(No Model.)

S. J. HARRELL.

MANURE DISTRIBUTER.

No. 360,877. Patented Apr. 12, 1887.

Fig. 1.

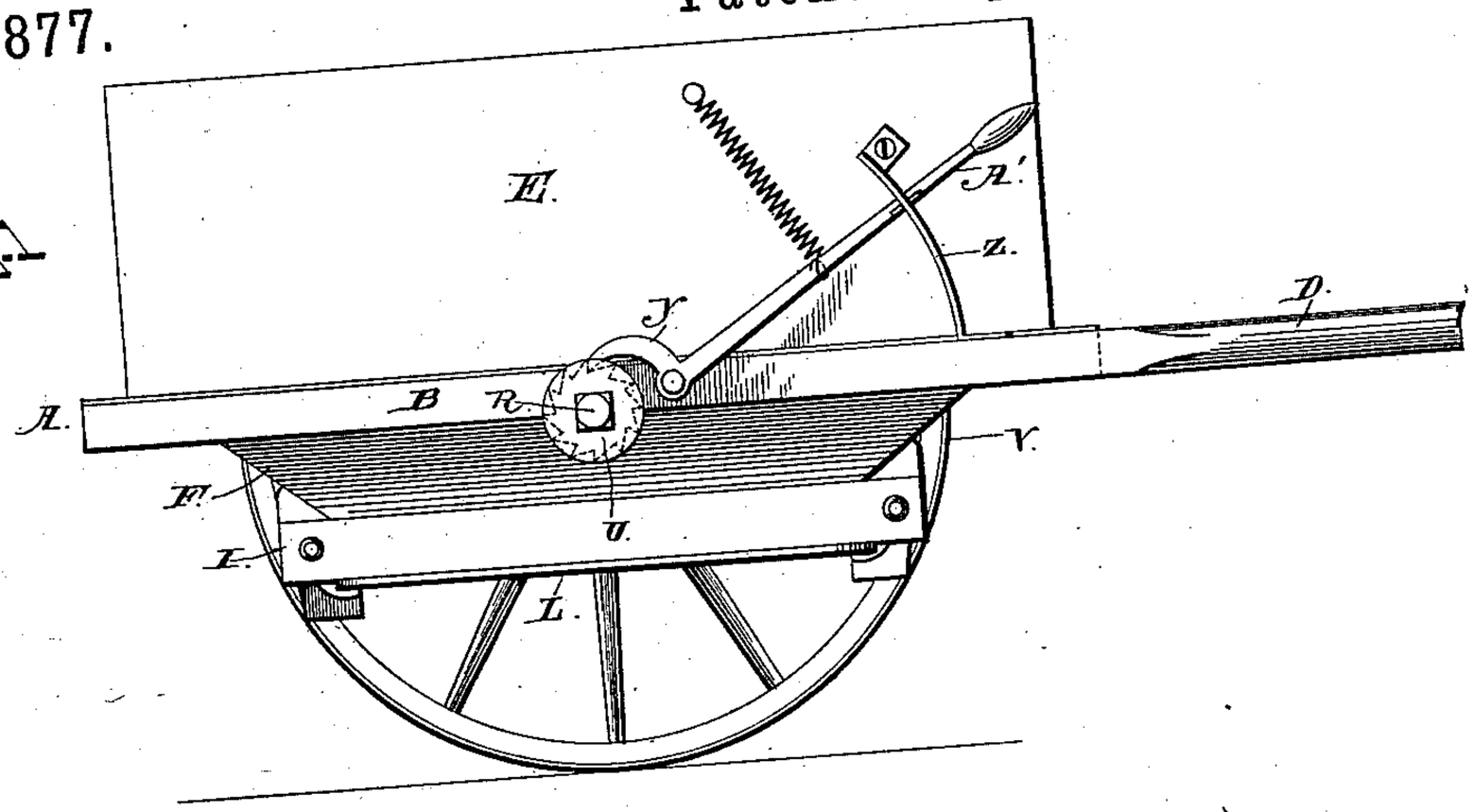


Fig. 2.

