward, except through the prescribed area of discharge-notch. The cut-off Q is really what adjusts the area of the discharge-notch by covering up more or less of its inner face; but at the same time the projection S also acts in conjunction with the regulating-edge of the cut-off. It is not essential that the projection S, with its scraper T, should be secured to the cut-off, though that construction is preferable. The two elements S and T may of course be secured directly to the end wall of the notch and have no adjustment, the cut-off Q serving this function alone. In other words, the purpose of the elements S and T is to properly guard the end wall of the notch against the undercreeping of fertilizing material, and it is immaterial whether these elements be fixed to the end wall proper of the notch or whether they be attached to the cut-off Q, and thus serve to act as the wall as well as the projection.

The rod P, instead of being placed above the notches H and provided with dampers attached to it, may be a flat bar resting with its lower edge upon the floor of the box, and provided with notches corresponding to the notches H. In such construction the bar P would still be the adjusting element, and would present in its own substance the cut-off Q, which is to be provided with an inwardly-flaring scraper, R, to prevent the outward creeping of fertilizing material. The cone M serves to throw the fertilizing material toward the periphery of the disk and to prevent the backflow of material. The stirrer N serves to agitate the fertilizing material, and it may have its end formed into any shape found desirable.

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

1. The combination, in a fertilizer-distributor, of the bottom plates and a side piece of the fertilizer-box having a groove to receive one edge of the plate, and a side piece of the fertilizer-box provided with discharge-notches and with a notch for holding the opposite edge of the plate, substantially as set forth.

2. In a fertilizer-distributor, the combina-

tion of a side piece of the fertilizer-box having a discharge-opening therein, of a rotary distributing-plate, one portion of which moves within said opening, a cone rigidly secured to said plate, and a horizontally-sliding cut-off gate, substantially as set forth.

3. The combination, in a fertilizer-distributor of the class specified, of a rotary distributing-plate, a cone rigidly secured to said plate, and a stirring-lever rigidly secured on the apex of the cone.

4. The combination, in a fertilizer-distributor of the class specified, of a side piece having a discharge-notch, a rotary distributing-plate projecting into and forming the floor of such notch, and an adjustable cut-off fitted to alter the area of such notch, and provided at its foot with an inwardly-flaring scraper to form the edge in contact with the upper surface of the distributing-plate.

5. In a fertilizer-distributor of the class specified, the adjustable cut-off Q, with its flaring scraper R, and provided with the projection S, having the flaring scraper T, substantially as and for the purpose set forth.

6. In a fertilizer-distributor, the combination, with a hopper and the distributing-plate, of a self-sharpening scraper, the lower edge of which bears against the flat upper surface of the distributing-plate.

7. In a fertilizer distributor, the combination, with a hopper and a distributing-plate, of a self-sharpening cut-off gate and scraper, the lower edges of which bear against the flat upper surface of the distributing-plate, substantially as set forth.

8. In a fertilizer-distributor, the combination, with a hopper and the rotary distributing-plate, of a vertically-adjustable self-sharpening cut-off gate, and a rod for moving the gate horizontally.

9. In a fertilizer-distributor, the combination, with a rotary distributing-plate, of a vertically-adjustable self-sharpening gate and scraper, and a rod or bar for moving the gate and scraper horizontally.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOHN L. RITER.

Witnesses:

GEO. F. DOWNING,  
GEORGE COOK.