

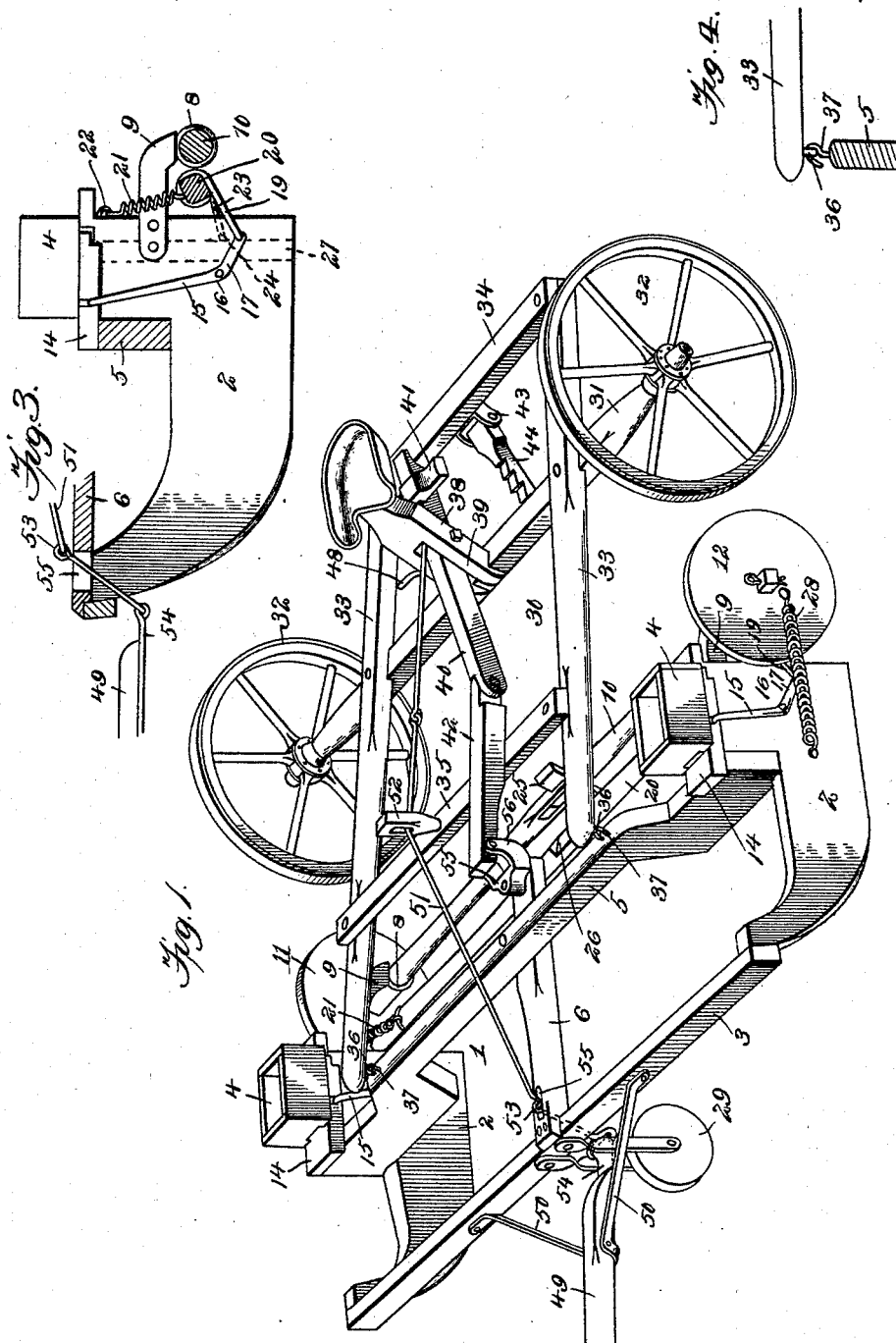
(No Model.)

2 Sheets—Sheet 1.

E. E. SCHLOSSER.
CORN PLANTER.

No. 526,749.

Patented Oct. 2, 1894.



Inventor

Witnesses

John Shaw
E. E. Schlosser

By *his* Attorneys.

