(No Model.)

H. O. KING.

DISTRIBUTER.

No. 406,449. Patented July 9, 1889.

Fig. 1.

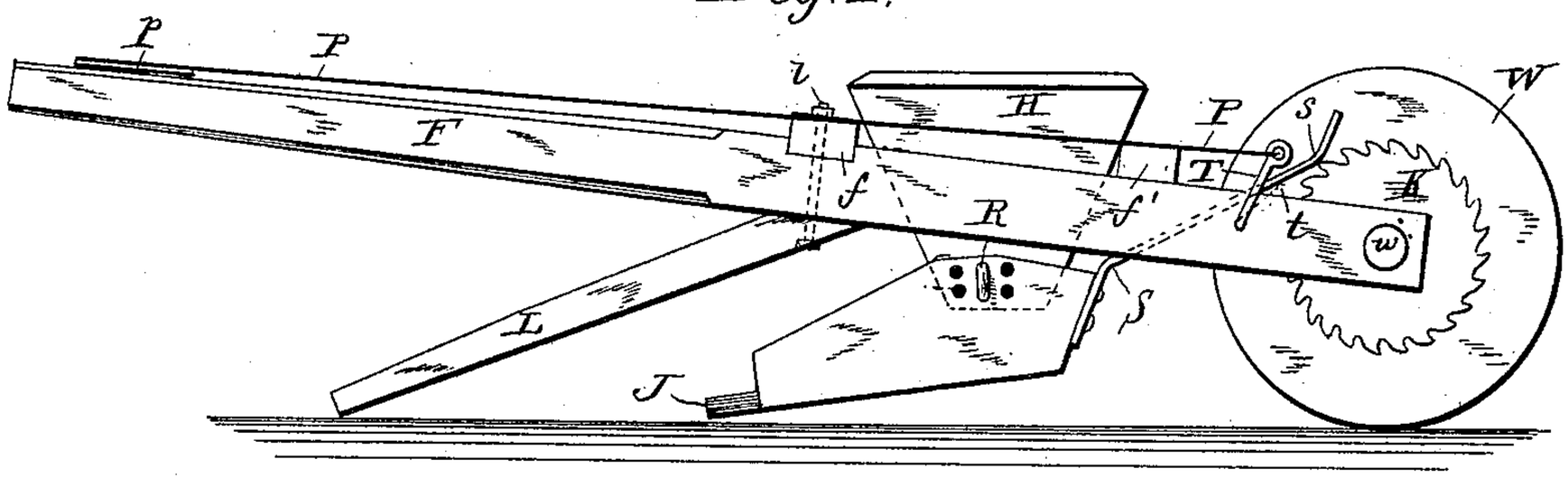


Fig. 2.

