

(No Model.)

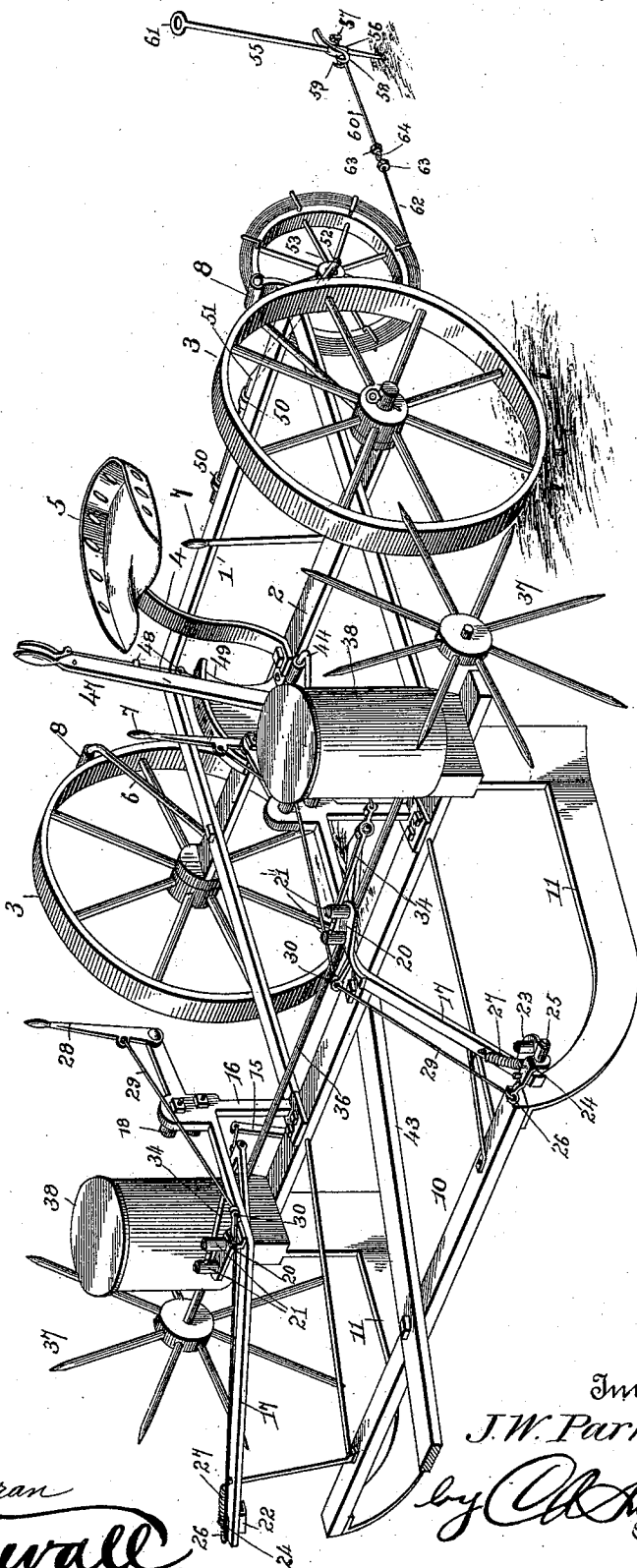
3 Sheets—Sheet 1.

J. W. PARKER.
PLANTER.

No. 528,235.

Patented Oct. 30, 1894.

FIG. 1.



Witnesses:

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(No Model.)

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FIG. 2 -

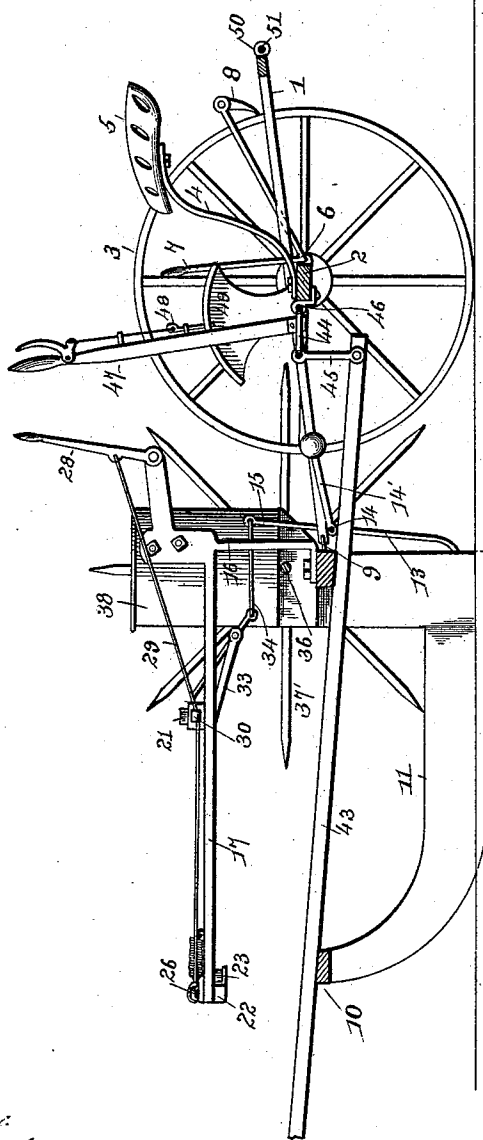
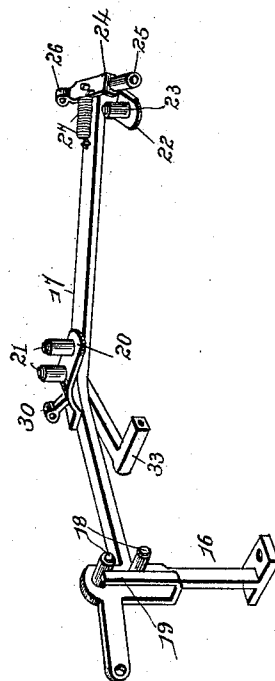


