

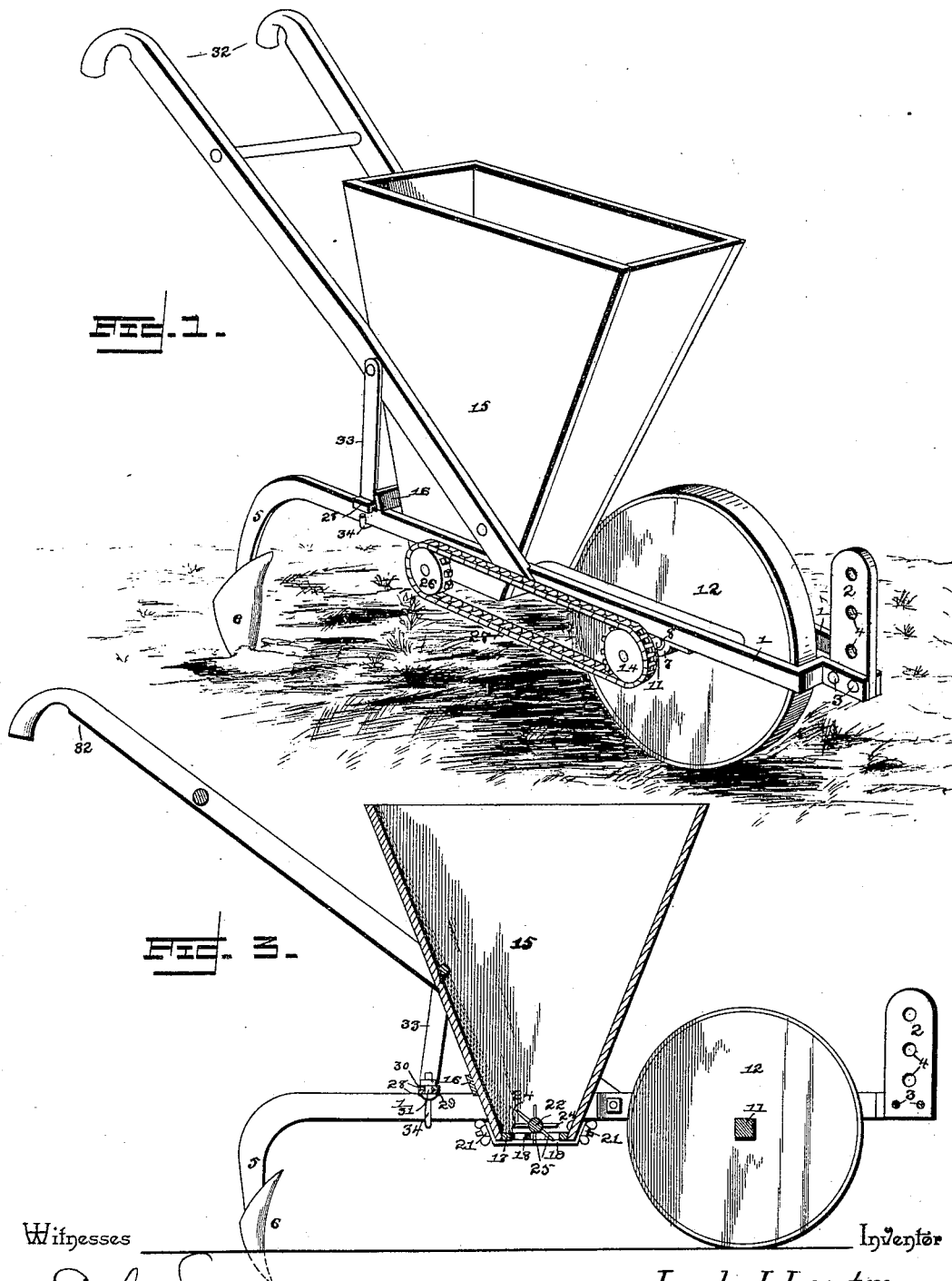
(No Model.)

2 Sheets—Sheet 1.

J. J. LAWTON.
FERTILIZER DISTRIBUTER.

No. 461,838.

Patented Oct. 27, 1891.



Witnesses

Inventor

E. S. Duval Jr. By his Attorneys,
W. S. Duval

Joseph J. Lawton.

