(No Model.) 2 Sheets—Sheet 1.

C. SCHMALZRID.

FERTILIZER DISTRIBUTER.

No. 459,240. Patented Sept. 8, 1891.

Fig. 1.

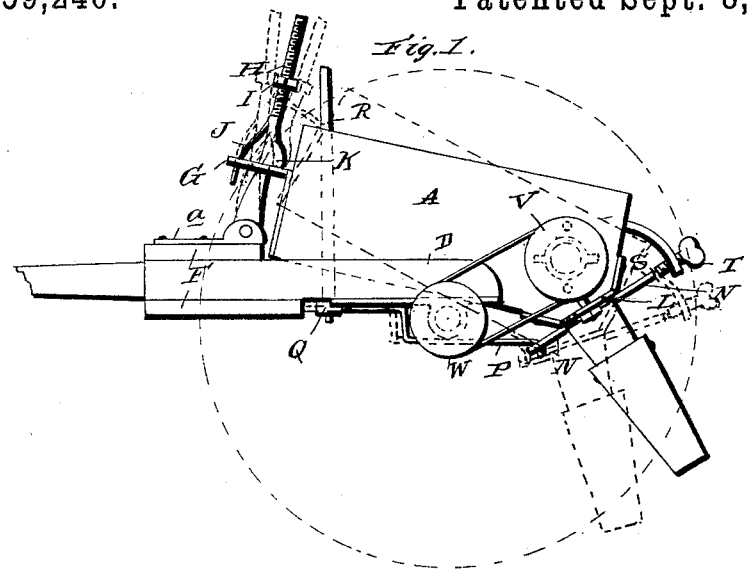
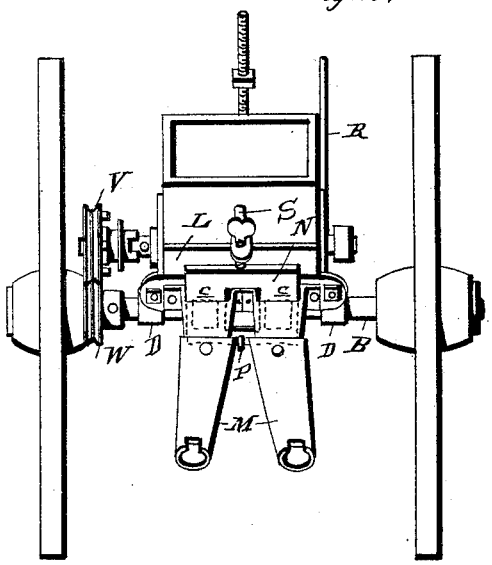


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

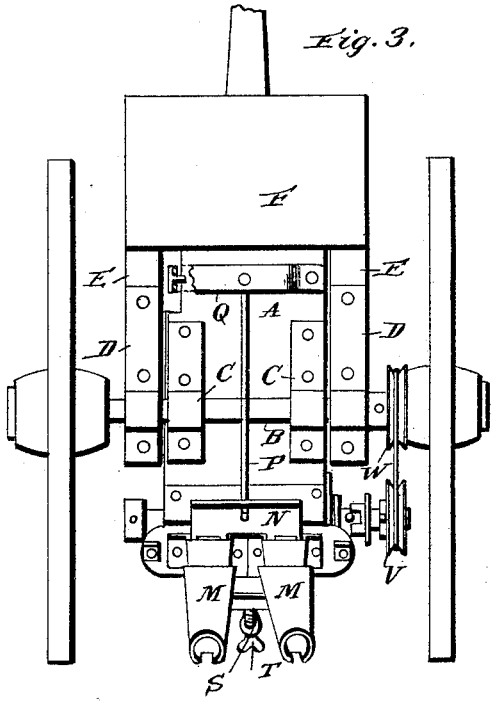


Fig. 4.

