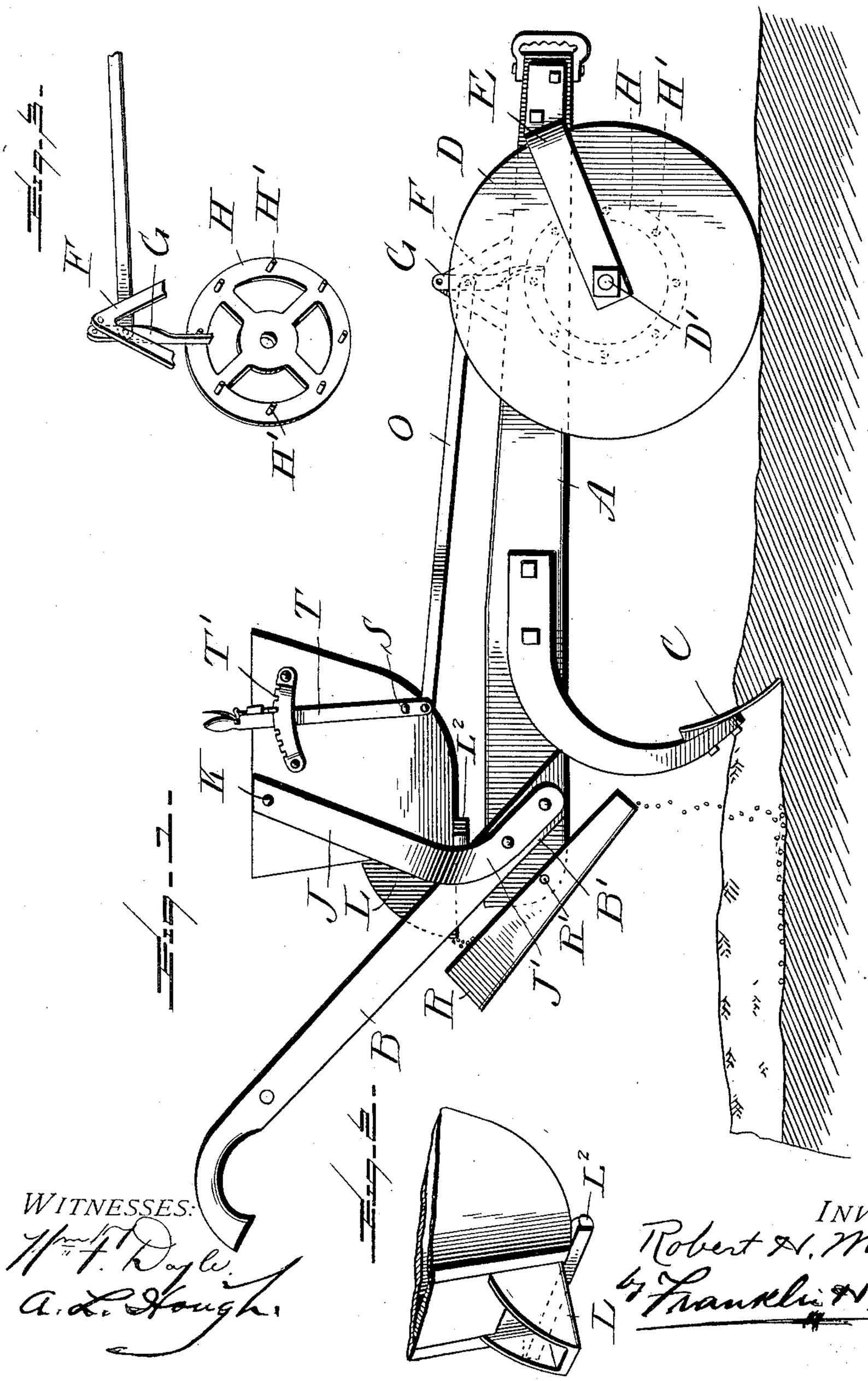
No. 699,627. Patented May 6, 1902.

R. H. MILAM.

GUANO DISTRIBUTER.

(Application filed Mar. 6, 1902.)

(No Model.)



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UNITED STATES PATENT OFFICE.

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GUANO-DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 699,627, dated May 6, 1902.

Application filed March 6, 1902. Serial No. 96,968. (No model.)

To all whom it may concern:

Be it known that I, ROBERT H. MILAM, a citizen of the United States, residing at Columbus, in the county of Muscogee and State of Georgia, have invented certain new and useful Improvements in Guano-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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in guano-distributers; and it consists in the provision of a vibrating hopper which is actuated by suitable connections with the driving-wheel, in connection with a pivoted spout, into which the fertilizer is adapted to fall as it drops from the hopper.

More specifically, the invention consists in the provision of a guano-distributer in which the vibrating hopper is pivotally supported by arms, which are secured at angles to the sides of the handles, which are connected to the beam, and in the provision of a cross-piece fastened to the rear lower portion of the hopper and adapted to strike against the forward edges of the hopper-supporting bars, whereby a sudden stoppage of the hopper is effected for the purpose of throwing the guano into the pivoted spout.

