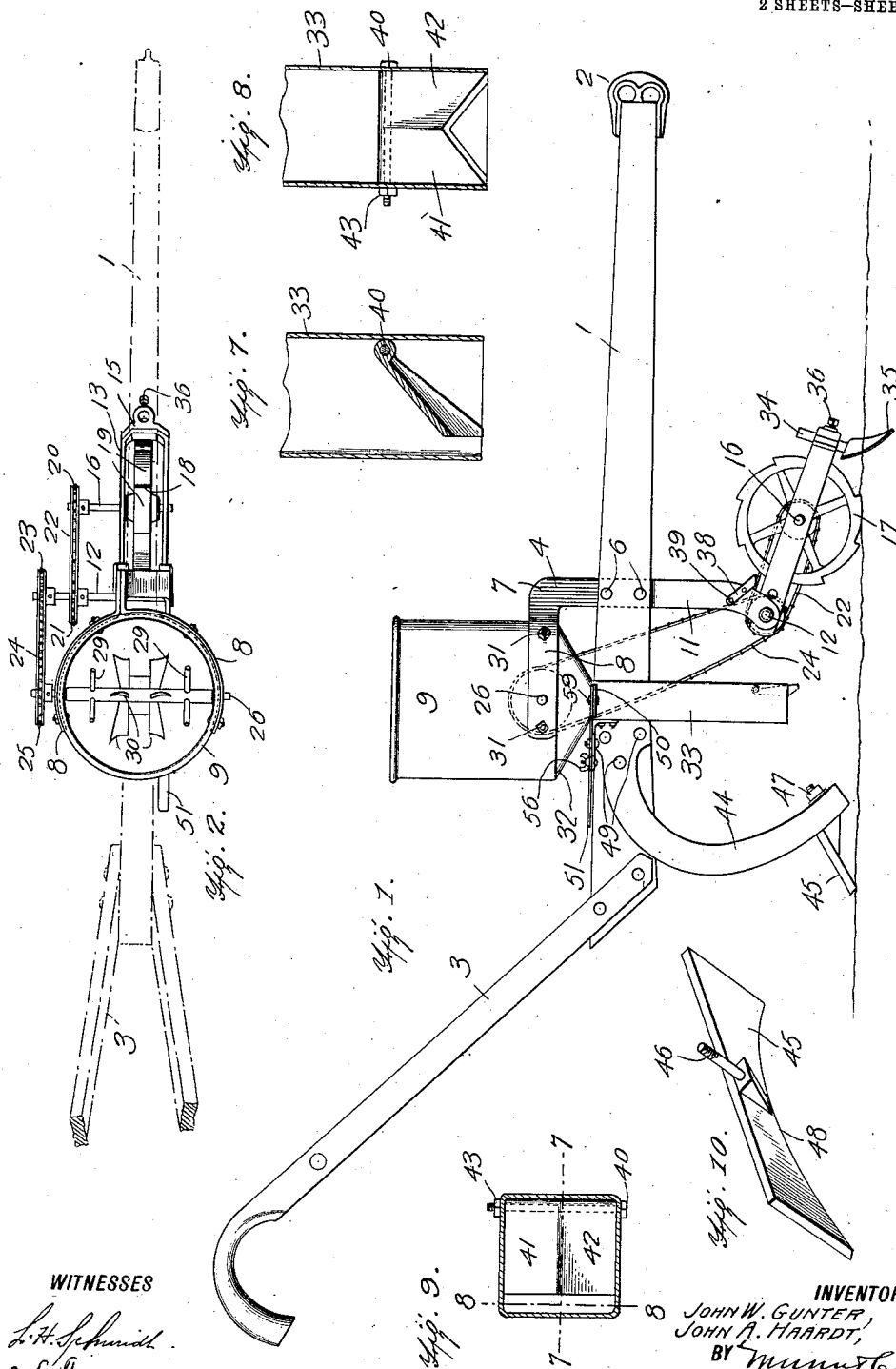


J. W. GUNTER & J. A. HAARDT.
 MATERIAL DISTRIBUTER.
 APPLICATION FILED AUG. 3, 1912.

1,047,796.

