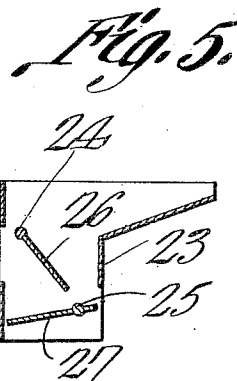
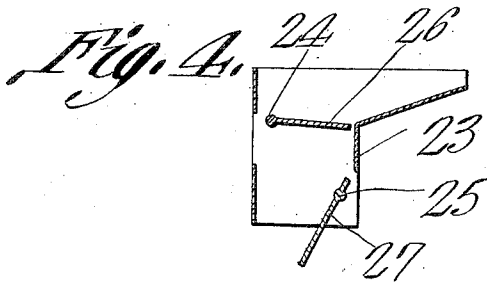
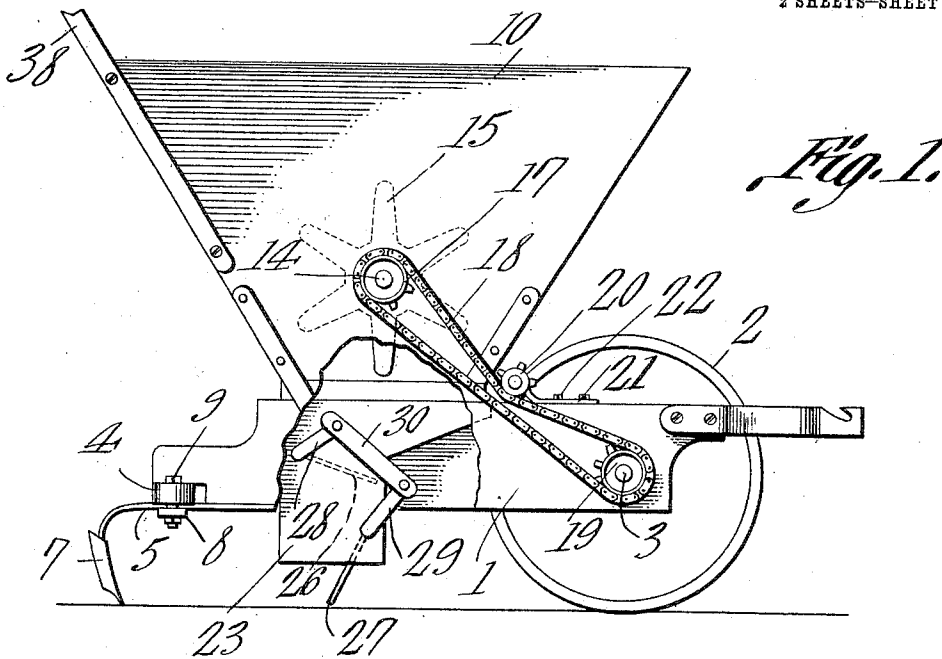


L. L. BEVIS.
COTTON PLANTER.
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1,051,382.

Patented Jan. 28, 1913.

