

(No Model.)

R. B. THOMAS.
FERTILIZER DISTRIBUTER.

No. 481,315.

Patented Aug. 23, 1892.

Fig. 1.

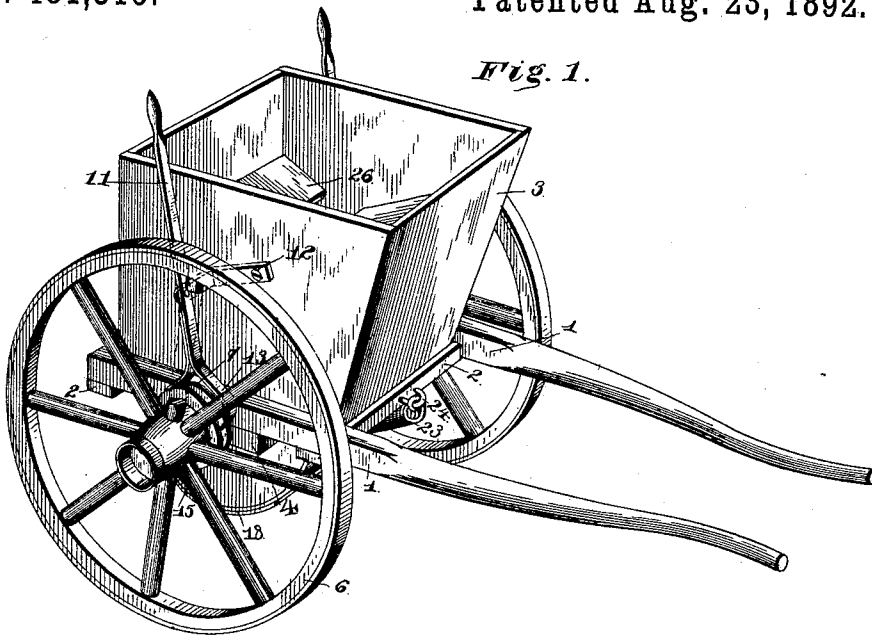


Fig. 3.

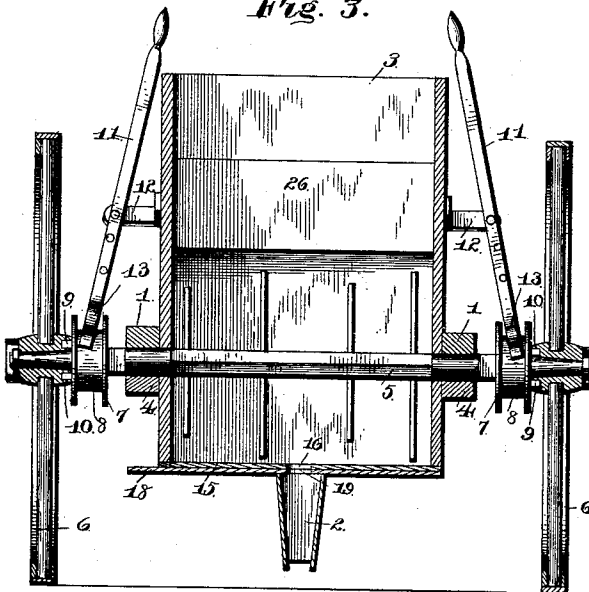


Fig. 2.

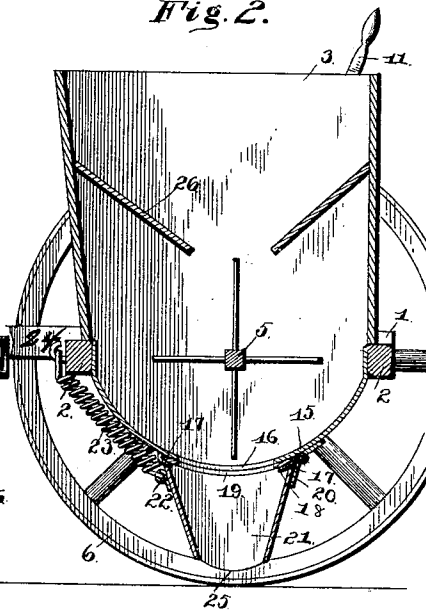
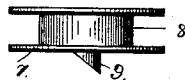


Fig. 4.



Witnesses

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John H. Giggers.

R. B. Thomas. Inventor

By his Attorneys,

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UNITED STATES PATENT OFFICE.

ROBERT BONY THOMAS, OF BLACKBURN, LOUISIANA.

FERTILIZER-DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 481,315, dated August 23, 1892.

Application filed March 16, 1892. Serial No. 425,206. (No model.)

To all whom it may concern:

Be it known that I, ROBERT BONY THOMAS, a citizen of the United States, residing at Blackburn, in the parish of Claiborne and State of Louisiana, have invented a new and useful Fertilizer-Distributor, of which the following is a specification.

This invention relates to improvements in fertilizer-distributers; and the objects in view are to provide a cheap and simple distributor adapted to drill the fertilizer into the ground and to so construct the drill or spout as to obviate impairing the same by contacting with objects lying in its path.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claim.

