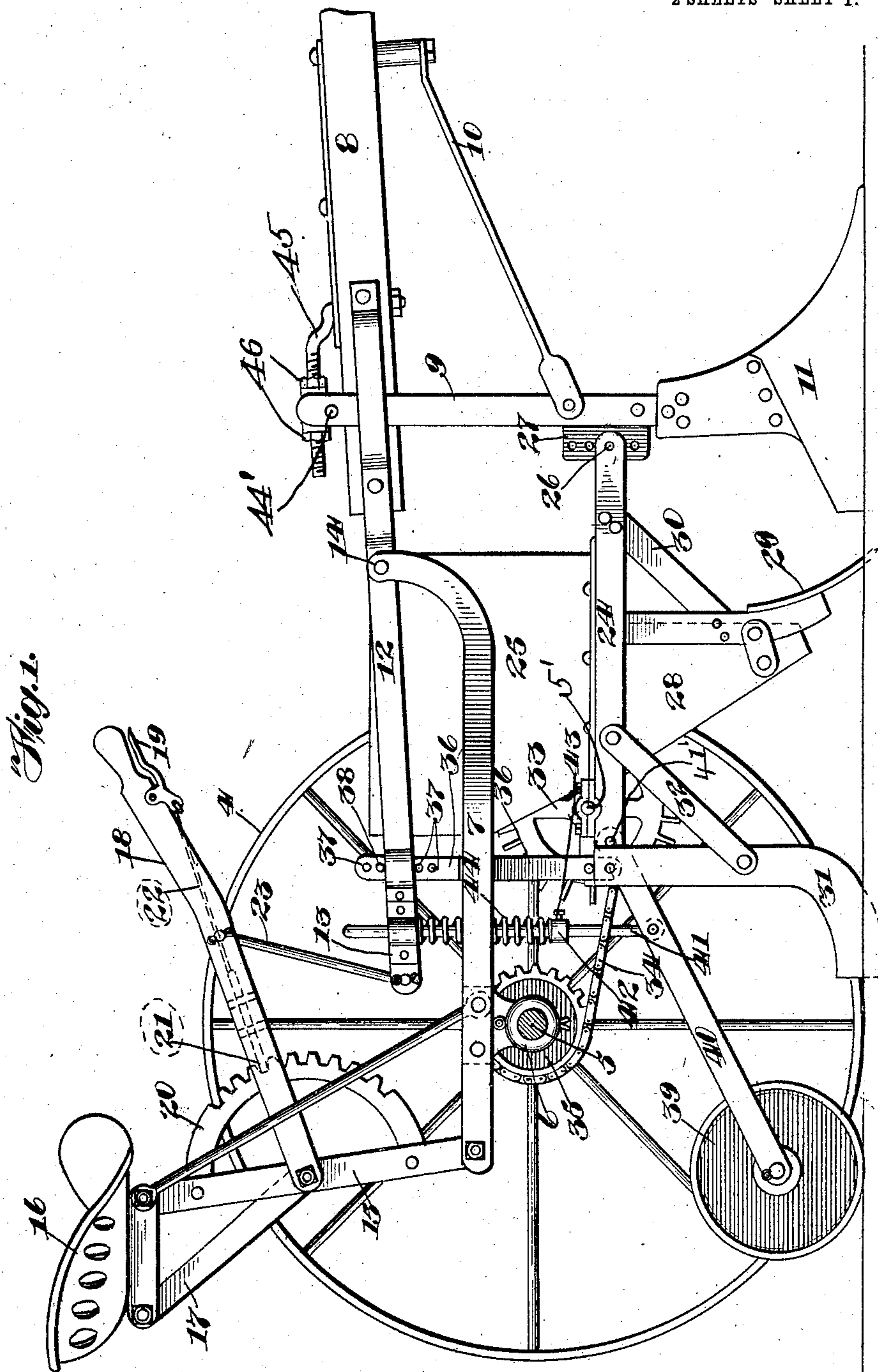


No. 791,161.

PATENTED MAY 30, 1905.