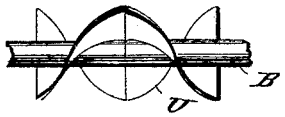
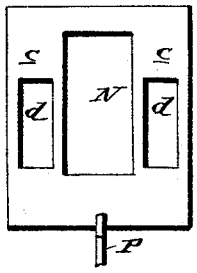


Fig. 5.



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UNITED STATES PATENT OFFICE.

CHRISTIAN SCHMALZRID, OF NEAR DONALDSONVILLE, LOUISIANA.

FERTILIZER-DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 459,240, dated September 8, 1891.

Application filed September 25, 1890. Serial No. 366,177. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN SCHMALZRID, a citizen of the United States, residing near Donaldsonville, in the parish of Assumption and State of Louisiana, have invented certain new and useful Improvements in a Fertilizer-Distributer; and I do 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.

My invention has relation to improvements in fertilizer-distributers, and it has for its objects, among other things, first, to provide a fertilizer-distributer embodying a carrying body or hopper capable of being adjustably fixed with respect to the ground, so as to enable the discharge-tubes to be carried adjacent thereto, as is highly desirable in windy weather, and, secondly, to provide a lever, under the immediate control of the driver, whereby the amount of fertilizer to be discharged may be regulated and the body may be raised from its lowered position into an elevated position; and to the accomplishment of these and other ends the invention consists in the construction, novel combination, and adaptation of parts hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of my improved machine, the body or hopper being illustrated as elevated out of an operative position. Fig. 2 is a rear elevation of the same. Fig. 3 is an inverted plan view of the body or hopper illustrating to a better advantage the seed-discharge. Fig. 4 is a front elevation of the spiral agitator removed from the body or hopper. Fig. 5 is a plan view of the discharge-regulating plate.

Referring by letter of designation to the said drawings, A indicates the body of my improved fertilizer-distributer, which is preferably of a rectangular form and of a depth suitable to the purpose required. This body A is pivotally mounted upon an ordinary axle B, and is secured thereto by journal-straps C, as better shown in Fig. 3 of the drawings. Pivotally mounted by means of straps D upon the axle B, at either side of the body A, are two beams E, which extend forwardly from the axle to a point in front of the body, where they are connected by a transverse strip or strips F, to which strips the pole or tongue is attached in any suitable manner. Fastened to the front wall of the body A at a suitable point is an angular strap G, the forwardly-extending branch of which is slotted to receive the body-adjusting lever H, which takes up through the same. The body-adjusting lever H is pivoted in vertical ears rising from a plate *a*, fastened to the transverse strip F′, and it is provided for a sufficient distance of its length with a screw-thread, as shown, to receive a nut I, which regulates and limits the adjustable throw of the body when the strap G is released from a beveled catch K, arranged at a suitable point on the lever H, and when this catch is in engagement with the strap G it will be seen that the body or hopper will be held up in about the position illustrated in Fig. 1. At an opposite point on the lever to the catch K, I place a flat spring J, whereby the engagement of the catch and strap is insured and a casual slipping or separation is prevented.

The rear lower edge of the body or hopper is cut away, as better shown in Fig. 1, and a plate L, having discharge-openings therein, is fastened to the body so as to close the opening formed therein. Attached in a suitable manner to this plate L, and in alignment with the discharge-openings therein, are the discharge-tubes M, which are preferably formed in two telescoping sections, but may be of any other approved construction, if desired.

N indicates the discharge-regulating plate, which is provided with a central opening, as shown, to enable it to slide freely in the guides formed in the two discharge-tubes M, and two of the parallel strips *c* of this plate N are provided with aligned discharge-openings *d*, which, when adjusted in alignment with the discharge-openings in the plate L, will allow a discharge of fertilizer. The strips or branches *c* of the plate N take through the guide-slots formed in the discharge-tubes adjacent to the plate L, and it will be readily seen that by adjusting said plate the fertilizer-discharging openings may be opened or closed.

