

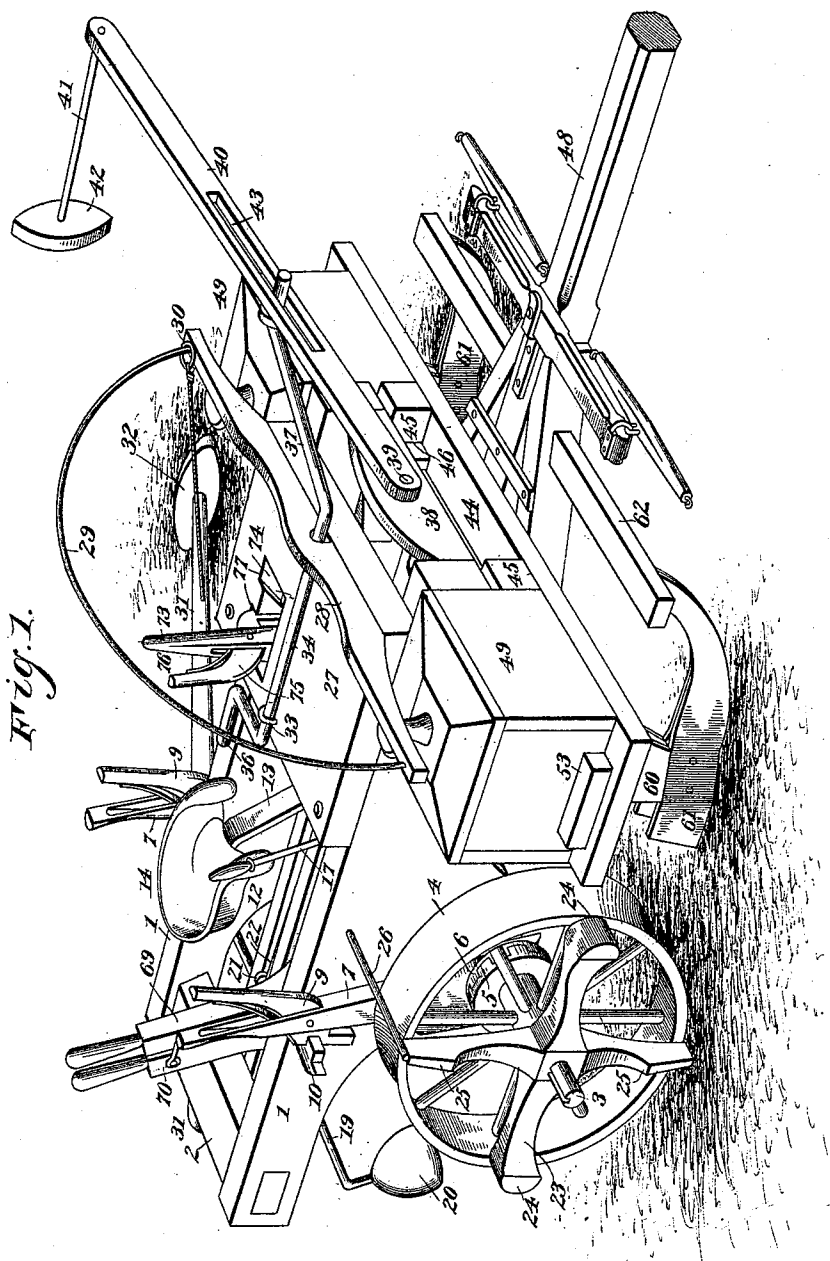
(No Model.)

3 Sheets—Sheet 1.

J. H. PETERS.
CORN PLANTER.

No. 497,339.

Patented May 16, 1893.