Elias E. Schlosser,

Cashner & Co.

(No Model.)

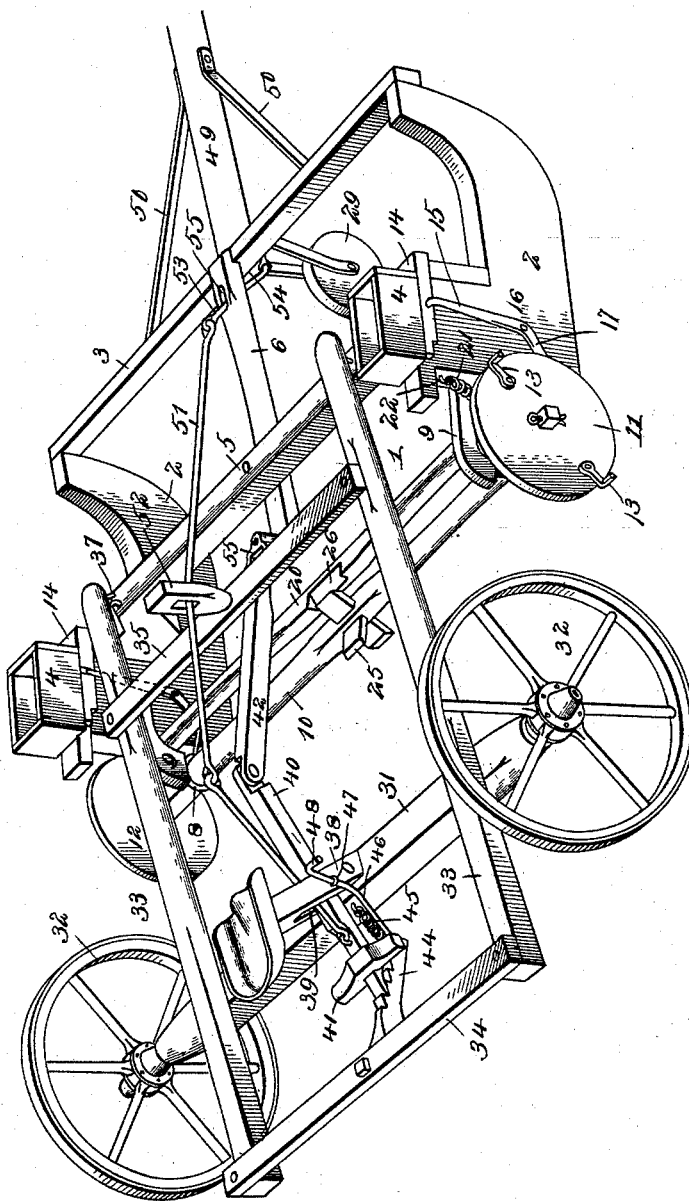
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Fig. 2.



Inventor

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Witnesses

John Shaw.
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C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

ELIAS E. SCHLOSSER, OF WILLIAMSPORT, INDIANA.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 526,749, dated October 2, 1894.

Application filed April 18, 1894. Serial No. 508,033. (No model.)

To all whom it may concern:

Be it known that I, ELIAS E. SCHLOSSER, a citizen of the United States, residing at Williamsport, in the county of Warren and State of Indiana, have invented a new and useful Corn-Planter, of which the following is a specification.

My invention relates to a check-row corn planter, and has for its object to provide improved means for operating the seed-slides at intervals, such means being capable of adjustment to adapt the mechanism for use in planting in drills; to provide means for automatically returning the parts to their operative positions when the planter-frame, which carries the furrow-opening shoes, is elevated by accident from the ground; and furthermore, to provide simple and efficient means for elevating the planter-frame when the planting mechanism is not in use.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims hereto appended.