Referring to the drawings, Figure 1 is a perspective view of a fertilizer-distributor constructed in accordance with my invention. Fig. 2 is a longitudinal section of the same. Fig. 3 is a transverse section. Fig. 4 is a detail.

Like numerals of reference indicate like parts in all the figures of the drawings.

The side bars 1 merge into shafts or thills and at and near their rear ends are connected by a pair of cross-bars 2, upon which is supported the hopper 3. Bearing-boxes 4 are located upon the under sides of the side bars 1, and an axle 5 is journaled in the boxes for loose rotation. The axle between the boxes is squared, and likewise beyond the same, with the exception of its extremities, which are reduced to form spindles and have mounted thereon ground-wheels 6.

Between each wheel and adjacent side bar 1 a sliding clutch 7 is mounted, the same being provided with external annular grooves 8 and at their outer faces with diametrically-opposite beveled teeth 9, adapted to be thrown into engagement by movements of the clutches into the recesses 10, formed in the inner faces of the hubs of the ground-wheels 6. Such shifting of the clutches is secured by a manipulation of the levers 11, which are fulcrumed on brackets 12 at opposite sides of the hopper and have their lower ends forked, as at 13, and their upper ends reduced to form handles. When the levers are drawn inwardly, the ground-wheels and axle become locked and move together, and when thrown outwardly

the clutches disconnect from the wheels, thus permitting the latter to revolve upon the spindles of the axle. The side walls of the hopper extend below the frame of the machine and are semicircular below such point and are connected by a curved or semicircular sheet-metal bottom 15. The bottom 15 is provided at front and rear sides of its discharge-opening 16 with flanges 17, and in these flanges there is mounted for sliding a cut-off 18, having a slot 19. By moving the cut-off to one side its slot is thrown out of alignment with that of the bottom, and hence escape of the fertilizer is prevented, and, on the other hand, by moving the cut-off so that the two openings align the discharge of the fertilizer will be permitted.

Hinged to the bottom in rear of the discharge-opening, as indicated at 20, is a tapered discharge-spout or drill 21, the lower end of which is adapted to take into the furrow or directly over the same and deposit the fertilizer in such manner as to prevent the waste of the same by the blowing of it away. The front upper end of the spout or drill is provided with a hook 22, and a coiled spring 23 is connected at its lower end to the hook and at its upper end to a hook 24, located upon the front cross-bar 2. The lower end of the discharge spout or drill is rounded, as shown at 25, to facilitate its riding over the earth; but should the spout meet with such an obstruction as would be calculated to injure the same, if forced by it, the spring will yield, permitting the spout to swing to the rear, and thus the obstruction may be safely passed, after which the spout or drill will be automatically returned by the retracting-spring, as mentioned.

At intervals there project from the shaft or axle within the hopper a series of long and short blades or agitator-arms, the same being deflected or set at an angle to the angle of the shaft or axle, so as to constitute a means for agitating or loosening the fertilizer and preventing the same from becoming packed and also for feeding fertilizer to the discharge-opening in the hopper. Every other arm is shorter than the adjacent or intermediate arm, and I find that this arrangement serves more efficiently to agitate the fertilizer than where all of the arms are of the same length.

From the front and rear walls of the hopper inwardly extend inclined shelves 26, the same terminating short of each other and serving to support the fertilizer and prevent the entire weight of the contents of the hopper from resting upon the axle and agitating-arms.

As before mentioned, the discharge or drill is tapered and the lower end of the same is rounded. The object and advantage of these features are that in case the drill should strike an object sufficient to overcome the tensile strength the said discharge or drill would swing to the rear and by reason of its lower end being rounded would not offer such great impediment to the movement or travel of the machine. Furthermore, by the rounding of the lower end the front wall terminates above the lower end of the discharge, and hence would drop the fertilizer in a line substantially vertical below the opening in the hopper-bottom. By slanting or tapering the drill the front wall is inclined or flared, so that it will catch the fertilizer dropping from the hopper and conduct the same properly, which would not be the case if the front wall were straight, for the reason that its upper edge would when the drill was swung to the rear be in rear of the front edge of the opening in the hopper, and hence the fertilizer would drop from said opening and but a portion of it pass through the drill.

Having described my invention, what I claim is—

In a fertilizer-distributor, the combination, with the framework, the hopper having the curved bottom provided with a discharge-opening, a downwardly-tapered drill hinged at its rear edge to the hopper-bottom in rear of the opening, having a lower rounded end, and a spring connecting the front end of the drill with the fixed part of the frame, of an axle having rounded bearing portions located in openings formed in the opposite sides of the hopper and at its opposite ends provided with reduced bearings and between the reduced bearings and rounded portions squared, the ground-wheels mounted on the reduced bearings and having their hubs notched or toothed at their inner sides, the toothed clutch-sleeves adapted to engage therewith and mounted on the squared portions of the axle, brackets extending from the opposite walls of the hopper, and hand-levers fulcrumed on the bracket, which at their lower ends terminate in lugs loosely embracing the sleeves.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ROBERT BONY THOMAS.

Witnesses:

JAMES S. RICHARDSON,
W. C. PRICE.