Witnesses;

John H. Siggers,

By *his* Attorneys,

C. A. Snow & Co.

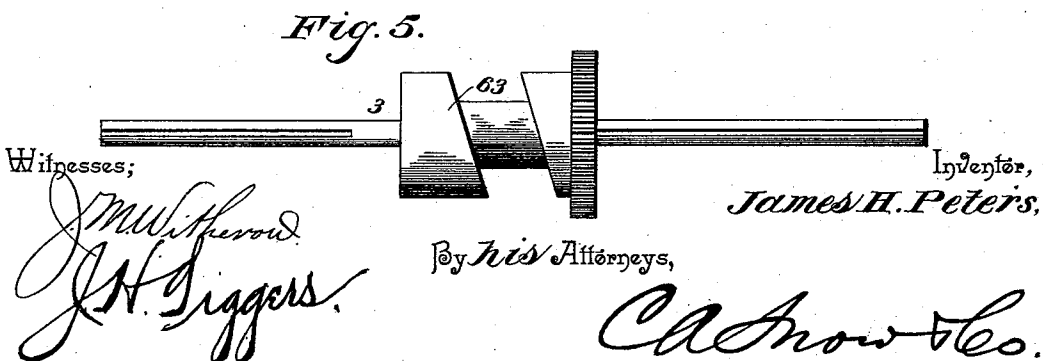
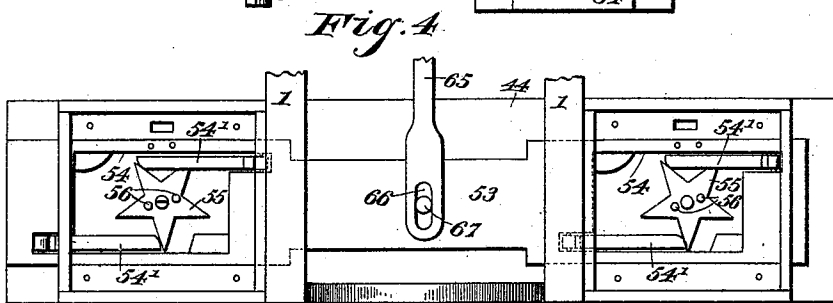
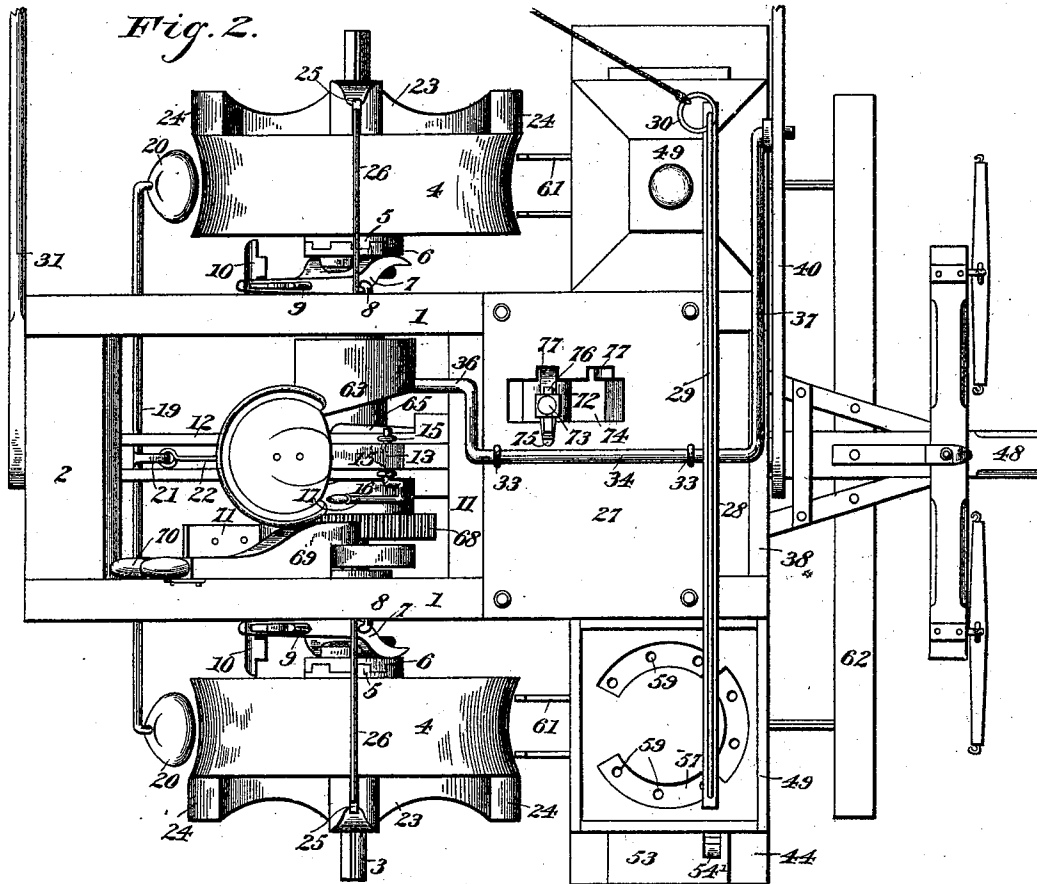
Inventor,