W. L. PAUL.
COTTON PLANTER.
APPLICATION FILED OCT. 22, 1902.

2 SHEETS—SHEET 1.



Witnesses:

Hugh C. Pearson
O. M. Kernich

Inventor:

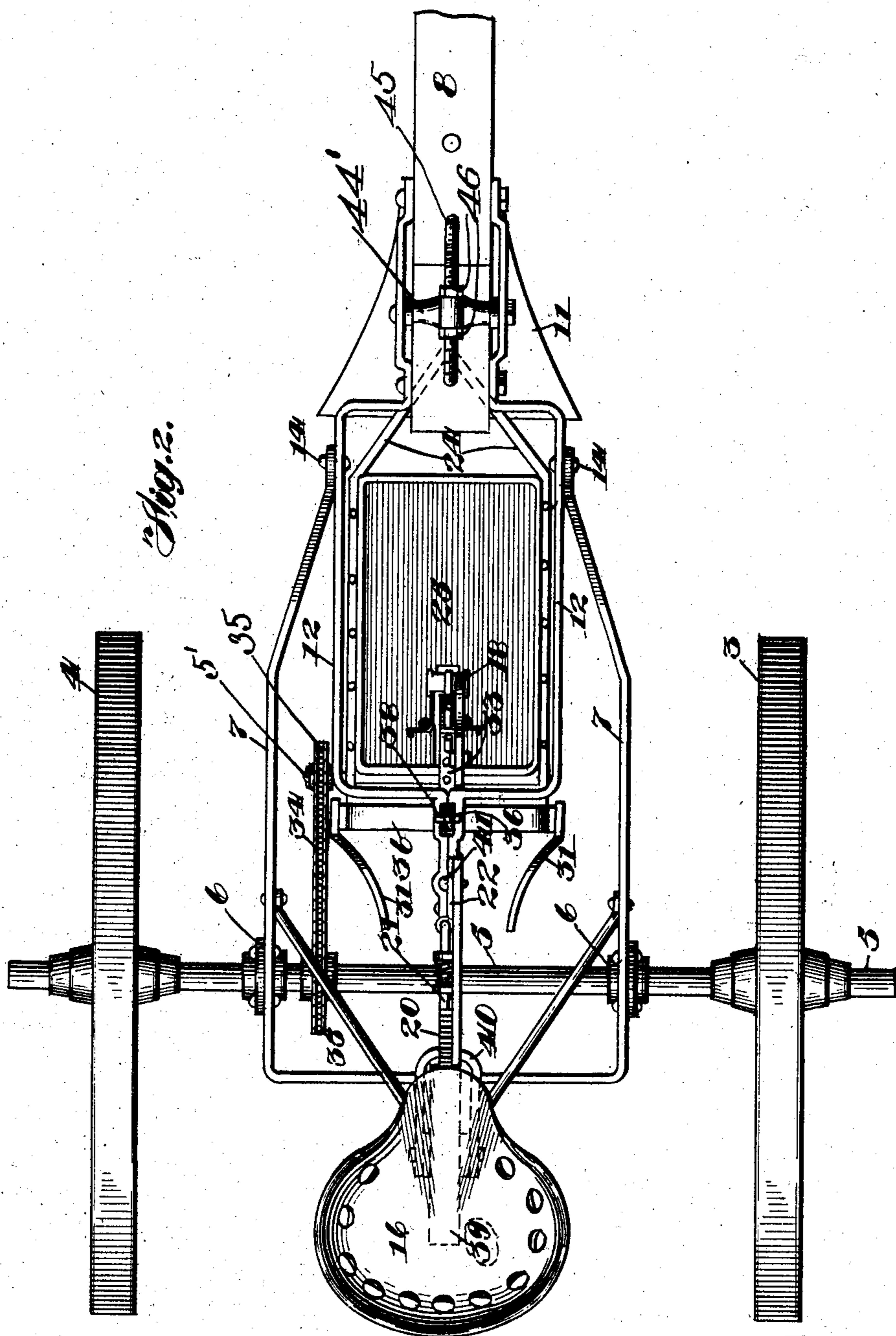
William L. Paul,
by Bond Adams & Isaac Jackson,
his attys.

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Inventor:

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UNITED STATES PATENT OFFICE.

WILLIAM L. PAUL, OF BRADLEY, ILLINOIS, ASSIGNOR TO DAVID BRADLEY MANUFACTURING COMPANY, OF BRADLEY, ILLINOIS, A CORPORATION OF ILLINOIS.

COTTON-PLANTER.

SPECIFICATION forming part of Letters Patent No. 791,161, dated May 30, 1905.

Application filed October 22, 1902. Serial No. 128,365.