In the drawings: Figure 1 is a perspective view of a planter embodying my invention, showing the parts in their operative positions. Fig. 2 is a similar view, showing the planter-frame elevated and the rear end of the tongue fastened to prevent vibration, as when turning at the end of a row or in passing to and from the field. Fig. 3 is a detail view of a portion of the planter-frame to show the seed-slide-operating mechanism. Fig. 4 is a detail view of the connection between the front ends of the bars of the sulky-frame and the planter-frame.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates the planter-frame, having the parallel furrow-opening shoes 2, which are connected at their front ends by a cross-bar 3, and at points adjacent to their rear ends, and in advance of the hoppers or seed-boxes 4, by the transverse beam 5. This transverse beam is connected, centrally, with the front cross-bar 3, by means of a draft-bar 6, which extends in rear of said beam and is prefer-

ably arranged upon a slight downward inclination toward its rear end.

Journaled in bearings 8, formed in brackets 9, projecting rearwardly from the furrow-opening shoes, is a transverse operating-shaft 10, to the extremities of which outside of the planes of the shoes, are fixed the ground-wheels 11 and 12. One of these ground-wheels is adapted to serve as a marker-wheel, and in the construction illustrated in the drawings, the markers 13 are attached to the ground-wheel 11, at the right side of the machine. The markers may be of any preferred construction.

14 represents the seed-slides, which are arranged in operative relation with the hoppers or seed-boxes, and to the same are attached the upper arms 15 of the bell-crank levers 16, said upper arms being loop-shaped with their parallel arms arranged respectively upon opposite sides of the planes of the furrow-opening shoes. The lower rearwardly-extending arms 17 of these bell-crank levers are connected by means of the rods 19 with the transverse vibrating pressure-bar 20. This pressure-bar is normally held in an elevated position by means of the coiled return-springs 21, which are attached to the extremities of the bar and depend from eyes 22, on the rear ends of the shoes, said springs also serving as the means for returning the seed-slides to their initial position after having been operated by the depression of the pressure-bar. The pressure-bar is further provided, adjacent to its extremities, with guiding-arms 23, which fit in guide-openings 24, in the rear ends of the shoes.

The operating-shaft is provided, at an intermediate point and preferably upon the longitudinal center of the machine, with an operating-wheel 25, which, in the construction illustrated in the drawings, consists of a series of radially-disposed rimless spokes or arms, which are beveled at their extremities to engage a beveled surface 26, at the center of the pressure-bar.

In operation, it will be seen that, as the operating shaft is rotated by the contact of the ground-wheels with the surface, the spokes or arms of the operating-wheel will

successively engage the pressure-bar, and by forcing the same downward and forward will operate the seed-slides at intervals to drop the seed through the chutes 27, at the rear ends of the furrow-opening shoes.

In order to provide against undesirably long intervals between adjacent hills, in case the rear ends of the furrow-opening shoes are elevated so as to remove the ground-wheels from contact, I have provided an adjusting spring 28, which is connected, at its rear end, to the ground-wheel 12, and at its front end to a fixed portion of the planter-frame. The tension of this spring is insufficient to affect the regular rotation of the ground-wheels and operating-shaft when the former are in contact with the ground, but is sufficient to turn said ground-wheels and shaft to an initial position when the ground-wheels are elevated from the ground. This initial position consists in the arrangement of one of the markers in contact with the surface of the ground and one of the spokes or arms of the operating-wheel in contact with the pressure-bar and about to operate the latter to plant a hill. Therefore, in case of the removal of the ground-wheels from contact with the ground, by the elevation of the rear end of the planter-frame, the planting-mechanism will be automatically brought to the initial or planting position, whereby, as soon as the ground-wheels again contact with the ground, a hill will be planted. To prevent the elevation of the rear end of the planter-frame, I provide a front supporting-roller 29.

In connection with the above described mechanism I employ a sulky or riding frame 30, consisting of the axle 31, provided with the supporting-wheels 32, the parallel side bars 33, which are loosely connected at their front ends to the transverse beam of the planter-frame, a rear cross-bar 34 connecting the extremities of the side bars in rear of said axle, and a transverse brace 35, connecting the side bars adjacent to their front extremities. The front ends of the side bars are preferably connected to the transverse beam of the planter-frame so as to allow free independent oscillation of both frames, and so as to enable the sulky frame to be detached from the planter-frame, and a simple and efficient form of connection, as shown in the drawings, consists of eyes 36, carried by the extremities of the side bars and engaging hooks 37, on the transverse beam of the planter-frame, said hooks being turned forward so as to prevent accidental disengagement of the two frames.