James H. Peters,

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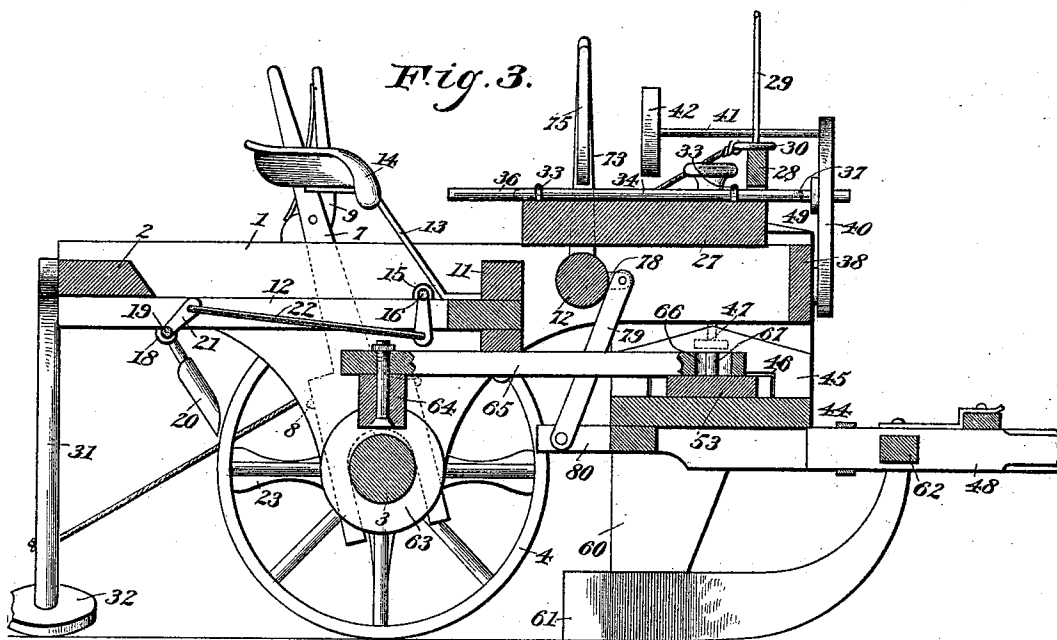
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3 Sheets—Sheet 3.

J. H. PETERS.
CORN PLANTER.

No. 497,339.

Patented May 16, 1893.



*Myself and
J. H. Peters,*

By his Attorneys,

C. A. Snow & Co.

Inventor,
James H. Peters,

UNITED STATES PATENT OFFICE.

JAMES HARDEN PETERS, OF STOWERS, KENTUCKY.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 497,339, dated May 16, 1893.

Application filed December 5, 1892. Serial No. 454,160. (No model.)

To all whom it may concern:

Be it known that I, JAMES HARDEN PETERS, a citizen of the United States, residing at Stowers, in the county of Simpson and State of Kentucky, have invented a new and useful Corn-Planter, of which the following is a specification.

My invention relates to improvements in corn planters; the objects in view being to provide a machine of simple construction and operation, the same being designed to uniformly plant corn in hills without the employment of check-row wires, their attendant expense, and additional labor.

With the above as the main objects of my invention, the same consists in certain features of construction and combinations of parts hereinafter specified and particularly pointed out in the claims.