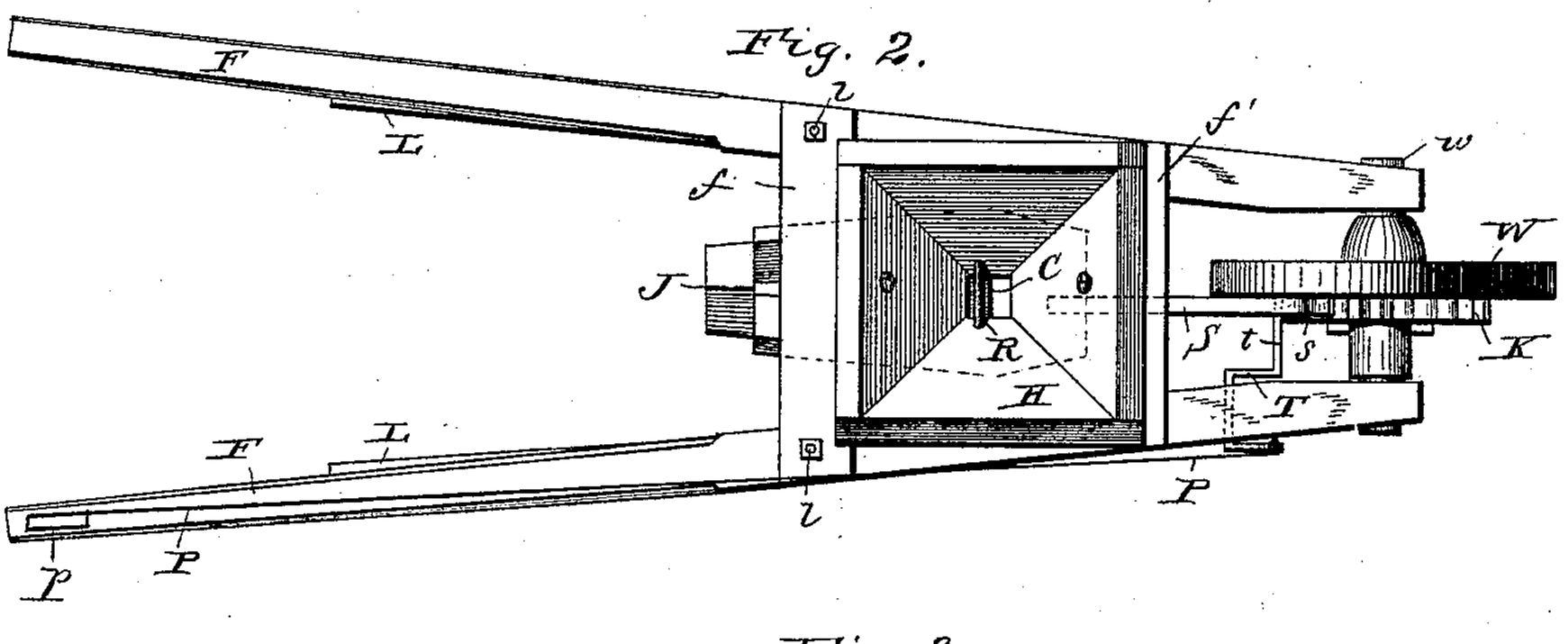


Fig. 3.

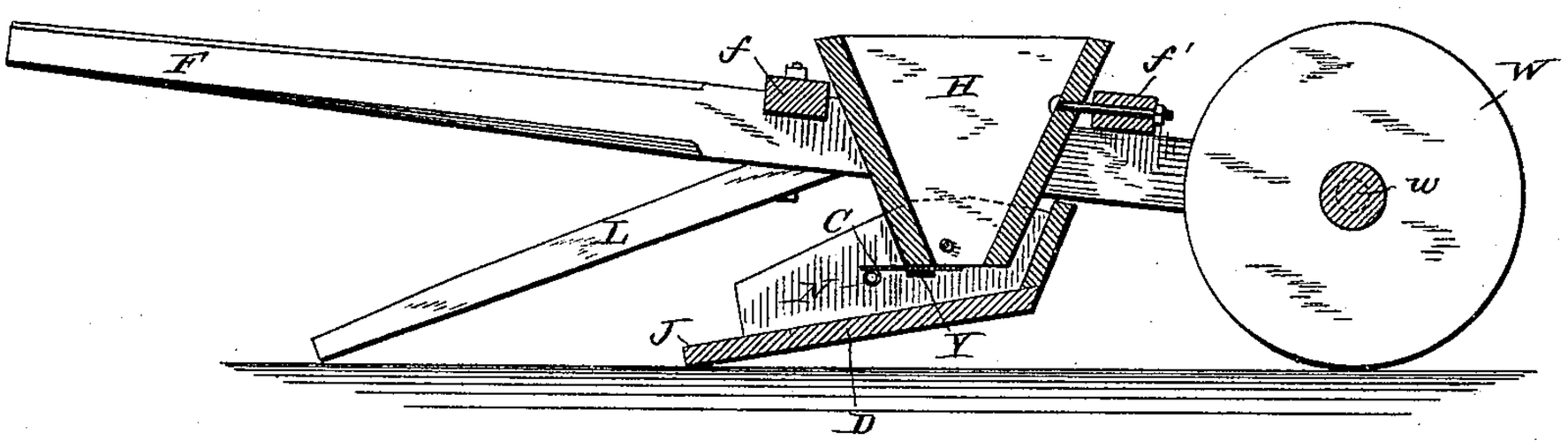


Fig. 4.