Suitably attached to and extending forwardly from the plate N through suitable

guides is an adjusting-bar P, which has its forward end pivotally connected to a lever-arm Q, which has one end pivoted to the bottom of the hopper and the other end connected to or formed integral with an upright lever R, which is designed and adapted to open and close the discharge-openings leading from the hopper through the medium of the devices just described; and it will further be seen that when the body is down and it is desired to stop operation the operator pulls the lever R forward and closes the discharge-openings, and by continuing the forward movement of said lever the body will be pulled down so that the plate G will engage the catch K on the lever H and be held thereby.

Suitably attached to the rear wall of the body A, and extending rearwardly from the same, is a preferably downwardly-curved bar S, adjacent to the end of which is formed a screw-threaded aperture adapted to receive a screw T, which bears against the rear edge of the plate N, and by the employment of this turn-screw it will be seen that the adjustment of the said regulating-plate may be limited as desired.

U indicates a spiral agitator or feed-screw, which is fixed on a shaft journaled in the side walls of the body above the discharge-opening therein, and loosely mounted on one end of the shaft of the agitator-screw is a band-pulley V, which is connected by a band, as illustrated, with a band-pulley W fixed on the axle B, whereby the said agitating-screw is rotated.

In the practice of my invention I design fixing a clutch device to the pulley V, whereby it may be shifted to engage a clutch fixed on the shaft of the agitator-screw, and I have illustrated such a construction; but, as I do not desire to limit myself to any construction in this particular, a further description of the clutch devices is believed to be unnecessary.

Having described my invention, what I claim is—

1. In a fertilizer-distributer, the combination, with a body or hopper journaled on an axle and a forwardly-extending slotted plate attached to the front wall of said body, of a frame also journaled on the axle independent of the body and adapted for the attachment of the draft-pole, the vertically-disposed screw-threaded lever pivotally connected to said frame and adapted to take up through the slotted plate carried by the body, said lever being provided with a flat spring adapted to bear against the slotted plate and a beveled catch adapted to engage the edge of the slotted plate, and a threaded nut adapted to turn on the lever and limit the throw of the body, substantially as specified.

2. In a fertilizer-distributer, substantially as described, the combination, with a body or hopper provided at a suitable point with a discharge-opening, of a plate adapted to be attached to said body so as to cover the opening therein and provided with a discharge-aperture, a depending discharge-tube attached to said plate in alignment with the aperture therein and having a guide-slot adapted to receive a discharge-regulating plate, the said discharge-regulating plate adapted to slide in the slot of the tube so as to open and close the discharge-opening, a lever connected with said discharge-regulating plate and adapted to operate the same, and a screw supported in a rigid bearing and adapted to bear against one edge of the discharge-regulating plate and limit the adjustment thereof, substantially as specified.

3. In a fertilizer-distributer, the combination, with a body or hopper journaled on an axle and having a forwardly-extending slotted plate attached to the front wall thereof, a discharge-opening formed at a suitable point in said body, a plate attached to the body so as to cover the opening therein and provided with a discharge-aperture, a depending discharge-tube attached to said plate in alignment with the aperture therein and having a guide-slot adapted to receive a discharge-regulating plate, the said discharge-regulating plate adapted to slide in the slot of the tube, so as to open and close the discharge-opening, and a lever connected with said discharge-regulating plate and adapted to operate the same and also adapted to raise the body out of an operative position, of a frame journaled on the axle independent of the body and adapted for the attachment of the draft-pole, the vertically-disposed screw-threaded lever pivotally connected to said frame and adapted to take up through the slotted plate carried by the body, said lever being provided with a flat spring adapted to bear against the slotted plate and a beveled catch adapted to engage said plate, and a nut adapted to turn on the lever to limit the throw of the body, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

CHRISTIAN SCHMALZRID.

Witnesses:
PERCY D. PARKS,
WILLIAM GÖETTZ.