Referring to the drawings:—Figure 1 is a perspective view of a corn-planter embodying my invention. Fig. 2 is a plan view thereof. Fig. 3 is a longitudinal sectional view taken centrally through the machine. Fig. 4 is a plan view of the hoppers, the seed-disk and cut-off removed. Fig. 5 is a detail of the axle. Fig. 6 is a vertical longitudinal section through one of the hoppers and seed-spout or tube. Fig. 7 is a detail in side elevation of the lever and locking pawl for operating the axle.

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

In practicing my invention I employ opposite side bars 1, which are widened toward their centers and are connected at their rear ends by a transverse bar 2. At their widest portions, or in other words, at the centers of the side bars, the same are provided with journaled bearings, and mounted loosely for rotation in said bearings is the axle 3. The axle 3 extends beyond its bearings, and carries ground-wheels 4, which preferably are provided with concave tires. The hubs or inner faces of the ground wheels are provided with teeth 5 and are loosely mounted on the axle. Clutch-sleeves 6 having teeth are splined upon the axle and may be thrown into engagement either singly or simultaneously with the teeth of the hubs through the medium of a pair of levers 7, that are fulcrumed in brackets 8 with which each of the side bars are provided. Each lever has pivoted in a

slot formed therein a locking-pawl 9, and the same may engage the inner or the outer notches of notched locking-bars 10 extending from the side bars. When the outer notches are engaged by the pawls, the clutch-sleeves are out of engagement with the hubs of the wheels, so that the latter are free to revolve independent of the axle, but when the pawls are engaged with the inner notches the lower ends of the levers have been swung outward and the clutch-sleeves engaging the toothed hubs of the wheels, the axle and wheels will therefore move together, and when this is accomplished the motion, as hereinafter described, will be imparted to the feeding mechanism of the machine.

A transverse bar 11 connects the side-bars 1 intermediate their ends, and a central bar 12 connects the intermediate bar 11 with the cross-bar 2 at the rear end of the frame. Upon this bar 12 there is supported the seat standard 13, the seat 14 surmounting the standard and thus accommodating the driver who is seated between the two levers at the opposite sides of the machine, whereby he may readily operate the same. Bearings 15 are located at opposite sides of a slot in the longitudinal bar 12, and in these bearings a short cranked rock-shaft 16 is journaled, one end of which is extended upward beyond the bearings to form an operating lever or arm 17. In bearings 18 located upon the under sides of the bars 1 near their rear ends a rock-shaft 19 is journaled, and the same at its ends carries convex scraping-blades 20. The center of this rock-shaft is provided with a cranked portion 21, and the same is by a link 22 connected loosely with the central cranked portion of the rock-shaft 16. It will thus be seen that the driver by manipulating the lever 17 may swing the scraping-blades into and out of contact with the concave rims of the wheels, and thus eradicate therefrom any adhering soil.

Upon each end of the axle beyond the ground wheels there is rigidly secured thereupon rotary markers 23, and each marker consists of four radiating arms, two of which are provided with hill marking ends 24, and the remaining two of which are plain or reduced toward their ends as indicated at 25. Indicating rods 26 extend from each of the side

bars 1 immediately above the axle, and the same are used in conjunction with the markers just described in a manner that will hereinafter be made apparent.

5 Surmounting the side-bars 1 near their front ends is a platform 27, and secured to the same at its front edge is a transverse yoke 28 which supports a bowed runner or track 29. A ring 30 is loosely mounted on the runner
10 and adapted to travel from one end to the other thereof, and to this ring is connected the cord or chain the rear end being secured to a marking-bar 31 carrying a marker 32 and pivoted at its inner end to the center of the rear cross bar 2 of the framework. This
15 marking bar may be swung to either side of the machine and in so doing the ring will travel over the runner to the opposite end and the chain or rope connecting the ring with
20 the marking bar and by which the marking-bar is swung will be carried up over the mechanism of the machine and over the head of the driver or operator.