2 SHEETS—SHEET 1.



Witnesses

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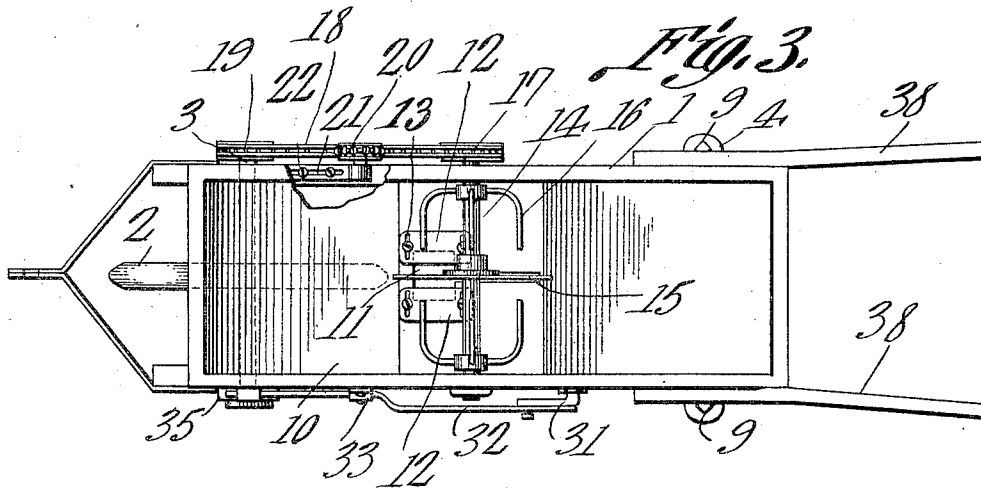
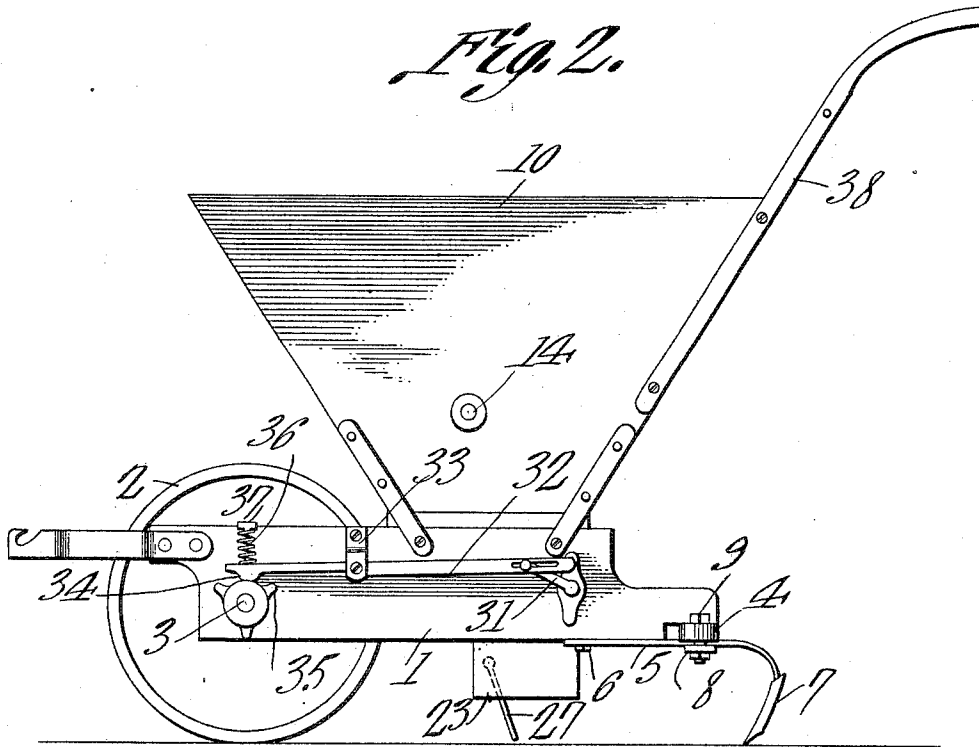
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2 SHEETS-SHEET 2.



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UNITED STATES PATENT OFFICE.

LUTHER LEE BEVIS, OF FRANKLIN, GEORGIA.

COTTON-PLANTER.

1,051,382.

Specification of Letters Patent.

Patented Jan. 28, 1913.

Application filed August 3, 1911. Serial No. 642,085.

To all whom it may concern:

Be it known that I, LUTHER L. BEVIS, a citizen of the United States, residing at Franklin, in the county of Heard and State of Georgia, have invented a new and useful Cotton-Planter, of which the following is a specification.

This invention relates to machines for planting cotton seed and the like, and one of its objects is to provide improved means whereby the cotton seeds will be accurately dropped in predetermined quantities and at desired intervals apart, novel means being employed for transmitting motion to the dropping devices from the wheels of the planter.

A further object is to provide improved means for controlling the discharge of seed from the hopper of the planter to the dropping mechanism.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings, the preferred form of the invention has been shown.

In said drawings:—Figure 1 is an elevation of one side of the machine. Fig. 2 is an elevation of the other side of the machine. Fig. 3 is a plan view with a portion of the hopper broken away. Fig. 4 is an enlarged view of the receiver of the dropping mechanism with one side thereof removed and the valves in section. Fig. 5 is a view similar to Fig. 4 and showing the valves in another position.

Referring to the figures by characters of reference 1 designates side beams supported at one end by a wheel 2 the axle 3 of which is mounted for rotation within the beams 1. A cross beam 4 connects the rear end portions of the side beams 1. Springs 5 are pivotally connected, as at 6, to the lower faces of the side beams 1 and extend under the cross beam 4, these springs being provided, at their rear ends, with coverers 7. A clamping strip 8 extends transversely of the beam 4 and the springs 5 and is adjustably connected to the beam 4 by bolts 9 or

the like so that, by loosening the bolts, the springs 5 can be swung to any desired positions relative to each other, after which they can be tightly held by clamping the strips 8 upon them.

A hopper 10 is mounted on the beams 1 back of the wheel 2 and has an outlet slot 11 in the bottom thereof. Controlling plates or cut-offs 12 are mounted upon the bottom of the hopper at opposite sides of the slot and are slidably mounted, clamping screws 13 being provided for holding them against relative movement. Obviously, by adjusting these plates 12 toward or from each other, the size of the outlet opening in the bottom of the hopper can be increased or diminished as desired.

A shaft 14 is journaled within the sides of the hopper 10 and is provided, at its center, with an ejecting wheel 15 made up of a plurality of radially disposed fingers adapted to move successively between the plates 12. Secured to the shaft 14 at opposite sides of the wheel 15 are curved agitating fingers 16, these fingers having their end portions extended toward the wheel 15. It will be apparent that when the shaft is rotated the fingers will thoroughly agitate the contents of the hopper and the wheel 15 will then force some of the seeds between the plates 12 and through the opening 11.