C. A. Snow & Co.

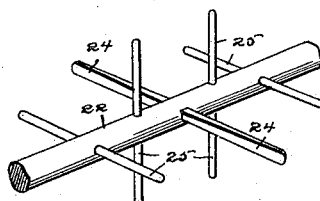
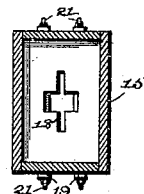
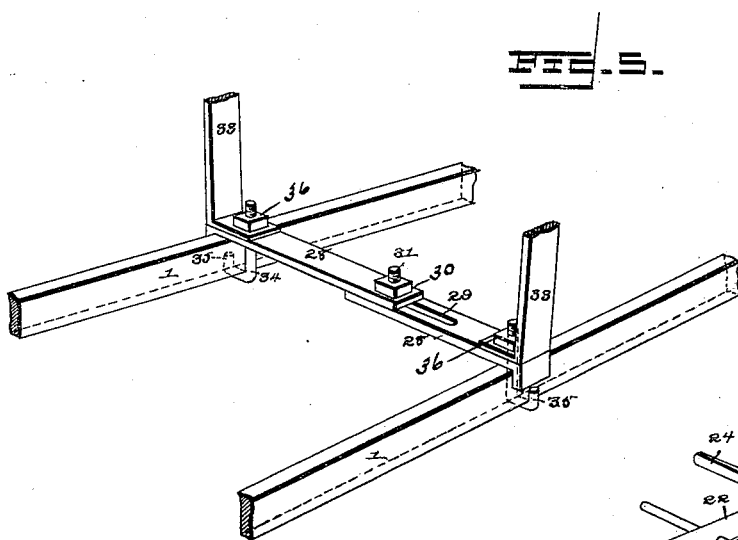
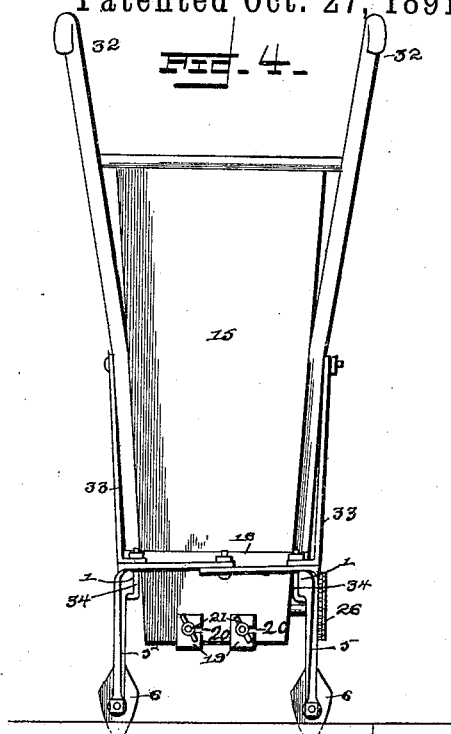
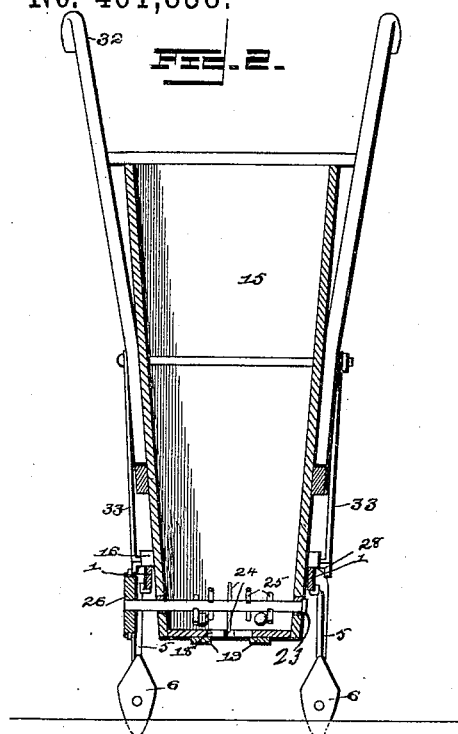
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By his Attorneys,

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UNITED STATES PATENT OFFICE.

JOSEPH JAMES LAWTON, OF HARTSVILLE, SOUTH CAROLINA.

FERTILIZER-DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 461,838, dated October 27, 1891.

Application filed June 25, 1891. Serial No. 397,437. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH JAMES LAWTON, a citizen of the United States, residing at Hartsville, in the county of Darlington and State of South Carolina, have invented a new and useful Fertilizer-Distributor, of which the following is a specification.

This invention relates to improvements in fertilizer-distributers, and has for its object to provide a distributor of great efficiency, durability, and simplicity in the arrangement of its parts, to provide means for creating a positive feed, to lighten the draft, and for adjusting the width of the furrows created by the plows.

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 of a fertilizer-distributor constructed in accordance with my invention. Fig. 2 is a transverse section. Fig. 3 is a vertical longitudinal section. Fig. 4 is a rear elevation. Fig. 5 is a detail in perspective of the rear terminals of the frame or what constitutes the plow-beams, together with their adjustable connection. Fig. 6 is a detail in perspective of a portion of the agitator and feed-shaft combined. Fig. 7 is a detail view of a portion of the hopper-bottom.