To these ends and to such others as the invention may pertain, the same consists, further, in the novel construction and combination of parts, as will be hereinafter more fully described and then specifically defined in the appended claims.

I illustrate my invention in the accompanying drawings, in which similar letters of reference indicate like parts, and in which—

Figure 1 is a side elevation of my improved guano-distributer. Fig. 2 is a detail view showing the hopper with the cross-piece secured to its lower rear edge. Fig. 3 is a detail view showing the means for vibrating the hopper.

Reference now being had to the details of the drawings by letter, A designates the beam of the distributer, to which suitable handles B are secured to the rear end of said beam, said handles being preferably seated in recesses or grooves B′ in the outer faces of said beam, whereby the handles will be better able to withstand the jar of the vibrating hopper. To said beam is held a suitable uncovering furrow-opener, plow, or shoe C, and near the forward end of the beam is pivotally mounted the wheel D, journaled on a shaft D′, which is supported in suitable bearing on said beam and on the arm E. Mounted on the beam adjacent to said wheel is a standard F, to which an arm G is pivoted at its upper end. On the inner face of said wheel a disk H is fastened, and about the face of said disk is an annular series of laterally-projecting pins H′, against which the lower free end of said arm strikes as the wheel rotates. Fastened to the outer faces of said handles B are the angle-bars J, which are bent at angles at the points J′ and slightly outwardly curved. To the upper ends of said bars pins K, fastened to the outer faces of the hopper near its upper edges, are pivoted, and to the bottom of the hopper, near its rear edge, is fastened securely the cross-piece L^2, the ends of which project beyond the outer faces of the hopper, and as the hopper is vibrated the projecting ends of said cross-piece are designed to strike against the forward edges of said bars J at locations preferably above their angled portions, thus limiting the rearward swing of the hopper. A spout L is fastened about the exit-aperture in the hopper on its rear face and extends between the handles. Pivotally mounted to the rear end of said beam is a second spout R, which is mounted on a pivotal pin R′. This spout is so mounted on its pivotal pin that the force of the dropping guano from the hopper will cause same to tilt, and thus jar the fertilizer out of the pivoted spout.

S designates a pin fastened to one side of the hopper and on which pin the lever T is pivoted at a location a short distance above its lower end. Said lever is provided with means whereby it may be held by means of the hand-lever and pawl in one or another of the notches T′ on the side of the hopper, as shown. A bar O is pivotally connected at one end to the lower end of said lever T, below the pivotal point of the latter with the

hopper, and at the other end of said bar is a pivotal connection with the swinging arm G. The utility of the adjusting means in connection with the lever pivoted to the hopper will now be understood. As said lever is held in one or another position the free end of said arm G will be held higher or lower, causing the hopper to be agitated or vibrated to a less or greater degree.

The operation of the device comprises a vibration of the hopper caused by the rotation of the driving-wheel, and as the pins on said disk strike against the lower end of the arm G, disposed in the path of said pins, the hopper is driven forward and allowed to return to its normal position by gravity, the rearward movement of the hopper being limited by the projecting ends of said cross-piece coming into contact with the forward edges of the angle-bars supporting the hopper, which will cause the latter to stop suddenly, which will have a tendency to throw the guano forcibly out of the hopper and into the pivoted spout, from which it will fall to the ground.

Having thus described my invention, what I claim to be new, and desire to secure by Letters Patent, is—

1. A vibrating guano-distributer, comprising in combination with the beam, handles seated in recesses in the opposite faces of the beam and secured thereto, angle-bars fastened to said handles, a hopper pivotally mounted on said bars, a wheel journaled in suitable bearings on said beam, a disk on the face of said wheel and provided with laterally-projecting pins, a pivoted arm, carried by said beam and disposed in the path of said pins, pivotal link-and-lever connections between said arm and the hopper, as set forth.

2. A vibrating guano-distributer, comprising, in combination with the beam, the wheel carried thereby, the disk rotating with said wheel, laterally-projecting pins on said disk, a standard on the beam, an arm pivoted to said standard, and having its free end disposed in the path of said pins, handles seated in inclined recesses in the opposite faces of said beam, angle-bars, fastened to said handles, a hopper pivotally mounted on said bars, a cross-piece fastened to the lower rear edge of said hopper, the ends of which cross-piece are adapted to strike against the forward edges of the upright inclined portions of said angle-bars, to limit the rearward throw of the hopper, a lever pivoted to the hopper, means for holding the lever in different positions, a bar pivotally connecting said lever with said pivotal arm, and the pivotal spout mounted on the rear end of the beam, as set forth.

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

ROBERT H. MILAM.

Witnesses:
S. O. BULLOCK,
JASPER HARRIS.