Patented Dec. 17, 1912.

2 SHEETS—SHEET 1.



WITNESSES

L. H. Schmidt
 C. E. Tramm

INVENTORS

JOHN W. GUNTER,
 JOHN A. HAARDT,
 BY *Munn & Co.*

ATTORNEYS

J. W. GUNTER & J. A. HAARDT.
MATERIAL DISTRIBUTER.
APPLICATION FILED AUG. 3, 1912.

1,047,796.

Patented Dec. 17, 1912.

2 SHEETS—SHEET 2.

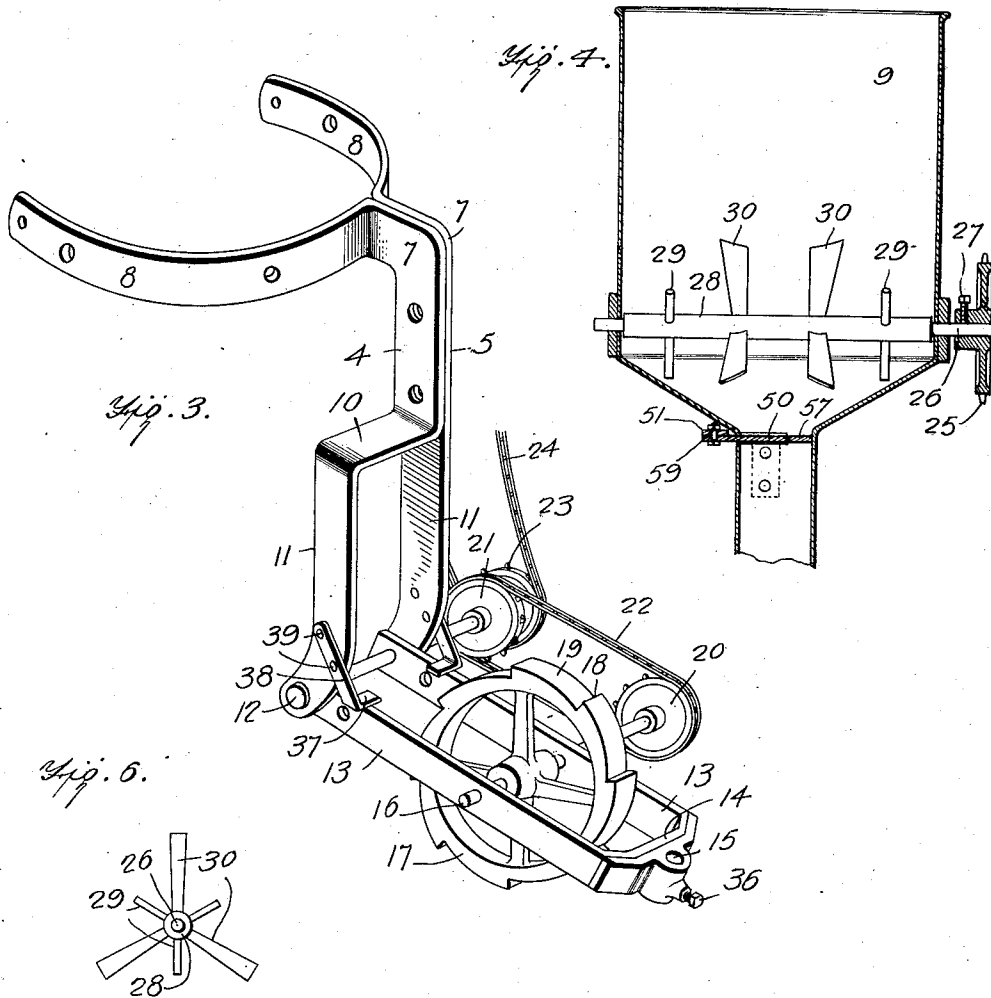


Fig. 6.