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

In practicing my invention I employ two opposite longitudinal side bars or beams 1 and converge the same toward their front ends, slightly in rear of which they are bent at a right angle, and clamp the opposite sides of a vertical draft-arm 2, to which they are securely bolted, as at 3. The draft-arm is provided with a series of perforations 4, to which the usual draft appliance may be connected, and thus the draft raised or lowered, as may be desired by the operator. The bars or beams 1 are downwardly disposed at their rear ends to form plow-standards 5 and have bolted thereto suitable cultivator-shovels 6.

7 designates a pair of bearing plates or boxes, one for each of the bars or beams 1, and each plate or box has a bearing 8 and at opposite sides of the same bolt-receiving slots, through which bolts are passed into the bars

1. It will be seen that the bearing plates or boxes may be adjusted to the front or rear within the limits of their slots and in such adjustment will be carried the axle 11, which is mounted in the bearings of the plates or boxes and adapted to freely rotate. The axle carries a wheel 12, centrally and rigidly mounted thereon, the wheel being provided with a broad tread, whereby it has considerable frictional contact with the ground. At one end the axle is extended considerably beyond its bearing, and is there provided with a sprocket-wheel 14.

15 designates a hopper of the usual shape, which is seated between the bars or beams 1, and is provided at its rear with a cross-bar 16, which at its ends overlap and rest upon the upper edges of the beams. The bottom 17 of the hopper is provided with an opening 18 with lateral slots, as seen in Fig. 7, and at each side of the same is located a slide or cut-off 19. The ends of the slides embrace the front and rear walls of the hopper and at their outer edges are slotted, as at 20, for the reception of set-screws 21, whereby they may be adjusted. It will be seen that by loosening the screws the slides may be moved so as to cover more or less of the opening, and thus the feeding of the fertilizer from the hopper be regulated.

22 designates the agitator-shaft, and the same is journaled in the opposite side walls of the hopper, for which bearings 23 are provided. The shaft is provided within the hopper, immediately over and in line with the X-shaped opening, with radial knives or cutters 24, adapted to pass into the opening when the agitator-shaft is rotated, and said shaft is also provided at opposite sides of the knives with the usual agitating-fingers 25. One end of the agitator-shaft extends beyond the hopper and carries a sprocket 26, and the same is connected with and operated by the sprocket 14 of the axle through the medium of an intermediate sprocket-chain 27. It will therefore be apparent that as the machine moves along the agitator-shaft will be positively driven by the rotations of the axle and that the fertilizer within the hopper will be thoroughly pulverized by the agitating-fingers and dropped through the opening; furthermore, that the feed will be positive by reason

of the cutters or knives passing into the X-shaped opening of the hopper, said cutters or knives serving to cut or break any clods or lumps that may escape the agitating-fingers and work their way to the opening.

28 designates a pair of connecting-straps, which are L-shaped and have their outer bent ends embracing the bars or beams 1 immediately in rear of the hopper. The inner ends of the straps overlap each other, one being provided with a slot 29 and the other with a perforation 30, through which perforation and slot an adjusting-bolt 31 is passed, whereby the two straps may be adjusted away from or toward each other, and thus provide for an adjustment of two plows or shovels, whereby the width between the furrows may be regulated.

32 designates the opposite handles, which are bolted to the hopper and bars 1 and serve as an additional support for the hopper. The handles near their rear ends are connected by the usual rung, and from said handles near their lower ends depend vertical L-shaped braces 33, the lower bent ends of the braces resting upon the connecting-straps 28 immediately above the bars or beams 1. Through the lower bent ends of the braces and the straps at the inner sides of the beams there are passed J-shaped bolts 34, the lower hooked ends 35 of which embrace the lower edges of the beams 1, while the upper ends are provided with nuts or taps 36.

From this it will be seen that the entire structure is extremely rigid and well braced, and this by means of the pair of bolts shown. By this means I avoid the use of so many bolts, always liable to become loose and therefore requiring constant attention, and also avoid the necessity of drilling a corresponding number of holes in the manufacture of the machine.

Having described my invention, what I claim is—

In a fertilizer-distributor, the combination, with the opposite side beams curved at their rear ends to form plow-standards carrying shovels, the opposite handles secured to the beams, and the L-shaped braces bolted to the handles and depending therefrom over the beams, of the opposite perforated and slotted L-shaped strap-sections having their bent ends engaging the beam, the adjusting-bolt passed through the perforation and slot, and the J-shaped bolts passed through the lower bent ends of the handle-braces and the straps and at their lower ends engaging the lower edges of the beams and at their upper ends provided with nuts, substantially as specified.

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

JOSEPH JAMES LAWTON.

Witnesses:

C. L. KING,

W. R. ERWIN.