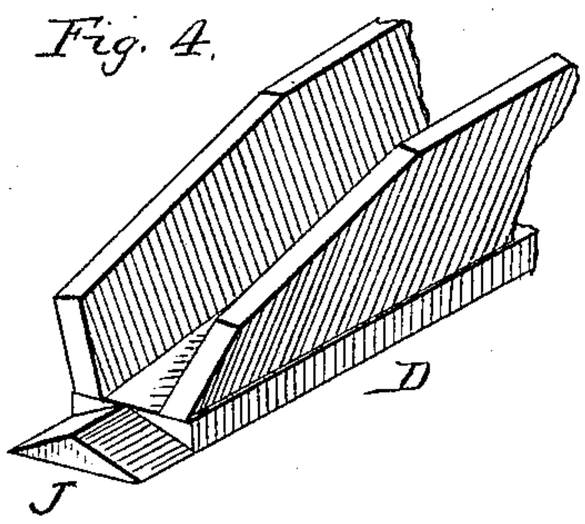
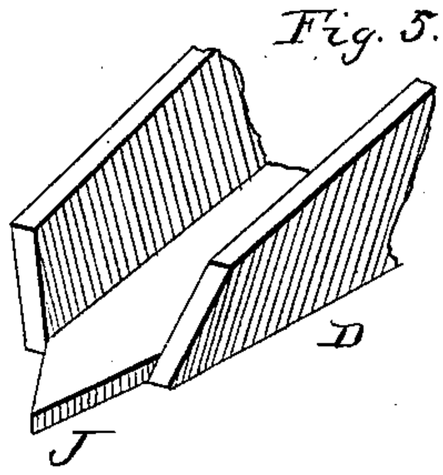


Fig. 5.



Witnesses:
Chas. A. Taylor
C. E. Doyle

Inventor:
H. O. King,
by H. N. Low
attorney

UNITED STATES PATENT OFFICE.

HEZEKIAH O. KING, OF GREENVILLE, SOUTH CAROLINA.

DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 406,449, dated July 9, 1889.

Application filed March 18, 1886. Renewed January 17, 1887. Serial No. 296,655. (No model.)

To all whom it may concern:

Be it known that I, HEZEKIAH O. KING, a citizen of the United States, residing at Greenville, in the county of Greenville and State of South Carolina, have invented certain new and useful Improvements in Distributers; 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.

The object of my invention is to provide a distributer for fertilizers embracing various new and advantageous features of construction and operation.

The distributer which I have devised is especially adapted for use in fertilizing cotton.

The invention relates to certain features hereinafter more particularly set forth.

My invention can best be understood by reference to the accompanying drawings, in which I have shown a means for carrying it into effect.

In said drawings, Figure 1 is a side elevation of a distributer embodying my invention. Fig. 2 is a top plan view of the same. Fig. 3 is a longitudinal section. Fig. 4 is a perspective view of a portion of the delivery end of the dropper. Fig. 5 is a similar view of a modified form of the dropper.

Referring to the drawings, F F represent the side or handle bars of the distributer, which also, in connection with the cross-bars *f f'*, constitute the frame of the machine. In the front end of this frame is journaled the axle *w* of the ground or supporting wheel W. Intermediate between said wheel and the handles of the bars F is supported the hopper H, preferably between the bars *f f'*.