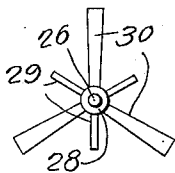
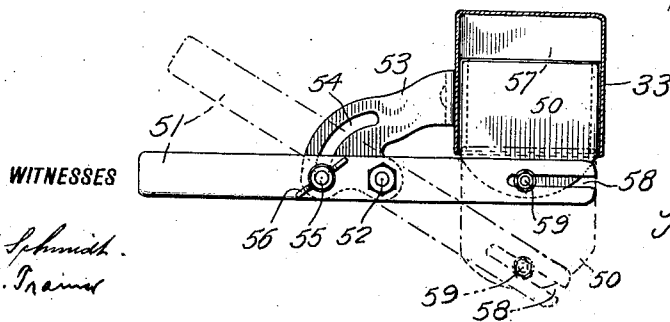


Fig. 5.



WITNESSES
L. H. Schmidt.
C. E. Pinner

INVENTORS
JOHN W. GUNTER,
JOHN A. HAARDT,
BY *Wm. F. Co.*
ATTORNEYS

UNITED STATES PATENT OFFICE.

JOHN W. GUNTER AND JOHN A. HAARDT, OF MONTGOMERY, ALABAMA.

MATERIAL-DISTRIBUTER.

1,047,796.

Specification of Letters Patent.

Patented Dec. 17, 1912.

Application filed August 3, 1912. Serial No. 713,088.

To all whom it may concern:

Be it known that we, JOHN W. GUNTER and JOHN A. HAARDT, citizens of the United States, and residents of Montgomery, in the county of Montgomery and State of Alabama, have invented certain new and useful Improvements in Material-Distributers, of which the following is a specification.

Our invention is an improvement in material distributers and has for its object, the provision of a simple inexpensive machine of the character specified, wherein means is provided for insuring a regular and uniform feed of the material, operated directly by the movement of the machine, and wherein the feed may be regulated to suit conditions.

In the drawings: Figure 1 is a side view of the improved distributer; Fig. 2 is a plan view; Fig. 3 is an enlarged perspective view of the operating wheel and connected parts; Fig. 4 is a transverse vertical section of the container or box; Fig. 5 is a plan view of the feed controlling device; Fig. 6 is an end view of the agitating device; Figs. 7 and 8 are sections on the lines 7—7 and 8—8, respectively of Fig. 9; Fig. 9 is a transverse horizontal section of the feed chute, and Fig. 10 is a perspective view of the covering plate.

The present embodiment of the invention comprises a supporting frame, composed of a longitudinal bar or beam 1, having at one end a clevis 2, and at the other a pair of handles 3. A bracket arm is secured to the beam 1, intermediate the ends of the beam, and the said arm extends above and below the beam, and is provided with an arch-shaped frame, at its upper end. The bracket is composed of a pair of plates 4 and 5, arranged alongside each other, and secured to the beam by bolts 6, and each plate is bent at a right angle rearwardly at its upper end, as shown at 7, and is then curved outwardly, as shown at 8, co-acting to form an arch-shaped frame, for embracing the box 9. The plate 4, below the beam is bent at a right angle, away from plate 5, as shown at 10, and thence downwardly parallel with the plate 5, to form a pair of arms 11, which curve rearwardly, as shown in Figs. 1 and 3, and a shaft 12 is journaled in the ends of the arms. An auxiliary U-shaped frame is connected with the shaft 12, the ends of the arms 13 of the frame being journaled on the shaft, between the arms 11, and the body 14

of the frame is provided with a bearing 15. A second shaft 16 is journaled in the arms 13 of the frame 13—14, parallel with shaft 12, and a wheel 17 is secured to the shaft 16, between the arms 13. The wheel 17 is provided on its periphery with a plurality of transverse radial shoulders 18, and each shoulder has its base or inner edge connected to the outer edge of the adjacent shoulder by an inclined surface 19.

