

(No Model.)

J. D. SCHOFIELD.
COTTON PLANTER.

No. 445,734.

Patented Feb. 3, 1891.

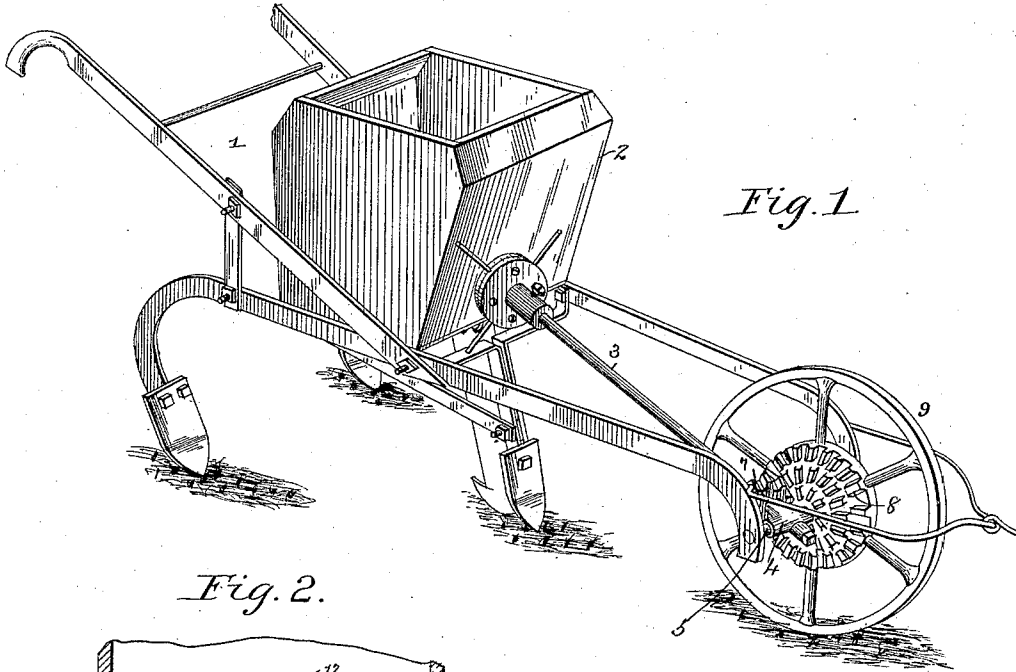


Fig. 1

Fig. 2.

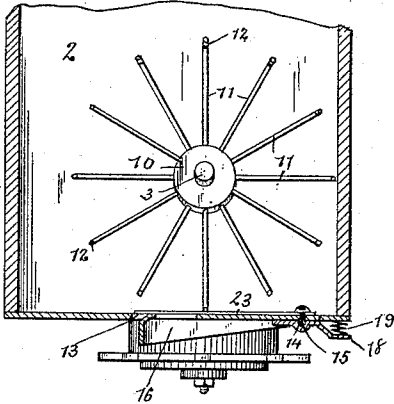


Fig. 3.

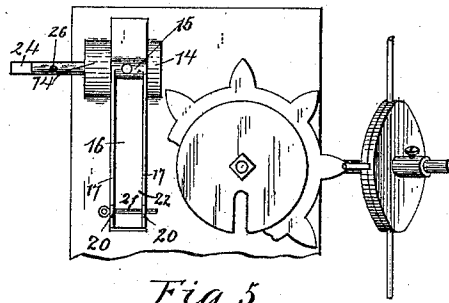


Fig. 5.

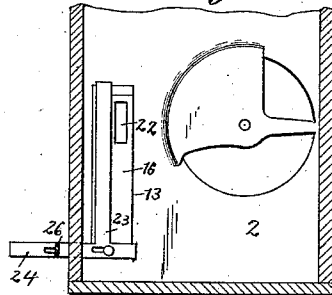
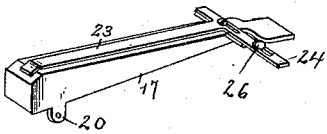


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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COTTON-PLANTER.

SPECIFICATION forming part of Letters Patent No. 445,734, dated February 3, 1891.

Application filed August 9, 1890. Serial No. 361,571. (No model.)

To all whom it may concern:

Be it known that I, JAMES DROMMOND SCHOFIELD, a citizen of the United States, residing at Rodgers, in the county of Bell and State of Texas, have invented a new and useful Cotton-Planter, of which the following is a specification.

This invention relates to seeders and planters, and more particularly to that class of machines which are used for planting cotton-seed; and it has for its object to construct a machine of this class which shall be simple, durable, and efficient in operation, and in which there shall be no danger of the cotton-seed becoming clogged in or around the feed-slot.

With this end in view the invention consists, broadly, in the combination, with the hopper, of a hinged or pivoted spring-actuated tongue having a feed-slot and regulating-slide, as will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed I have illustrated my invention as applied to a planter of that class which may be used interchangeably for planting corn and cotton-seed; but I desire it to be understood that that portion of the machine which relates solely to the corn-planting mechanism is not claimed in the present application, but is made the subject of a separate application for Letters Patent filed of even date with the present application.

Figure 1 is a perspective view of a seed-planter embodying my improvements. Fig. 2 is a sectional view taken vertically and transversely through the hopper. Fig. 3 is a bottom plan view of as much of the machine as is necessary to illustrate the construction of my invention. Fig. 4 is a perspective detail view of the spring-actuated tongue. Fig. 5 is a horizontal sectional view taken through the hopper of the machine and looking downward.