Rising from the axle of the sulky-frame, and inclining rearwardly toward its upper end, is a seat-standard 38, which, in the construction illustrated in the drawings, is bifurcated at its lower end, and fulcrumed. Preferably between the parallel arms 39, formed by this bifurcation, is a foot-lever 40, provided at its rear end with a foot-rest or cross-bar 41, and pivotally connected at its front

end to a bar 42, which, in turn, is pivotally connected at its front end to the rear projecting end of the draft-bar of the planter-frame. When the rear end of the foot-lever is elevated, as shown in Fig. 1, the rear end of the draft-bar is depressed, thus bringing the planting mechanism into operative position by allowing the ground-wheels to come in contact with the surface of the ground; and when the rear end of the foot-lever is depressed, as shown in Fig. 2, the rear end of the draft-bar is elevated, thus removing the ground-wheels from contact and throwing the planting mechanism out of operative position.

Pivotally connected to a bracket 43, secured to the rear transverse bar of the sulky-frame, is a locking-bar 44, provided, upon its front side, with notches for engagement with the rear tapered or beveled extremity of the foot-lever, a coiled spring 45 being attached to the free end of the locking-bar to hold the latter normally in position to engage the foot-lever.

Connected to the locking-bar adjacent to its free end, is a push-bar 46, which extends through a keeper 47, arranged upon one side of the seat-standard and terminating at its upper end in a tread 48, whereby the driver, by pressure thereon, may release the foot-lever and allow the parts of the planting mechanism to resume their operative positions.

The tongue 49 is fulcrumed upon the front end of a yoke 50, secured to the front cross-bar of the planter-frame, the rear end of said tongue being free for vertical vibration when the planter is in operation. It is necessary in turning the machine at the end of a row to bring it in position for a succeeding row, and in moving the machine to or from the field, to secure this free rear end of the tongue, and I accomplish the same by means of a draft-rod 51, which extends through a slotted guide 52, on the front cross-bar of the sulky-frame, and is connected at its front end, by means of a pivotal link 53, with a plate or extension 54, on the rear extremity of the tongue. Said link 53 extends through a guide-opening 55 in the draft-bar of the planter-frame, and the rear end of the rod 51 is attached to the foot-lever at a point adjacent to its rear end. When the foot-lever is in its normal position, and the planting mechanism is in operative position, the draft-rod 51 is slack, thus allowing the tongue to vibrate with the movements of the horses; and when the foot-lever is depressed to elevate the ground-wheel, said draft-rod is drawn taut, and the rear extremity of the tongue is secured in contact with the front cross-bar of the planter-frame, thus preventing vibration of the tongue.

In order to provide for a slight lateral vibration of the planter and sulky frames, independently of each other, the connection between the front end of the connecting-bar and the rear end of the draft-bar is formed by means of a pivotal bifurcated bracket 55, which is mounted upon the said draft-bar,

and the parallel arms 56 of which are arranged, respectively, upon opposite sides of said connecting-bar.

The operation of the above mechanism has been indicated in detail in the course of the description of the construction, and therefore further description at this point is unnecessary. It should be noted, however, that the planting mechanism is compact and simple in construction and all of the parts thereof are exposed to view, whereby necessary adjustments and repairs may be made without loss of time. It should be noted, furthermore, that, when preferred, the sulky-frame may be disconnected from the planter by the detachment of the front ends of the side-bars of the sulky-frame from the hooks upon the transverse beam of the planter-frame; and the detachment of the pivotal bracket which forms the connection between the draft-bar of the planter-frame and the connecting-bar carried by the sulky-frame.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention. Among such changes may be mentioned the substitution of an operating-wheel having a greater number of spokes or arms disposed at shorter intervals, whereby the machine is adapted for planting in drills. The operation of the parts will be the same, but the vibration of the seed-slide will be more rapid.

Having described my invention, what I claim is—

1. In a corn planter, the combination with furrow-opening shoes provided with seed-chutes and hoppers, and longitudinally movable seed-slides, of a transverse operating-shaft, a rimless operating-wheel carried by said shaft, means for rotating the operating-shaft, a transverse pressure-bar arranged in the path of the spokes or arms of the operating-wheel, and bell-crank levers connecting the extremities of the pressure-bar with the seed-slides, substantially as specified.