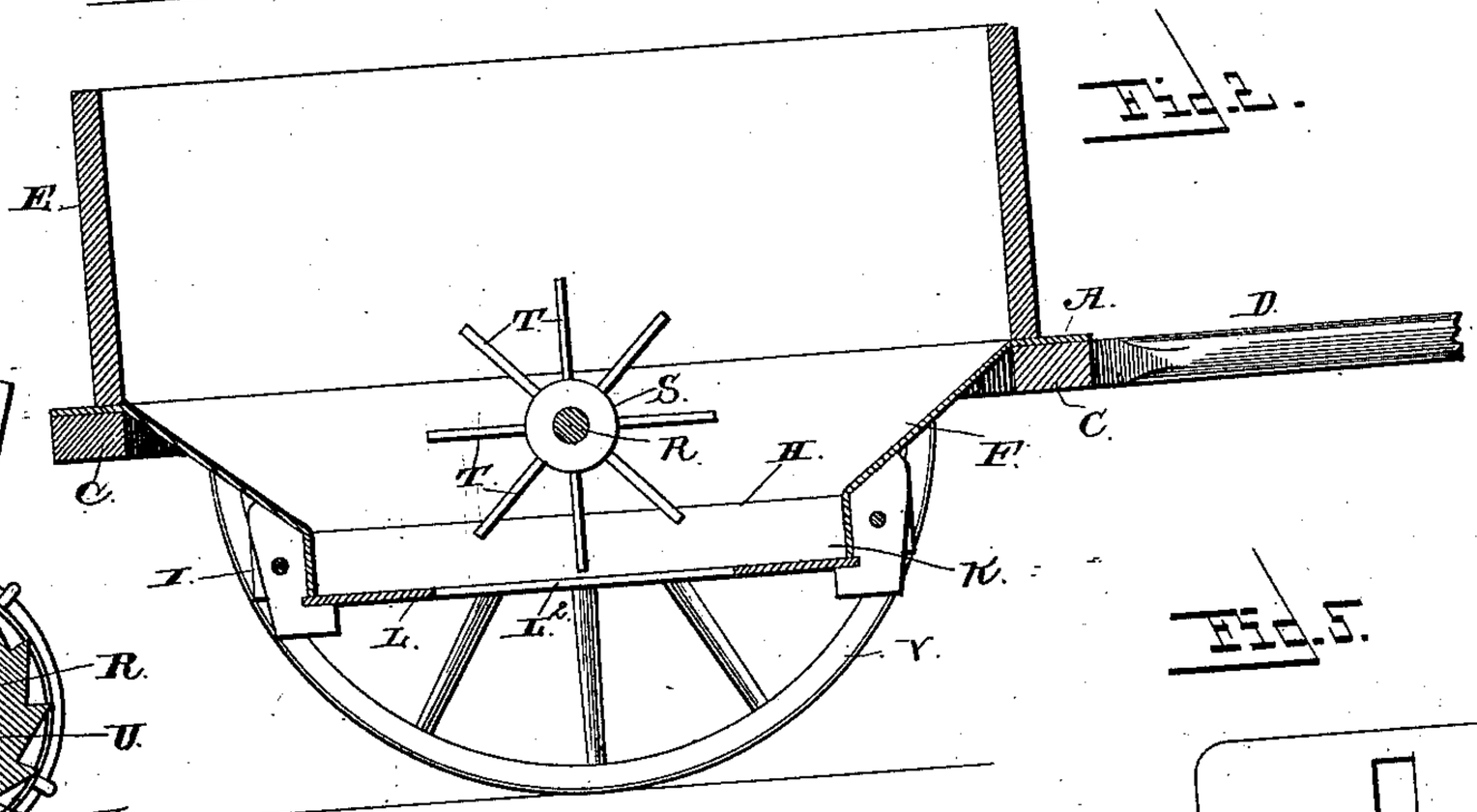


Fig. 4.

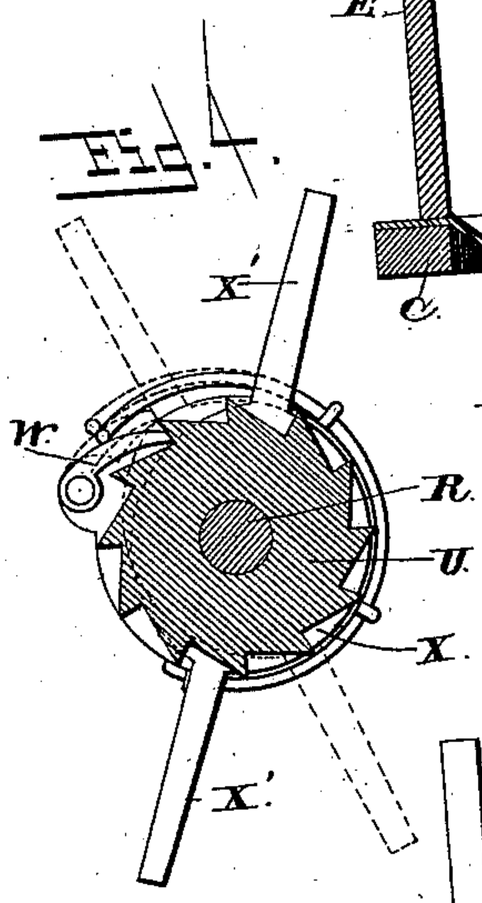


Fig. 5.