FIG. 5.



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(No Model.)

3 Sheets—Sheet 3.

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FIG-6-

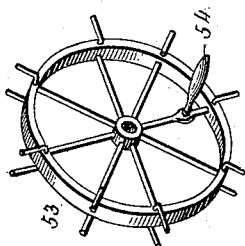


FIG-7-

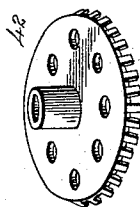


FIG-3-

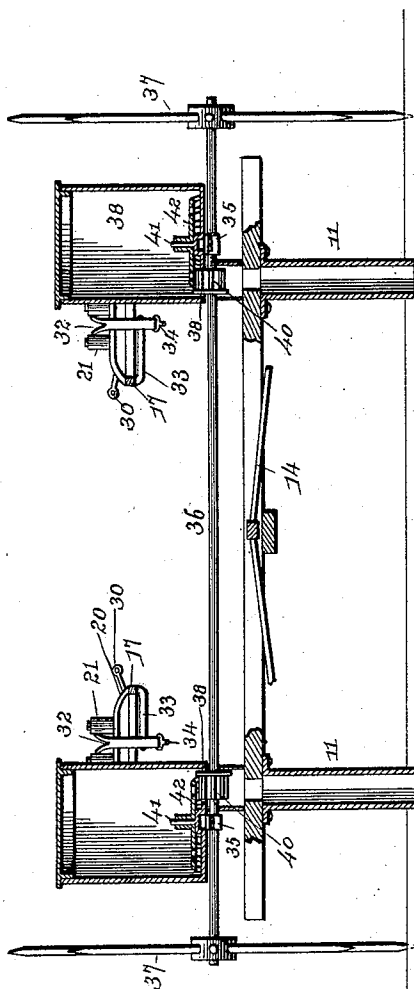
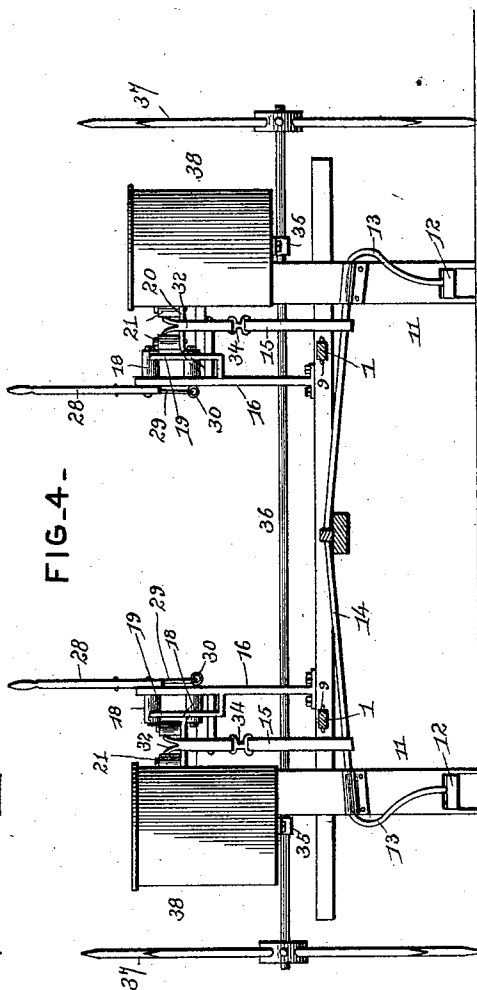


FIG-4-



Witnesses.

Jas. H. McCallister.
W. S. Duwall.

Inventor

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UNITED STATES PATENT OFFICE.

JAMES W. PARKER, OF VIOLA, ILLINOIS.

PLANTER.

SPECIFICATION forming part of Letters Patent No. 528,235, dated October 30, 1894.

Application filed April 22, 1893. Serial No. 471,460. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. PARKER, a citizen of the United States, residing at Viola, in the county of Mercer and State of Illinois, have invented a new and useful Planter, of which the following is a specification.

My invention relates to improvements in planters of that class known as check-rowers.