2. In a corn planter, the combination with furrow-opening shoes having seed-chutes, hoppers and seed-slides, of an operating-shaft, a rimless operating-wheel carried by said shaft, means for rotating the shaft, a pressure-bar arranged in the path of the spokes or arms of the operating-wheel and provided with terminal return-springs, and bell-crank levers fulcrumed upon the furrow-opening shoes, connected at their rear ends to the extremities of the pressure-bar and having looped upper arms engaged with and fitting in transverse grooves in the seed-slides, substantially as specified.

3. In a corn planter, the combination with furrow-opening shoes having seed-chutes, hoppers and seed-slides, of an operating-shaft, provided at an intermediate point with a rimless operating-wheel, a pressure-bar arranged in the path of the spokes or arms of said

wheel, operating connections between the pressure-bar and the seed-slides, ground-wheels fixed to the terminals of the operating-shaft, markers carried by one of said ground-wheels, and an adjusting spring connected to one of the ground-wheels and adapted to return the operating-shaft to its initial position when the ground-wheels are removed from contact with the ground, substantially as specified.

4. In a planter, the combination of a planter-frame carrying planting mechanism and provided with a longitudinally-disposed draft-bar, a tongue loosely connected at a point adjacent to its rear end to the planter-frame, a sulky-frame loosely connected to the planter-frame in advance of the rear end of the draft-bar, a foot-lever fulcrumed upon the sulky-frame and connected at its front end to the rear end of said draft-bar, means for locking the foot-lever, and connections between the foot-lever and the rear end of the tongue, whereby when the rear end of the draft-bar is elevated by the depression of the foot-lever, the tongue is locked against vibration, substantially as specified.

5. In a planter, the combination of a planter-frame carrying planting mechanism and provided with a central draft-bar, a tongue loosely fulcrumed to the planter-frame and having a free rear end, a sulky-frame loosely connected to the planter-frame in advance of the rear end of the draft-bar, a foot-lever fulcrumed upon the sulky-frame and connected at its front end to the rear end of the draft-bar, means for locking the foot-lever, a draft-rod connected at its rear end to the foot-lever and extending through a guide on the sulky-frame, and a link arranged in a guide adjacent to the front end of the draft-bar and connecting the front end of said draft-rod with a plate or extension on the rear end of the tongue, substantially as specified.

6. In a planter, the combination of a planter-frame carrying planting mechanism and provided with a front cross-bar, a transverse beam in rear of said bar, and a draft-bar supported by said transverse beam and bar and extending in rear of the beam, a tongue loosely fulcrumed to a yoke carried by the front cross-bar and having a free rear end, a sulky-frame having side-bars which are loosely connected at their front ends to the said transverse beam of the planter-frame, a foot-lever fulcrumed upon the sulky-frame, means for locking said foot-lever in its depressed position, a connecting-bar between the front end of the foot-lever and the rear end of said draft-bar, the connection being by means of a swiveled bracket, and a draft-rod connecting the foot-lever with the rear end of the tongue, substantially as specified.

7. In a planter, the combination with a planter-frame carrying planting mechanism and having a draft-bar arranged upon its longitudinal center, and a sulky-frame hav-

ing its side-bars loosely connected with the planter-frame in advance of the rear end of the draft-bar, of a foot-lever fulcrumed upon the sulky-frame and loosely connected at its
5 front end with the rear end of the draft-bar by an intermediate connecting-bar, a pivotal notched locking-bar 44 depending from the rear cross-bar of the sulky-frame in the path of the rear end of the foot-lever, a spring to
10 retain said locking-bar in position to engage the foot-lever, and a push-bar 46 connected

to the free end of the locking-bar and having a tread arranged within reach of the operator, substantially as specified.

In testimony that I claim the foregoing as 15 my own I have hereto affixed my signature in the presence of two witnesses.

ELIAS E. SCHLOSSER.

Witnesses:

J. H. SIGGERS,
E. G. SIGGERS.