The supporting-legs which sustain the rear end of the machine when it is not in use are indicated at L. In distributers heretofore made, with legs arranged in the ordinary perpendicular manner, the use of the machine, particularly by careless persons on rough ground, subjects the apparatus frequently to shocks by collision of the perpendicular legs with stumps, stones, or other obstructions. I therefore incline the legs in my distributer backward at a sharp angle with the ground—say thirty degrees. The legs being situated beneath the handle-bars, they are not in the way, and this longitudinal extension of the leg is not objectionable. They are connected securely with the main frame by bolts *l*, which pass from their lower inclined faces and are fastened by nuts upon the top of the cross-piece *f*. The inclination of the legs thus also enables them to be securely held to the frame, each by a single bolt.

C is the feed-regulating slide arranged in a horizontal position in the bottom of the hopper, where it is confined by a strap Y, which permits of its longitudinal adjustment by a ring N.

D indicates the dropper adapted to be oscillated upon a pivot R, upon which it is hung immediately beneath the hopper. The agitation of the dropper is effected by an arm S, attached thereto and engaging at its forward end with a toothed wheel K, mounted upon and rotated by the axle *w*.

It is often desired to run the machine backward—as, for instance, to finish a part of the furrow which, from clogging of the hopper or other causes, has not been fertilized. To permit this movement, the arm S may be beveled in each direction from its point *s* of contact with the wheel K, as shown in the drawings. The teeth of the wheel K are undercut, as shown, to give not only an oscillation to the hopper, but a jar, which loosens and facilitates the feeding of the fertilizer.

The rate of delivery of the fertilizer varies with the degree of inclination of the handle-bars and the dropper. To compensate, therefore, for the differences in height in different persons who use the machine or for different characters of fertilizer, I arrange for pivoting the dropper at different points by the holes *r* to give it different inclinations.

Instead of delivering the fertilizing material from the end of the spout in a body, I divide it and distribute it over each side and, if desired, to some extent over the end of an extension J of the bottom of the dropper. This extension is beveled preferably as shown in Fig. 4 or in Fig. 5. This extension, though not necessarily, is by preference integral with said bottom. By being in line or in the same horizontal plane with the latter it is insured that weeds or stalks will not catch and collect upon the beveled part and destroy its efficiency.

Blocks mounted below the openings from

vibrators of distributers have been used to scatter the fertilizer; but as heretofore constructed such blocks and the arms which support them have been objectionable, especially when used over old cotton-fields, because of the amount of material—such as old stalks, &c.—which they collect, thus practically destroying the usefulness of such distributing-blocks, which can only work satisfactorily when free from all material—such as grass, weeds, or stalks. This objection I overcome by leaving the rear or delivery end of the vibrator or dropper open and extending the bottom thereof in the manner shown.

T is a crank-arm pivoted in the frame and adapted to engage by a lateral extension *t* with the under side of the dropper-arm S. The crank-arm is oscillated to make such engagement and to lift the arm S from the wheel W by a rod P, which extends to within convenient reach of the operator. At its rear end it is formed into the handle *p*, which rests upon one of the main handles F, and may be conveniently grasped by the hand at the same time as the latter and so held with the arm S either in or out of engagement with its operating-wheel.

I do not claim, broadly, the use of a bevel or incline in connection with the dropper for distributing the fertilizer, as I am aware that the same has been heretofore proposed.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a fertilizer-distributer, the combination, with the hopper, of the dropper D and an extension J, shaped as described, and situated in substantially the same horizontal plane with the bottom of the dropper, as and for the purpose set forth.

2. The combination of the hopper, the dropper D, the arm and ground-wheel for actuating the same, and the extension J, projecting beyond the side walls of the dropper and tapering toward the rear end of the extension, as and for the purpose set forth.

3. The combination, with the hopper, of the dropper D, having an extension J, shaped as described, and constituting a rearwardly-extending integral part of the bottom of the dropper, as set forth.

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

HEZEKIAH O. KING.

Witnesses:
JOHN B. MARSHALL,
A. H. DEVENS.