To all whom it may concern:

Be it known that I, WILLIAM L. PAUL, a citizen of the United States, residing at Bradley, in the county of Kankakee and State of Illinois, have invented certain new and useful Improvements in Cotton-Planters, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to planters, and is particularly adapted for cotton-planters, although it may be used in other kinds of seeding-machines; and its principal object is to provide a planter by which the ground may be opened, a furrow or trench to receive the seed made in the ground, and the seed deposited in the trench and covered and in which the frame carrying the plow, the furrow-blade, the coverers, and the seedbox may be lifted as a whole out of the ground or lowered into it a proper depth, and in which at the same time the portion of the frame which contains the seedbox, the blade for digging the trench or furrow, and the coverers may be free to rise and fall independently of the first-named frame. I attain this object as hereinafter described and as illustrated in the drawings.

That which I regard as new will be set forth in the claims.

In the drawings, Figure 1 is a side elevation, and Fig. 2 is a top or plan view.

Referring to the drawings, 3 4 indicate wheels, one of which is keyed or otherwise secured to an axle 5, on which they are mounted and which is journaled in suitable bearings 6, secured to the rear or seat frame 7, hereinafter described.

8 indicates a tongue.

9 indicates a standard, which is pivotally supported upon the rear end of a brace 10, secured to the tongue 8 in such a way that the standard 9 may swing vertically forward and backward upon such pivotal support. The upper end of the standard 9 is bifurcated and extends upward upon each side of the tongue 8 and carries a cross-bar 44', which is pivoted between the bifurcated upper end of the standard 9.

45 indicates a rod, which is secured to the upper surface of the tongue 8 and passes

through a suitable opening in the cross-bar 44' and is screw-threaded.

46 indicates nuts carried on the screw-threaded end of the rod 45 upon each side of the cross-bar 44'. By the adjusting of the nuts 46 the upper end of the standard 9 may be moved forward or backward, the standard swinging vertically on its pivoted connection with the brace 10.

11 indicates a spreader-plow or sweep, which is secured to the lower end of the standard 9 and whose function it is to open up the ground ahead of the seeding devices, hereinafter described.

12 indicates a frame, which is secured at its forward end to the tongue 8, so as to be rigid therewith. The frame 12 at the rear of the tongue is bent or otherwise formed into a rectangular shape, as is best shown in Fig. 2, so as to surround the seedbox, hereinafter described, and is provided at its rear end with a rearward projection 13. The rear or seat frame 7 is pivoted at its forward end by bolts 14 to the sides of the rectangular portion of the frame 12 near the rear end of the tongue 8, forming a pivotal point of support on which the tongue and front frame, which, as said above, are rigid with one another, may move.

15 indicates a standard, which is secured to the rear of the rear frame 7 and supports upon its top a seat 16, braced by a brace 17.

18 indicates a lever pivoted to the standard 15 and provided with a bell-crank lever 19, pivoted in its forward end.

20 indicates a segmental rack-bar, which is secured to the standard 15.

21 indicates a dog, of the usual form and construction, adapted to engage the teeth of the segmental rack 20 and is operated in the usual manner by means of a link 22, connected at one end with said dog 21 and at the other end with said bell-crank lever 19.

The lever 18, bell-crank lever 19, dog 21, link 22, and segmental rack 20 may be of any approved form and construction, and as they form of themselves no part of my present invention need no further description.

23 indicates a link, which is pivotally connected at one end with the lever 18 and at the

other end with the rearward projection 13 of the frame 12. By moving the lever 18 up or down the front frame 12 and the tongue 8, with the plow 11 and seeding devices, herein-
 5 after described, may be raised or lowered from the point at which the forward end of the tongue 8 is secured to the neck-yoke of the horses, (not shown,) so that the plow and seed-
 10 ing devices, hereinafter described as a whole, may be raised from the ground or lowered into it to any required depth, the lever 18 locking, by means of the dog 21, to the seg-
 mental rack 20 in order to hold the parts in the desired position.

15 24 indicates a frame, which is preferably formed of a steel bar bent into a shape to receive and support the seedbox 25. The forward ends of the bar which forms the frame 24 are brought together and are pivotally con-
 20 nected at their forward ends by means of a pin 26, which passes through suitable openings in a lug 27, secured to the rear side of the standard 9. The lug or projection 27 contains several openings in order that the
 25 point of support of the frame 24 may be varied as occasion may demand. The seedbox 25 is, as was said, supported in the frame 24 and is provided with a seed-chute 28, through which the seed may drop to the ground.

30 29 indicates a furrow-opener, which is secured to the forward side of the chute 28 below the seedbox 25, behind the plow 11, and is suitably braced by a brace 30. The furrow-opener 29 is of a shape suitable to plow
 35 a trench in the ground behind the spreader-plow 11, into which trench the seed may be deposited.