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

The frame of my improved seed-planter, which is designated by 1, is substantially of well-known construction, and is not claimed in the present application. Suitably mounted upon the said frame is the hopper 2, the front

wall of which is provided with a bearing for the rear end of an inclined shaft 3, the front end of which is journaled in a boxing 4, suitably mounted upon the axle 5, which connects the front ends of the side bars of the frame. The said inclined shaft carries at its front end a pinion 7, adapted to mesh with any one of a series of bevel-gears 8, formed upon the hub of the drive-wheel 9, or suitably secured to the latter. In this manner it will be seen that when the machine in operation is drawn over the field a rotary movement will be transmitted from the drive-wheel to the said inclined shaft 3. The latter carries at its rear end and within the box or hopper a hub 10, provided with a series of radial arms 11, having bent or L-shaped outer ends, as shown at 12. This forms the stirring or agitating device, by means of which the contents of the hopper are constantly agitated and forced out through the feed-opening.

The bottom of the hopper is provided near its rear edge with a transverse slot 13, near the outer end of which bearings 14 are formed for a short shaft 15, upon which the tongue 16 is secured. The said tongue is preferably constructed of metal, and is provided at its edges with flanges 17, and at its outer end with a lug 18, between which and the bottom of the hopper a spring 19 is interposed, the function of which is to hold the body of the tongue normally in a raised position within the hopper. The flanges 17 are provided with downwardly-extending lugs 20, through which a pin 21 is extended to retain the said tongue in its normal position and to prevent the spring-actuated tongue from being forced too far upward through the slot in the bottom of the hopper.

The tongue 16 is provided with a slot 22, through which in practice the seed is forced out from the hopper. 23 designates the slide, which is mounted upon the upper side of the tongue, upon which it may be adjusted so as to partially cover the slot 22, the size of which may thus be regulated to cause any desired quantity of seed to be planted at each operation. The slide 23 has an arm 24, which extends rearwardly over the shaft 15, upon which the spring-actuated tongue is mounted, and to which it may be adjustably secured

by means of the thumb-screw 26. It will thus be seen that the operator, who in practice walks behind the machine, has it in his power to very easily and quickly adjust or regulate the size of the feed-opening, so as to cause the desired quantity of seed to be dropped or deposited in the ground.

A seed-chute and furrow-opening, as well as covering devices, are provided, as also are handles by means of which the machine may be guided; but all of these parts are of ordinary well-known construction and do not require to be described in detail in this application.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of my invention will be readily understood.

Cotton-planting devices are usually provided with hoppers, the bottoms of which are provided with feed-openings and adjusting-slides, revolving hubs having stirring or agitating fingers being provided to force the seed through the said feed-openings. Owing to the nature of the cotton-seed, however, the lint has been apt to hold or form itself into balls which would choke the feed-opening and seriously interfere with the successful operation of the machine. By my present improvement the spring-actuated tongue having the feed-opening is intermittently depressed by the agitating fingers or arms, which latter serve to force the seed into the feed-opening. When disengaged from the agitating-arms, the spring will cause the tongue to rebound quickly and forcibly, thus serving the double purpose of causing the seed to be quickly and efficiently ejected and also loosening and agitating the contents of the hopper.

I desire it to be understood that while I have herein described what I consider to be an efficient and desirable construction of my invention I do not limit myself to the precise details herein described. Thus, for instance, the tongue having the feed-opening might be formed of spring metal and suitably secured to the bottom of the hopper, thereby dispensing with a separate operating-spring. Other modifications might be made whereby the construction might be further simplified.

Having thus described my invention, I claim—

1. In a planter, a spring-actuated tongue mounted in a slot in the bottom of the hopper and having a feed-opening, substantially as and for the purpose set forth.

2. In a planter, the combination, with the hopper having a slotted bottom, of a spring-

actuated tongue mounted pivotally in said slot and having a feed-opening, and a regulating-slide mounted upon said spring-actuated tongue, substantially as set forth.

3. In a planter, the combination, with the hopper having a slot in the bottom thereof, of a tongue mounted upon a shaft at one end of said slot, and a spring to force the body of said tongue normally in an upward direction, substantially as set forth.

4. In a planter, the combination, with the hopper having a slot in the bottom thereof, of the hinged or pivoted tongue provided at its edges with downwardly-extending flanges, a spring arranged to force the body of said tongue normally in an upward direction, and a pin extending through the flanges to limit the upward movement of the body of the tongue, substantially as set forth.

5. In a planter, the combination of the hopper having a slot in the bottom thereof, a shaft journaled at one end of said slot, a tongue mounted upon said slot and having downwardly-extending flanges at its edges, and a spring arranged to force the body of said tongue normally in an upward direction, substantially as and for the purpose set forth.

6. In a planter, the combination of the hopper having a slot in the bottom thereof, the spring-actuated tongue mounted in said slot and having a feed-opening and a regulating-slide, and the revolving shaft receiving motion from the drive-wheel of the machine and having a hub provided with arms engaging the said spring-actuated tongue, substantially as set forth.

7. In a planter, the combination of the hopper having a slot in the bottom thereof, the spring-actuated tongue mounted in said slot and having a feed-opening and a regulating-slide, and a revolving shaft journaled in the hopper and having bent or L-shaped arms engaging the said spring-actuated tongue, substantially as and for the purpose set forth.

8. In a seed-planter, the combination of the hopper having a slot in the bottom thereof, the shaft journaled at one end of said slot and having a spring-actuated tongue provided with a feed-opening, and a regulating-slide having an arm adapted to be secured adjustably to the said shaft, substantially as and for the purpose set forth.

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

JAMES DROMMOND SCHOFIELD.

Witnesses:

G. N. GIVENS,

A. B. ATER.