A sprocket wheel 20 is secured to shaft 16, outside the frame 13—14, and a similar wheel 21 is secured to shaft 12, in alinement with wheel 20. A chain 22 connects wheels 20 and 21, and a sprocket wheel 23 is secured to shaft 12 outside of wheel 21, and is connected by means of a chain 24, with a sprocket wheel 25, on a shaft 26, journaled transversely of the box 9. The wheels 20—21—23 and 25 are each held to the shaft by a set screw 27, which passes through the hub of the wheel and engages the shaft, to hold the wheel in place. The shaft 26 is enlarged intermediate its ends, as shown at 28, and is provided with a plurality of series of radial fingers 29, and a plurality of series of radial blades 30.

The portions 8 of the bracket embrace the box 9, and the ends of shaft 26 are journaled in the arms, Fig. 4. The said portions are also bolted to the box by bolts 31, and the fertilizer box has a hopper bottom 32, and an outlet chute 33, leading from the center of the bottom. The wheel 17 runs on the ground, and the shank 34 of a plow is held adjustably in the bearing 15, by means of a set screw 36.

The free end of the auxiliary frame, wheel and plow may move downwardly, swinging on the shaft 12, but the upward movement is limited by means of stops, each stop being an angular lug 37 on the end of a plate 38, secured to the adjacent arm 11 of the bracket, by bolts or rivets 39. The lugs 37 extend above the arms 13 of the auxiliary frame, as shown in Figs. 1 and 3.

A valve or plate is mounted to swing on a bolt 40, arranged transversely of the chute near its lower end, and the said valve is composed of two portions 41 and 42 arranged at an angle to each other. The bolt is held in place by a nut 43, and the valve or plate is arranged with the apex of the angle formed by the two portions upward. The lower end of the chute is slightly be-

low the lower ends of the arms 11, and directly behind the said arms.

An arch bar 44 is secured at one end to the beam, behind the chute 33, and a plate 45 is secured to the lower end of the bar. The plate is provided at the center of its upper edge with a threaded stem 46, and the said stem passes through an opening in the lower end of the bar and is engaged by a nut 47, above the bar. The lower edge 48 of the plate is concave, and the said plate is transverse to the direction of motion of the machine. The bar 44 is secured to the beam by bolts 49, and the rear side of the chute is slotted to admit a cut off plate or valve 50. The chute is square in cross section, (Fig. 5) and the cut-off plate is arranged to swing in from one side of the chute. The plate is on one end of a lever 51 pivoted at 52, intermediate its ends, to a bracket arm 53, extending rearwardly from the chute, and having an arc-shaped slot 54. A bolt 55 is passed through an opening in the lever 51, and through the slot 54, and is engaged by a wing nut 56. A fixed plate 57 is arranged in the bottom and the plate 50 moves toward and from the fixed plate to form an opening for the passage of the material. The size of the opening may be increased by swinging the cut-off plate outwardly, as indicated in dotted lines in Fig. 5, and the plate may be held in adjusted position by means of a bolt 55 and a nut 56. The lever 51 is slotted at 58, and a bolt 59 on the plate 50 passes through the slot.

The blades 30 are arranged in two series, each series consisting of three blades, spaced apart at equal angular distances, and the series are on opposite sides of the center of the shaft. The fingers 29 are also in two series of three fingers each, and each series of fingers is on the outer side of a series of blades. The fingers are shorter than the blades, and the said finger and blades thoroughly stir up and agitate the material in the box.

The shoulders 18 of the wheel 17 face the front of the machine, on the lower side of the wheel, and insure the rotation of the wheel, when the machine is drawn over the ground. The wheel 17 rotates shaft 26, and thus feeds the material. The auxiliary frame may move downward to insure the wheel 17 following the inequalities of the ground.

In operation, the cut-off is set to feed the requisite amount of fertilizer, and is held in this position. The machine is drawn over the ground, the wheel 17 rotating the shaft 26, and causing the fertilizer to be fed through the chute. The plow 35 opens a furrow to receive the fertilizer, and the plate 45 covers the fertilizer in the furrow.

The device is particularly adapted for

feeding growing plants, that is for inserting the fertilizer in the ground during the cultivation of the crops.

