(No Model.)

J. J. BALLARD.

COTTON SEED DROPPER.

No. 372,009. Patented Oct. 25, 1887.

Fig. 1.

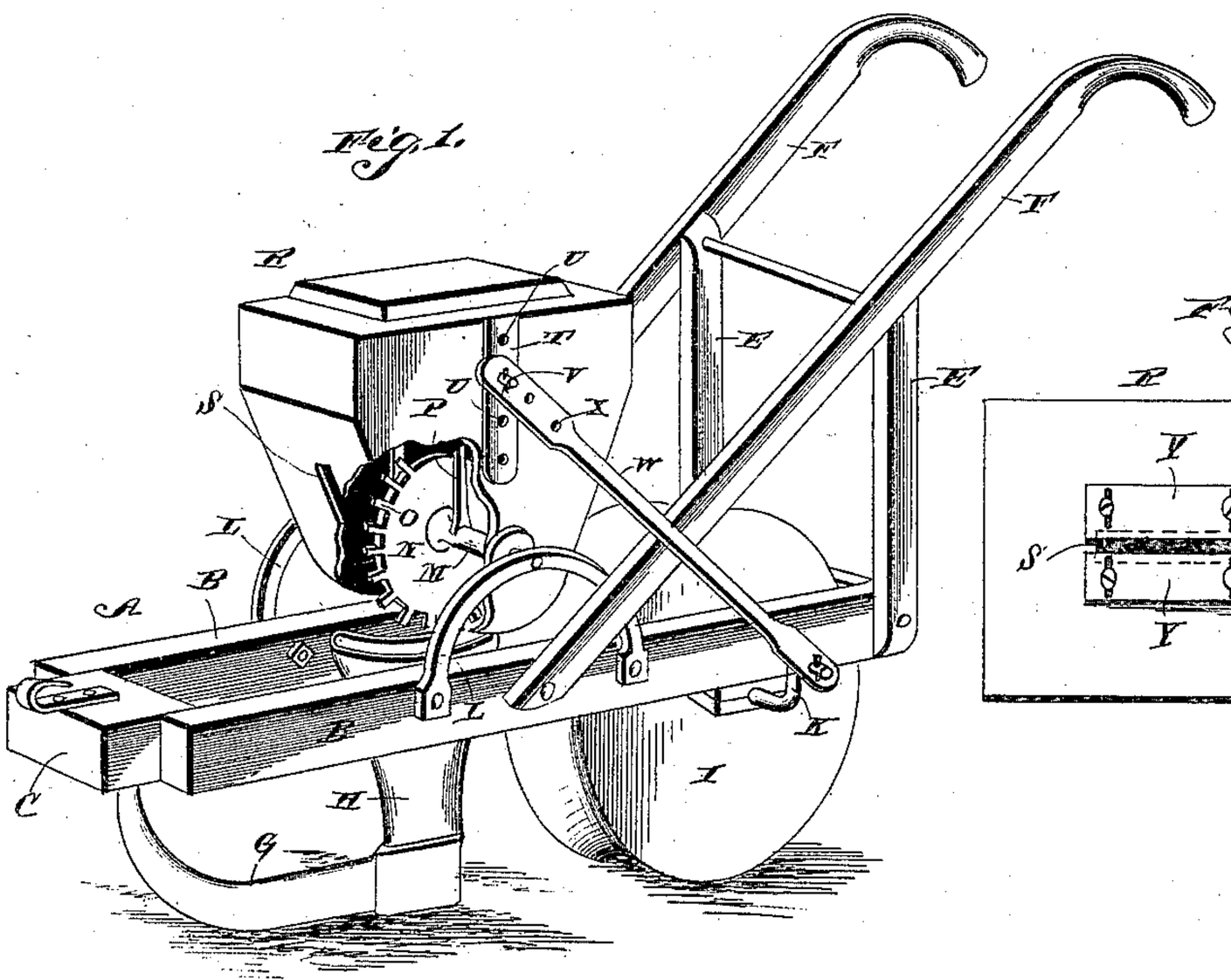


Fig. 3.