31 indicates coverer-blades, of any well-known form and description, secured to the
 40 rear part of the frame 24 and braced by suitable braces 32. The coverer-blades 31 are of any well-known form and description and are adapted to cover the seed deposited in the trench formed by the furrow-opener 29. The
 45 seedbox 25 is equipped with any suitable form of seeding mechanism—such as a wheel 33, driven by sprocket-chains 34 and sprocket-wheels 35, secured to the axle 5 and shaft 5'. As these seeding devices may be of any ap-
 50 proved form and construction and form no part of my present invention, they need not be further described here.

The seat-frame 7 and frame 12, connected together as above described, may be called
 55 the "main" frame of the machine, and the frame 24, pivotally connected therewith, may be called the "supplementary" frame.

The supplementary frame 24, extending rearward, may be said to be within the main
 60 frame in the sense that the vertical planes of its sides lie within the vertical planes of the sides of the frames 12 and 7.

36 indicates an upright, which is bifurcated at its lower end and is secured to the rear part
 65 of the frame 24, the upper end of which

passes upward through a suitable opening in the rearward projection 13 of the frame 12, so as to slide longitudinally of itself therein. The upper end of the upright is provided with
 70 several openings 37, adapted to receive a pin 38, which may bear upon the upper side of the rearward projection and prevent the up-
 right 36, and with it the frame 24 and seed-
 75 box 25, from dropping any lower than may be desired. By means of the several open-
 ings the depth to which the frame 24, with the seedbox 25, may drop may be suitably con-
 trolled.

39 indicates a presser-wheel, which is jour-
 80 naled in the rear ends of a bar 40, which is pivoted at 41' at its front end to the frame 24.

41 indicates a rod, which is pivoted at its lower end to the bar 40 and passes upward through a suitable opening in the rearward
 85 projection 13 of the frame 12.

42 indicates a collar, which is secured by a set-screw 43 to the rod 41.

44 indicates a spiral expansion-spring, which bears at its lower end upon the top of the collar 42 and at its upper end below the
 90 projection 13 of the frame 12, whereby the presser-wheel 39 may be pressed upon the ground, so as to assist in covering the seed with a variable pressure and at the same time
 95 may be free to rise and fall over inequalities of the surface.

By means of the devices above described by moving the lever 18 the tongue and frame 12 may be raised from the ground by the driver sitting in the seat 16, so that the plow 11 may
 100 be raised from the ground, lifting also with it the frame 24, raising the seedbox 25, and lifting the plow 29 and coverers 31 entirely out of the ground whenever it may be de-
 105 sired, and also by lowering the lever 18 the frame 12 may be lowered, so as to allow the plow 11 to enter the ground to spread the ground in front of the plow 29. At the same time the frame 24 will fall with the frame 12,
 110 so as to permit the plow 29 to plow a seed-trench in the ground and the coverers 31 to properly cover the seed. At the same time the frame 24, which supports the seedbox, the plow 29, and the coverers 31, will be free to rise and fall on the pivotal point 26 of the
 115 frame 24, whereby the plow 29 and coverers 31, being held in the ground by the weight of the frame 24 and the seedbox 25 and attached devices, may engage the ground yieldingly, so as to rise and fall as the planter is in oper-
 120 ation.

That which I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination with an axle, wheels mounted thereon, a frame journaled on said
 125 axle, a tongue pivotally connected with said frame, and means mounted on said frame and adapted to raise and lower said tongue, of a seedbox-frame pivotally connected with said tongue and adapted to swing vertically on its
 130

pivot, a seedbox carried by said seedbox-frame, and means for variably limiting the downward movement of said seedbox-frame, substantially as described.

2. The combination with an axle, wheels mounted thereon, a frame journaled on said axle, a tongue pivotally connected with said frame, a plow carried by said tongue, and means mounted on said frame for raising and lowering said tongue, of a seedbox-frame pivotally connected with said tongue and adapted to swing vertically on its pivot, a seedbox carried by said seedbox-frame, and means for variably limiting the downward movement of said seedbox-frame, substantially as described.

3. The combination with an axle, wheels mounted thereon, a frame journaled on said axle, a tongue pivotally connected with said frame, a plow carried by said tongue, and means mounted on said frame for raising and lowering said tongue, of a seedbox-frame pivotally connected with said tongue and adapted to swing vertically on its pivot, a seedbox carried by said seedbox-frame, means for variably limiting the downward movement of said seedbox-frame, and a furrow-opener mounted on said seedbox-frame, substantially as described.