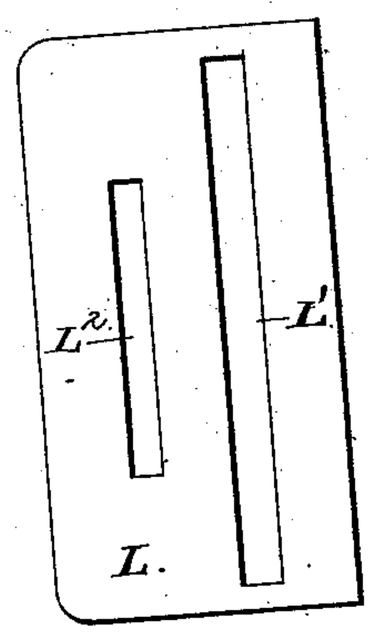
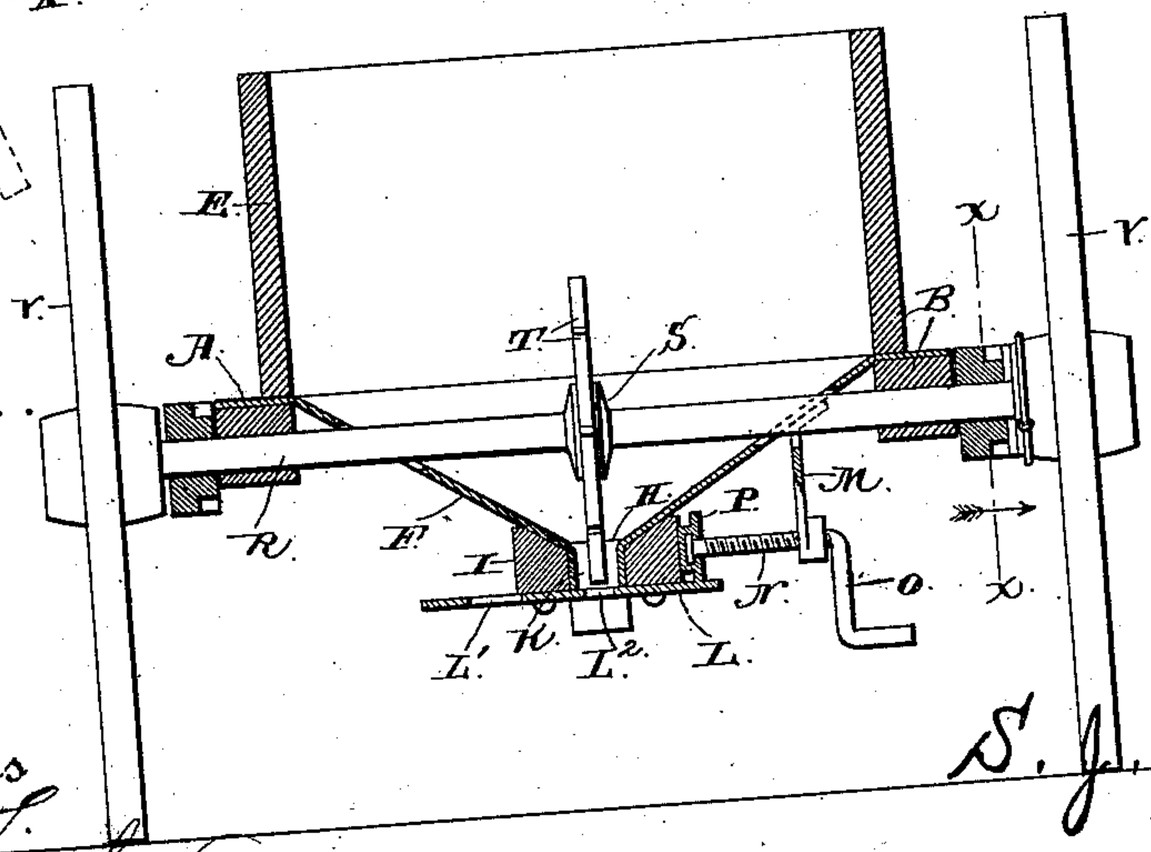


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

SOLOMON JAMES HARRELL, OF LAMPASAS, TEXAS.

MANURE-DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 360,877, dated April 12, 1887.

Application filed December 4, 1886. Serial No. 220,730. (No model.)

To all whom it may concern:

Be it known that I, SOLOMON JAMES HARRELL, a citizen of the United States, residing at Lampasas, in the county of Lampasas and State of Texas, have invented a new and useful Improvement in Manure-Distributers, of which the following is a specification.