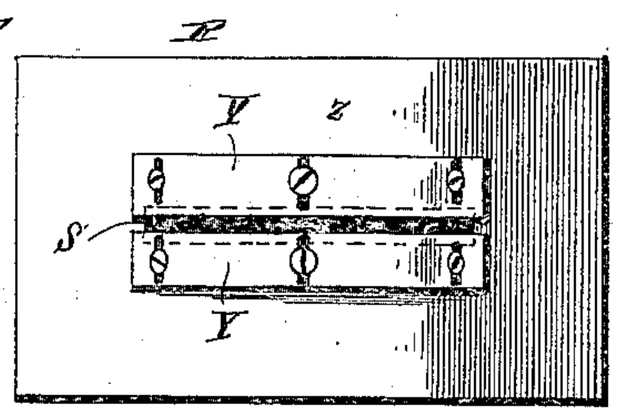
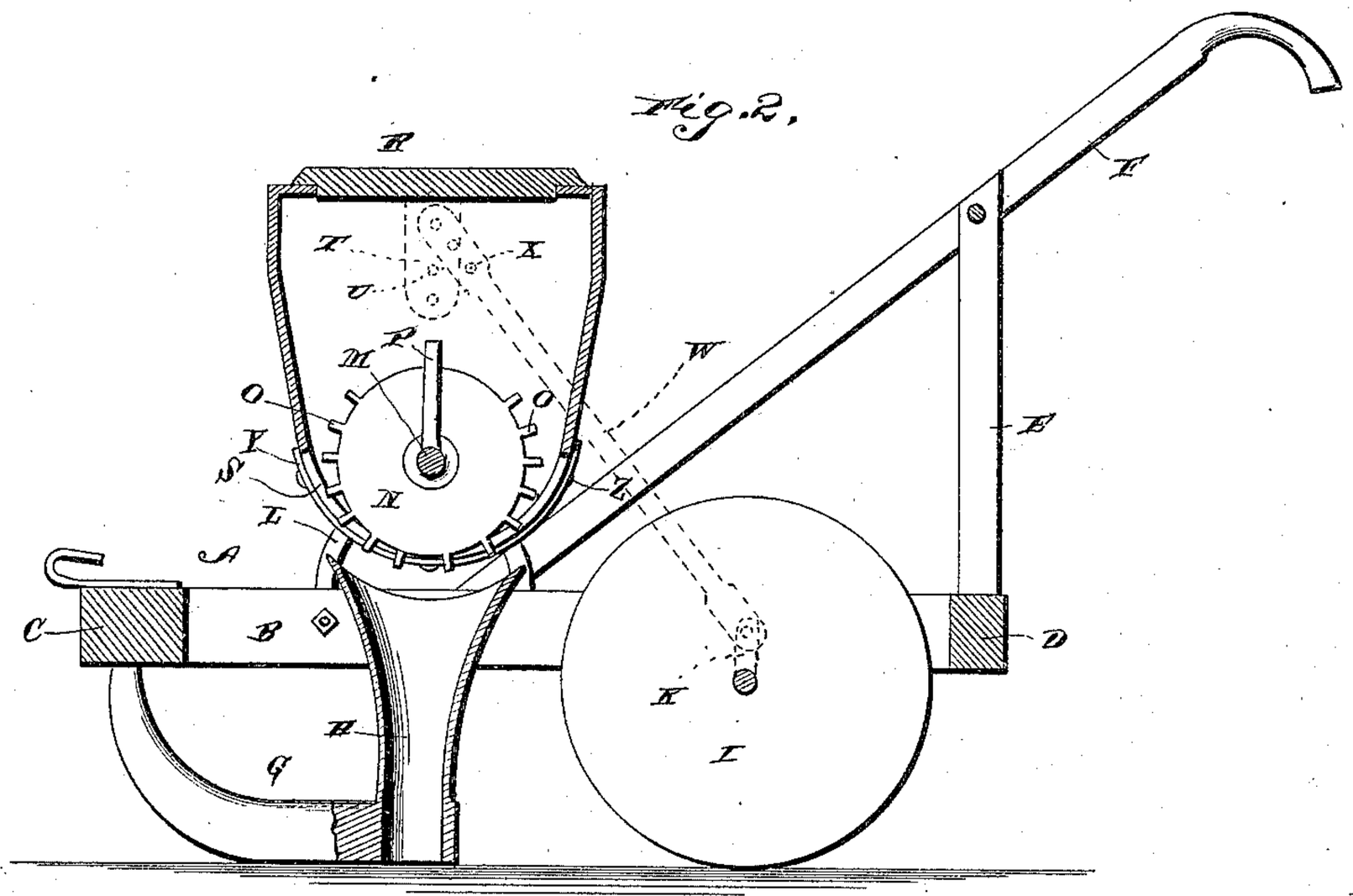


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN J. BALLARD, OF TERRELL, TEXAS.

COTTON-SEED DROPPER.

SPECIFICATION forming part of Letters Patent No. 372,009, dated October 25, 1887.

Application filed April 22, 1887. Serial No. 235,799. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. BALLARD, a citizen of the United States, residing at Terrell, in the county of Kaufman and State of Texas, have invented new and useful Improvements in Cotton-Seed Droppers, of which the following is a specification.