4. The combination with an axle, wheels mounted thereon, a frame journaled on said axle, a tongue pivotally connected with said frame, a plow carried by said tongue, and means mounted on said frame for raising and lowering said tongue, of a seedbox-frame pivotally connected with said tongue and adapted to swing vertically on its pivot, a seedbox carried by said seedbox-frame, means for variably limiting the downward movement of said seedbox-frame, a furrow-opener mounted on said seedbox-frame, and coverers carried by said seedbox-frame behind said furrow-opener, substantially as described.

5. The combination with an axle, wheels mounted thereon, a frame journaled on said axle, a tongue pivotally connected with said frame, a plow carried by said tongue, and means mounted on said frame for raising and lowering said tongue, of a seedbox-frame pivotally connected with said tongue and adapted to swing vertically on its pivot, a seedbox carried by said seedbox-frame, means for variably limiting the downward movement of said seedbox-frame, a furrow-opener mounted on said seedbox-frame, coverers carried by said seedbox-frame behind said furrow-opener, a support pivoted to said seedbox-frame and adapted to swing vertically on its pivot, a presser-wheel journaled on said support, and a spring bearing on said support and adapted to yieldingly hold said presser-wheel in engagement with the ground, substantially as described.

6. In a seeding-machine, the combination of a tongue, a wheel-frame pivotally connected at its forward end to said tongue, a supplementary frame, means pivotally connecting said supplementary frame with said tongue,

and seeding devices carried by said supplementary frame, substantially as described.

7. In a seeding-machine, the combination with a main frame, of a standard connected with said main frame, and a sweep carried by said standard, of a supplementary frame extending rearward of said standard and having a pivotal connection with said main frame, and a seedbox and shovels supported by the supplementary frame, substantially as described.

8. In a seeding-machine, the combination of a tongue and carrying-wheels, of a main frame supported on said carrying-wheels and connected with said tongue, a standard supported by said tongue, a sweep mounted on said standard, a supplementary frame pivotally connected with said standard and extending rearward therefrom, and a seedbox and shovels supported by said supplementary frame, substantially as described.

9. In a seeding-machine, the combination of a main frame, a tongue, a sweep carried thereby, a supplementary frame pivotally connected with said sweep and extending rearward therefrom, and seeding devices carried by said supplementary frame, substantially as described.

10. In a seeding-machine, the combination of a carriage, draft devices, a sweep connected with the carriage, a frame pivotally connected at the front with said draft devices through said sweep, and seeding devices carried by said frame, substantially as described.

11. In a seeding-machine, the combination of a carriage, draft devices, a sweep pivotally connected with the carriage, a frame pivotally connected at the front with said sweep, and seeding devices carried by said frame, substantially as described.

12. In a seeding-machine, the combination of a carriage, draft devices, a sweep connected with the carriage, a frame pivotally connected at the front with said draft devices through said sweep, and seeding devices carried by said frame, said frame lying below said carriage, substantially as described.

13. In a seeding-machine, the combination of a carriage, draft devices, a sweep connected with the carriage, a frame pivotally connected at the front with said draft devices through said sweep, and a seedbox, a furrow-opener, and covering devices carried by said frame.

14. In a seeding-machine, the combination of a carriage, a sweep connected with the carriage, a frame pivotally connected at the front with said sweep, and seeding devices carried by said frame.

15. In a seeding-machine, the combination of a carriage, a sweep connected with the carriage, a frame pivotally connected at the front with said sweep, seeding devices carried by said frame, and means for raising said frame out of operative position.

16. In a seeding-machine, the combination

of a tongue, a wheel-frame pivotally connected with said tongue, a sweep connected with said tongue, a frame pivotally connected at the front with said sweep, and seeding devices
5 carried by said latter frame.

17. In a seeding-machine, the combination of a tongue, a wheel-frame pivotally connected with said tongue, a sweep connected with said tongue, a frame pivotally connected at the
10 front with said sweep, seeding devices carried by said latter frame, and means for raising said frame out of operative position.

18. In a seeding-machine, the combination of a tongue having a rearward extension, a
15 wheel-frame, a lifting-lever mounted on said wheel-frame and connected with said tongue extension, seeding devices pivotally connected

with said tongue, and means for vertically moving said seeding devices with said tongue extension. 20

19. In a seeding-machine, the combination of a tongue having a rearward extension, a wheel-frame, a lifting-lever mounted on said wheel-frame and connected with said tongue extension, seeding devices pivotally connected
25 with said tongue, means for vertically moving said seeding devices with said tongue extension, and a sweep in advance of said seeding devices.

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Witnesses:

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