In bearings 33 located longitudinally-opposite each other upon the platform 27 a rock-
25 shaft 34 is journaled, the ends of which extend beyond the platform. The rear or inner end of the rock-shaft is bent to form a crank handle 36 and the outer or forward end a long crank arm 37. A block 38 connects the two
30 ends of the side-bars 1 in advance of the platform, and to the same is pivoted as at 39 an arm 40, which at its outer end is provided with a rearwardly-extending rod 41 carrying a double-ended marker 42. The arm 40 is provided
35 with a longitudinal slot 43, and in the same loosely rides the extremity of the crank-arm 37. It will thus be seen that the driver while perched upon his seat may by operating the
40 crank-handle swing the arm 40 to either side of the machine.

The seed-platform 44 is located under the front ends of the side-bars 1 in advance of the wheels and is provided upon its upper side
45 at each side of its center with convexed bolster-blocks 45 whose lower edges are recessed or provided with openings 46 and whose upper convexed portions are loosely connected by couplings 47 with the lower edges of the
50 side-bars 1. A draft-tongue 48 is secured to the seed-platform and carries the usual double and single trees. Seed hoppers 49 surmount the seed-platform at the outersides of the side-bars 1 and have openings in their side walls
55 which agree with the openings in the bolsters. Above these openings in the hoppers the bottoms 50 thereof are located, and the bottoms are provided with central circular openings 51 and in rear of the same with discharge
60 openings 52. A transversely-reciprocating seed bar 53 surmounts the seed-platform and is mounted in the openings in the bolster and walls of the hoppers, and said seed-bar is provided near its ends with openings 54 which
65 align with the central openings in the hopper bottoms. At diagonally opposite corners of its openings the seed bar has loosely pivoted

thereto gravity-pawls 54', whose free ends ride loosely over the corn platform and alternately engage the radial arms of a star-shaped plate
70 55, one of which is located upon the seed-platform below the central opening of each of the hopper bottoms, and each plate is provided with a plurality of upwardly-disposed pins 56. Circular seed-disks 57 surmount the bottoms
75 of the hoppers and are provided with openings 58 through which the pins of the plates take. Each seed plate is further provided with an annular series of perforations 59, which are designed to be successively brought
80 into register with the discharge openings in the bottoms of the hoppers. From the discharge openings in the bottoms of the hoppers and platforms which are but continuations of those in the hoppers, depend the usual seed-
85 tubes 60, which are located in the runners 61, the forward ends of said runners being secured to a transverse bar 62 which is supported by the draft-tongue and is therefore rigid with the seed-platform.
90

Between its bearings the axle is provided with a grooved cam 63, and moving in the track of the cam is a loose anti-friction roller 64, which is carried by the rear end of a vibratory lever 65 that is fulcrumed on the under
95 side of the intermediate cross-bar 11, and has its front end slotted at 66 and loosely connected or engaged with a stud 67 that extends upward from the seed-bar, whereby as the axle rotates the cam serves to oscillate or
100 vibrate the lever and it in turn reciprocates in a transverse manner the seed-bar, thus feeding through the instrumentality of the ratchet or star-shaped disks the seed disks of the hoppers. At one side of the cam the axle
105 is provided with a cog-wheel 68, and at one side of the cog-wheel, which is fast upon the axle, there is loosely connected or journaled a vibrating-lever 69, which has pivoted thereto a pawl-lever 70, the lower end of which is de-
110 signed to engage with the teeth of the cog-wheel, but is normally maintained out of such engagement by means of a spring 71 interposed between it and the aforesaid lever.

Journaled in the side bars 1 below the platform 27 is a rock-shaft 72, and rigidly secured thereto is a lever 73 that extends upward through an opening 74 formed in platform 27. This lever is provided with a locking pawl 75 spring-pressed by a spring 76 so
120 that its lower end will engage with either one of a pair of notches 77 formed in the edge of the opening in the platform. Short rock-arms 78 extend from the rock-shaft and the same are connected loosely by means of links
125 79 with the rear extremities of the hounds 80 which are secured rigidly to the under side of the seed-platform and project a slight distance in rear thereof. This completes the construction of the machine, and it will be
130 seen that by a manipulation of those levers at the sides of the frame either one or both of the wheels may be made rigid with the axle or independent thereof; furthermore that

when said wheels are loose or independent of the axle, the axle will be rotated through the medium of the lever and lever-pawl at the side of the driver and the cog-wheel of the axle so that the indicating-arms carried by the axle may be rotated or brought to a proper point for a purpose hereinafter apparent; and finally it will be seen that by a manipulation of a lever controlling the rock-shaft the runners may be set into the ground so as to form a furrow for planting the seed, or withdrawn from such lowered position. Such movement upon the parts of the runners is permitted by reason of the loose connection between the framework and the seed-platform, which has been previously described.