My invention relates to an improvement in cotton-planters; 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 perspective view of a cotton-planter embodying my improvements, a portion of the hopper being broken away to disclose the interior mechanism. Fig. 2 is a vertical longitudinal sectional view of parts of the mechanism of my cotton-planter. Fig. 3 is an inverted plan view of the hopper.

A represents the frame, which comprises the parallel side beams, B, the block C, connecting the front ends of the said beams, and the cross-bar D, connecting the rear ends thereof. From the rear ends of the frame rises a pair of standards, E.

F represents a pair of handles, which are similar to plow-handles, and have their front ends bolted to the beams B, and are connected near their rear ends to the upper ends of the standards E.

G represents a curved runner or furrow-opener, which is secured under the front end of the frame at the center thereof, and H represents the seed-spout, the lower end of which is connected to the rear end of the furrow-opener.

I represents a supporting-roller, which is journaled between the beams B at the rear end of the frame, and the shaft of the said roller is provided at one end with a crank, K. The periphery of the roller is concave, as shown in Fig. 1, for the purpose to be hereinafter described. On the outer side of the beams B, at a suitable distance from the front end of the frame, are bolted semicircular supporting-bars L.

M represents a rigid shaft, which connects the upper sides of the said supporting-bars, and to the center of the said shaft is rigidly attached a circular disk, N, which is provided with peripheral teeth or fingers O.

P represents a pair of vertical stirrers or arms, which project from the upper side of the shaft M at a slight distance from opposite sides of the disk N.

R represents a hopper, which is journaled on and is adapted to oscillate longitudinally on the shaft M. This hopper is provided on its lower side with a longitudinal opening, S, through which the lower end of the toothed disk extends, and the said hopper is arranged directly over the upper end of the seed-spout. On one side of the hopper is a vertical plate, T, which is provided with a vertical series of openings, U.

V represents a bolt, which is adapted to be secured to either of the openings U, and projects outwardly from the hopper.

W represents a pitman, which has its rear end pivoted to the crank K, and is provided at its front end with a series of openings, X, adapted to receive the projecting bolt V, and thereby connect the front end of the pitman to the hopper and adjust the same with relation thereto.

On the bottom of the hopper, on opposite sides of the opening S therein, are secured slide-plates Y, by means of set-screws Z, that pass through the transverse slots made in the said plates and enter the bottom of the hopper. By this means the slides are adapted to be moved toward or from opposite sides of the lower projecting edge of the seed-disk, and thereby regulate the size of the opening in the bottom of the hopper, and consequently control the number of seeds projected from the hopper.

The operation of my invention is as follows: The cotton-seeds to be planted are placed in the hopper and the machine is drawn across the field, and is guided by the operator, who has hold of the handles F. The runner G opens the furrow, and the rotation of the roller I causes the pitman to reciprocate, and thereby oscillate the hopper forward and back on the shaft M. This causes the arms P to stir the cotton-seeds in the lower sides of the hopper and prevent them from clogging, and the teeth O of the disk catch some of the seeds and force them through the opening in the bottom of the hopper into the seed-spout, which directs them to the furrow. The concave periphery of the roller which follows the furrow-opener covers

the seeds in the furrow and forms a ridge over the same, as will be very readily understood. By reason of the series of openings U, the front end of the pitman may be attached to the hopper at different distances from the shaft on which the hopper oscillates, and thereby the movement of the hopper can be regulated.

Having thus described my invention, I claim—

1. The combination, in a cotton-planter, of the oscillating hopper having the discharge-opening in its lower side, and the stationary disk projecting through the said opening, and having the teeth or fingers, for the purpose set forth, substantially as described.

2. The combination, in a cotton-planter, of the frame A, the rigid transverse shaft M thereon, the rigid disk connected to the said shaft and having the teeth or fingers, and the oscillating hopper journaled on the shaft M and having the discharge-opening in its lower side, through which the lower edge of the disk projects, for the purpose set forth, substantially as described.

3. The combination, in a cotton-planter, of the frame A, the roller I, journaled in the rear side thereof and having the crank, the seed-spout H, the supporting-bars L on opposite sides of the frame, the rigid shaft M, connecting the said bars, the seed-disk N, rigidly secured to the said shaft and having the curved fingers or teeth, the hopper journaled on the shaft M and adapted to oscillate thereon, the said hopper having the discharge-opening in its lower side, through which the lower edge of the seed-disk projects, and the pitman connecting the crank K with the hopper, to oscillate the latter as the roller rotates, substantially as described.

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

JOHN J. BALLARD.

Witnesses:
A. J. BECK,
R. J. SIMS.