A sprocket 17 is secured to one end of the shaft 14, and receives motion, through a chain 18, from a sprocket 19 secured to one end of the axle 3. An idler sprocket 20 may engage one run of the chain 18, this idler sprocket being connected to a plate 21 slidably mounted on one of the side beams 1 and adapted to be held against displacement by means of clamping screws 22 or the like.

A receiver, such as shown in detail in Figs. 4 and 5, is secured to the bottom of the hopper 10 and is located between the beams 1. This receiver is in the form of a spout having a depending portion 23 preferably rectangular in cross sectional contour and adapted to receive material dropped from the hopper 10 through opening 11. Shafts 24 and 25 extend transversely through the depending portion 23 of the spout adjacent the front and rear walls thereof respectively, the shaft 24, being disposed above the shaft 25. Shaft 24 carries flap valve 26 which is fixedly connected thereto while another flap valve 27 is fixedly connected to the shaft 25. Crank arms 28 and 29 are ex-

tended from shafts 24 and 25 respectively, at one end thereof and are connected by a link 30. The parts are so positioned relative to each other that when valve 26 is closed, valve 27 is open and vice versa.

One end portion of the shaft 24 is extended through one of the side beams 1 and has a crank arm 31 slidably engaging the slotted end of a lever 32. This lever is fulcrumed at a point between its ends, within a bracket 33 secured to one of the side beams 1 and a projection 34 extends downwardly from that end of lever 32 and is adapted to be successively engaged by a plurality of tappet projections 35 extending from one end of the axle 3. A spring 36 is interposed between the front end of lever 32 and a bracket 37 extending from beam 1. This spring holds the projection 34 normally in the path of the tappets 35.

Handles 38 extend upward and rearwardly from the hopper 10 and by means thereof the movement of the planter can be readily controlled.

It is to be understood that under normal conditions the valve 26 is closed and valve 27 is open, the parts being maintained in these positions by the spring 36. As the machine is moved forward motion is transmitted from wheel 2 through chain 18 to shaft 14 and the agitating fingers 16 keep the contents of hopper 10 constantly in motion while the fingers 15 of the ejecting wheel force portions of the seeds through the opening 11 and into the receiver thereunder, valve 26 thus serving to support the seeds. As the machine moves forwardly the tappets 35 move successively against the projection 34. Each time a projection is contacted by a tappet, it is elevated against the stress of spring 36, thus causing lever 32 to swing upon its fulcrum and to move the crank arm 31 downwardly. This will result in a corresponding downward movement of the valve 26. Simultaneously, the valve 27 is moved upwardly to closed position, so that the seeds sliding off of the valve 26 will be deposited on the valve 27. As soon as the tappet 35 passes from under the projection 34, spring 36 will return the lever to its initial position and the valves 26 and 27 will also be returned to their initial positions. The seeds deposited on the valve 27 will thus drop into the furrow and the coverers 7 will spread the soil over the dropped seeds as the machine advances.

It will be apparent that the distances between the hills can be varied by increasing or diminishing the number of tappets 35.

It will be apparent that by oppositely disposing the valves of the mechanism the seeds, while gravitating from the hopper, are caused to travel along a zigzag path.

The time required for the seeds to pass from the hopper to the outlet end of the receiver is thus considerably lengthened and danger of leakage during the movement of the valves from one position to the other is thus materially reduced.

What is claimed is:—

1. A planter including a wheel supported structure, a hopper mounted thereon and having an outlet, a receiver under the outlet, oppositely disposed valves pivotally connected to opposed walls respectively of the receiver, said valves being disposed one above the other and cooperating, when partly open, to form a zigzag seed passage, means for holding the upper valve normally closed and the lower valve normally open, means operated by the wheel when rotated, for opening the upper valve and closing the lower valve, and means for automatically returning the valves to their initial positions, said upper valve when opening, being adapted to discharge upon the upper or pivot end of the closing lower valve.

2. A planter including a wheel supported structure, a receiver carried thereby, upper and lower flap valves within the receiver, means for directing seeds onto the upper flap valve, means operated by the wheel, when rotating, for simultaneously opening the upper valve and closing the lower valve to discharge seeds from the upper valve onto the lower valve, said upper valve, when opening, being adapted to discharge upon the upper or pivot end of the closing lower valve, and means for automatically opening the lower valve and closing the upper valve, said valves, when partly open, cooperating to form a zigzag seed passage.

3. A planter including a structure, a supporting wheel at one end, coverers at the other ends, a receiver carried by the structure and between the wheel and coverers, oppositely disposed upper and lower valves within the receiver, the upper valve being normally closed and the lower valve being normally open, means operated by the wheel for simultaneously swinging the valves to open the upper valve and to close the lower valve, said upper valve when opening, being adapted to discharge upon the upper or pivot end of the closing lower valve, means for automatically returning the valves to their initial positions, a hopper, and means for directing seeds from the hopper onto the upper valve in the receiver.

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

LUTHER LEE BEVIS.

Witnesses:

ROBERT G. CRAIN,
J. W. RAY.