To operate the machine the lever at the side of the driver is oscillated so as to bring the plain or unheaded arms of the rotatable indicators opposite the indicating-arms or pointers that project from the side bars after which the levers at the sides of the frame are swung inward and locked, thus locking the ground-wheels and axle together. The rock-shaft is then operated by its lever in the manner described, so as to lower the runners into the ground or into operative position, and the marking-bars swung to the proper side of the machine. The machine is then started and the first row planted. The parts are so provided in the present instance that two corn-hills will be formed with every one revolution of the ground-wheels, and at points opposite the corn-hills the headed indicating arms will make an impression in the soil so as to indicate the points of planting. When the machine has reached the end of the row or field and it is desired to turn the same, the levers at the sides of the machine are swung outward so as to disengage the clutches with the wheels, and thus the machine may swing around without operating the planting mechanism. When swung around to travel in the reverse direction from which it started, or to form the second row, the marker-bar or arm is reversed and the driver ascertains that the tongue or draft-pole is in direct alignment with the previously made mark; next he ascertains if the indicator at the front of the machine is directly over the first hill of the row. If this be not so, then it is necessary to move the machine until it is. Such movement may be accurately accomplished by means of the lever at the side of the driver; after which he adjusts his rotatable hill-markers so that the plain arms thereof are directly under the indicating wire or rod extending from the side of the machine. He is now ready to plant the second row, and at the end of this row the operation is repeated, so that when the field has been planted the rows are absolutely uniform. Should the machine come to an obstruction around which it is necessary to drive, the parts may be thrown

out of operative position, as will be obvious, and when the opposite side of the obstruction is reached, the machine may be started in the same manner as when at the beginning of a row.

It will be seen that the machine is comparatively simple in its mechanism, comprising few parts, is adapted to uniformly plant, and is under complete and convenient control of a single operator. It will of course be understood that the seed-chute 60, is provided with the usual flint-valve 60^a, the same performing its usual function, and being provided at its upper end with the bent or L-shaped arm 60^b which is engaged and oscillated by two pins 60^c which depend from the slide 53.

Having described my invention, what I claim is—

1. In a planter, the combination with the rectangular frame provided upon its upper side with longitudinally-opposite bearings, of a rock-shaft mounted in the bearings and terminating at its front and rear ends in crank-arms, a lever or arm pivoted at its inner end to the frame-work and longitudinally-slotted to engage the outer crank arm, and an indicator terminating transversely opposite the planting mechanism and carried by said arm, substantially as specified.

2. In a planter, the combination with the rectangular platform comprising the opposite side bars, the axle and the ground-wheels for supporting the same, of a seed-platform located below the side bars opposite, convexed bolsters surmounting the platform and loosely coupled with the side bars of the framework, planting mechanism carried by the platform, and means for inclining the front or rear edge of the platform, substantially as specified.

3. In a planter, the combination with the rectangular platform, the axle and ground wheels, of a seed-platform carrying the planting mechanism, convexed bolsters surmounting the seed-platform and loosely coupled with and supporting the side bars of the framework, hounds secured to the under side of the seed-platform and extending in rear thereof, a rock-shaft journaled in the side bars of the frame, rock-arms extending from the shaft, links loosely connecting the ends of the rock-arms with the rear ends of the hounds, a superimposed platform having an opening provided with locking notches at one side thereof, and a lever extending from the rock-shaft through the opening and provided with a pawl for engaging the notches, substantially as specified.

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

JAMES HARDEN PETERS.

Witnesses:

GEO. C. HARRIS,
C. B. MOORE.