We claim:—

1. A machine of the character specified, comprising a supporting beam having draft apparatus at one end and handles at the other, a box supported on the beam and provided with a depending outlet chute, a bracket secured to the beam, the box being connected to the upper end of the bracket, a U-shaped auxiliary frame having a body extending in front of the bracket and provided with a vertical bearing and arms pivoted to the bracket, stops on the bracket for limiting the upward movement of the frame, a wheel journaled transversely of the auxiliary frame, a shaft journaled in the box parallel with the axis of the wheel, a driving connection between the wheel and the shaft, said shaft having radial agitating fingers and radial agitating blades, a plow having a shank in the bearing of the auxiliary frame, an arch bar secured to the beam behind the box, a covering plate arranged transversely of the beam at the lower end of the arch bar, and means for controlling the feed of the material through the chute.

2. A machine of the character specified, comprising a supporting frame, an approximately vertical bracket secured to the frame intermediate the ends of the bracket, an auxiliary frame extending in front of the bracket and pivoted to the lower end thereof, a box supported by the bracket at its upper end and having a depending chute, a shaft journaled in the box and provided with agitating arms, a wheel journaled transversely of the auxiliary frame, a driving connection between the wheel and the shaft, a furrow opener at the front of the auxiliary frame, a covering device supported by the main frame behind the chute, and means for controlling the feed of the material through the chute, said means comprising a cut off plate, the chute having an opening in its wall for permitting the passage of the plate, a lever pivoted adjacent to the chute, the plate being connected to one end thereof, and means for holding the lever in adjusted position.

3. A machine of the character specified, comprising a supporting frame, an approximately vertical bracket secured to the frame intermediate the ends of the bracket, an auxiliary frame extending in front of the bracket and pivoted to the lower end thereof, a box supported by the bracket at its upper end and having a depending chute, a shaft journaled in the box and provided with agitating arms, a wheel journaled transversely of the auxiliary frame, a driving connection between the wheel and the shaft, a furrow opener at the front of the auxiliary frame, a covering device supported by the main frame behind the chute, and

means for controlling the feed of the material through the chute.

4. A machine of the character specified, comprising a supporting frame, an approximately vertical bracket secured to the frame intermediate the ends of the bracket, an auxiliary frame extending in front of the bracket and pivoted to the lower end thereof, a box supported by the bracket at its upper end and having a depending chute, an agitating device in the box, a wheel journaled on the auxiliary frame on an axis transverse to the main frame, a driving connection between the wheel and the said device, a furrow opener at the front of the auxiliary frame, a covering device in rear of the chute, and means for controlling the feed through the chute.

5. A machine of the character specified, comprising a supporting frame, an approximately vertical bracket secured to the frame intermediate the ends of the bracket, an auxiliary frame extending in front of the bracket and pivoted to the lower end thereof, a box supported by the bracket at its upper end and having a depending chute, an agitating device in the box, a wheel journaled on the auxiliary frame on an axis transverse to the main frame, a driving connection between the wheel and the said device, and means for controlling the feed through the chute.

6. A machine of the character specified, comprising a supporting frame, an approximately vertical bracket secured to the frame intermediate the ends of the bracket, an auxiliary frame extending in front of the bracket and pivoted to the lower end thereof, a box supported by the bracket at its upper end and having a depending chute, an agitating device in the box, a wheel journaled on the auxiliary frame on an axis transverse to the main frame, a driving connection between the wheel and the said device, a spreading device at the lower end of the chute, and means for controlling the feed through the chute.

7. In a device of the character specified, a box having a feed chute, means for controlling the feed through the chute, and a spreader at the bottom of the chute, said spreader comprising a plate composed of two portions arranged at an angle to each other, and a bolt in the chute to which the plate is pivoted, the angle between the portions of the plate increasing toward the free end of the plate, and the plate being arranged with the apex of the angle between the portions upward.

JOHN W. GUNTER.
JOHN A. HAARDT.

Witnesses:

T. H. GUNTER,
WILLIFORD DUSKIN.