My invention relates to an improvement in manure-distributers; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a manure-distributer embodying my improvements. Fig. 2 is a vertical longitudinal sectional view of the same. Fig. 3 is a vertical transverse sectional view of the same. Fig. 4 is a detailed sectional view on the line *x x* of Fig. 3. Fig. 5 is a detail view of the plate L.

A represents a rectangular frame comprising the side bars, B, and the cross-bars C, connecting the same. The front ends of the bars B are extended to form the shafts or thills D, to which the horse is attached.

Secured to the rectangular frame is a hopper, E, which is of suitable dimensions to hold the desired quantity of manure. The lower side of the hopper is formed by the inclined converging sides F, between the lower edges of which is formed a longitudinal discharge-opening, H. The inclined sides F are made of sheet metal, and to the lower sides of the same, and depending therefrom, is a rectangular frame, I, having the longitudinal slotted opening, K, that registers with the opening H.

On the lower side of the frame I is secured a laterally-movable plate, L, which is provided with a pair of longitudinal slots, L′ and L², the latter being shorter and narrower than the former. From the under side of the hopper depends the bracket M, having at its lower end the transverse threaded opening, through which extends a transverse screw, N, the outer end of which has a crank-handle, O. The inner end of the screw N is swiveled to a lug, P, which projects from the upper side of the plate L at one side thereof.

R represents a transverse shaft, which is journaled in suitable bearings on the under side of the bars B, at the center of the frame, and the said shaft extends through openings which are made in the sides of the hopper. To the center of the said shaft is attached a hub, S, which is provided with a series of radial arms, T.

Near the ends of the shaft are rigidly secured disks U, which are provided with peripheral ratchet-teeth, and on the ends of the shaft are loosely mounted supporting-wheels V. One of the said wheels is provided on the inner side of its hub with a spring-actuated pawl, W, which engages one of the toothed disks U. An eccentric cam-disk, X, is journaled on the spindle of the shaft between the said wheel and disk, and is provided with radial lever-arms X′. By turning the said disk in one direction its cam is caused to engage the point of the pawl, so as to raise the latter out of engagement with the toothed disk. When the said pawl is in engagement with the said toothed disk, the wheel is fast to the shaft, as will be readily understood.

Y represents a spring-actuated pawl, which is pivoted to the opposite side of the frame A, and is adapted to engage the remaining disk U, in order to prevent the shaft from rotating. A rack-bar, Z, is provided for the lever A′ of the pawl Y, so that the latter may be secured out of engagement with its toothed disk.

The operation of my invention is as follows: The manure is placed in the hopper or body of the machine, and before the field is reached on which the manure is to be distributed the pawl Y is caused to engage the shaft, so as to prevent the latter from rotating, and the pawl W is disengaged from the other end of the shaft, and thereby both wheels are free to turn loosely thereon. When the field is reached, the horse is directed in an open furrow which has previously been made, and the plate L is moved laterally, so as to cause one of its slots to register with the discharge-opening of the hopper, according to the quantity of manure which it is desired to distribute to a given area. The pawl Y is then tripped from the disk at one end of the shaft, and the pawl W is caused to engage the disk at the opposite end thereof, thereby locking one of the wheels to the shaft, so that when the horse advances the rotation of the wheel is communicated to the shaft, thereby causing the radial stirring-arms to

force the manure through the discharge-opening of the hopper into the furrow.

Having thus described my invention, I claim—

1. In a manure-distributer, the rotating shaft having the stirring apparatus, the wheels loosely mounted on the said shaft, the detent Y, to engage the shaft and prevent it from rotating, and the clutch mechanism to secure one of the wheels to the shaft, for the purpose set forth, substantially as described.

2. In a manure-distributer, the combination of the hopper E, the transverse shaft R, extending through the same and having the radial stirring-fingers to work in the discharge-opening of the hopper, the toothed disks U, rigidly attached to the shaft, the wheels V, loose on the shaft, one of the said wheels having the spring-actuated pawl W to engage one of the toothed disks U, the eccentric cam X, journaled on the shaft to disengage the pawl from the toothed disk, and the lever A′, having the pawl or detent Y, to engage the remaining toothed disk U, and thereby prevent the shaft from rotating, substantially as described.

3. In a manure-distributer, the combination of the hopper having the discharge-opening, and the frame I, surrounding the said opening on the lower side of the hopper, the slide L, movable on the lower side of the frame I, and having the openings L′ and L², of different sizes, adapted to register with the discharge-opening of the hopper successively when the slide is moved, and the screw N, working through a bracket, M, depending from the hopper and having its inner end swiveled to the slide, and provided with the crank O at its outer end, whereby the screw may be turned to move the slide, substantially as described.

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

SOLOMON JAMES HARRELL.

Witnesses:
H. L. HIGDON,
D. J. MORRIS.