The objects of my invention are to produce a planter of this class in which the check-row mechanism operates the flirt-valves within the runners, and to provide a separate and independent means for feeding positively the grain to the runners; to provide means for winding up and paying out the check-row wire; and to provide convenient means for throwing off the check-row wire at the end of the row.

With these objects in view the invention consists in certain features of construction hereinafter specified and particularly pointed out in the claims.

Referring to the drawings:—Figure 1 is a perspective view of a planter constructed in accordance with my invention. Fig. 2 is a longitudinal sectional view through the center of the machine. Fig. 3 is a transverse sectional view through the hoppers. Fig. 4 is a transverse section through the machine in rear of the hoppers and looking toward the front. Fig. 5 is an enlarged detail of one of the angle-arms for guiding the check-row wire. Fig. 6 is a detail of the wire reel. Fig. 7 is a detail of the seed-disk.

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

The main frame 1 is of oblong shape in plan and preferably constructed of steel, and is provided at its opposite sides with bearings in which is mounted a stationary axle 2, whose ends project beyond the frame and have mounted thereon broad-tread ground-wheels 3. A seat standard 4 rises from the center of the axle, and supports a seat 5 for the accommodation of the driver. A rock-shaft 6 is journaled in bearings at each side of the seat 5, the inner end of said shaft being provided with a suitable operating handle 7, which extends within easy reach of the driver when perched upon the seat 5, and at its outer end the shaft is provided with an L-shaped scraper 8, which scraper overlaps the ground-wheel at that side of the machine.

The terminals of the main frame 1 are loosely

connected or hinged at their front ends, as at 9, to the transversely disposed oblong steel runner-frame 10, which frame is provided at its opposite sides or ends with the usual runners 11, whose rear ends or standard portions form the spouts for the discharge of the seed, and have pivoted therein flirt-valves 12. The flirt-valves 12 are connected to the terminals of a pair of depending rock-arms 13, which are formed at the ends of a transverse rock-shaft 14, from which shaft there rises at opposite sides of the machine vertical standards 15, and at its center is provided with a weighted arm 14', which normally maintains the flirt-valves closed.

Rising from the rear bar of the runner-frame and securely bolted thereto in line with the terminals of the main frame is a pair of standards 16, and each standard supports a forwardly disposed angle-arm or bar 17. Each angle-arm or bar is provided at its rear end and upon its outer side with a pair of loose roller-carrying lugs 18, and at one side of the same and extending across the lugs, with a keeper 19. At its angle each bar supports a horizontal bar 20, upon which is located a pair of loose roller-carrying lugs 21. At its outer end each bar supports a bracket 22, from which a single roller-carrying stud or lug 23 rises. Pivoted above and in front of this roller-carrying stud 23 to the outer end of the bar is a short lever or dog 24, the same having an inclined roller-carrying stud 25, and at its outer end an eye 26. A spring 27 normally holds the dog in such position as to maintain its stud 25 contiguous to the stud 23. At the rear end of each bar or arm a lever 28 is fulcrumed, the same being within easy reach of the driver, and a wire 29 leads from the eye of the dog through a suitable guide-eye 30 at the angle of the arm to said lever, so that as will be obvious, by a rearward pull upon the hand-lever 28 the dog may be turned aside against its spring, and thus a check-row wire, which passes under the roller-carrying lug thereof, may be liberated at the end of a row. This wire it will be understood also passes between the roller-carrying lugs 21 and 18, and is retained in the latter by means of the keeper.

Bifurcated check-row levers 32 are fulcrumed on brackets 33 which depend from the under sides of the angle-arms 17, and said levers are connected below their supports to

the standards 15 of the rock-shaft by means of links 34. It will be seen that the forked or bifurcated levers serve therefore merely to operate the flint-valves in the bottoms of the runners and have nothing whatever to do with the feed or discharge of the seed from the hoppers.

In suitable bearings 35 with which the rear bar of the front runner-frame is provided near its ends there is journaled a transverse operating-shaft 36, said operating-shaft at its ends carrying star-wheels 28, that is rimless wheels, which, when the machine is in motion, travel over the surface of the ground and impart rotary motion to their shaft. Above the shaft and its bearings at opposite sides of the machine cylindrical hoppers 38 are supported by the standards in which the bearings are formed, and each hopper is provided in its bottom with an opening 38 through which the seed may be discharged. Toothed-cylinders 40 are located in these openings and are mounted upon the transverse operating-shaft, the upper sides of the cylinders extending a slight distance through the bottoms of the hoppers, and being designed to catch and discharge the seed within the hoppers, so that the seed will pass down upon the flint-valves to be discharged at the rear ends of the runners, through the check-row mechanism. In each of the hoppers there is located a central stud 41, and upon each central stud there is rotatably mounted a perforated peripherally toothed seed-disk 42, the teeth of said disk engaging with those of the toothed-cylinders 40, so that the seed is constantly agitated and fed to the cylinders.

43 designates a draft-tongue which is rigidly secured to the front transverse bar of the runner-frame, and declines under the rear transverse bar thereof and to a point adjacent to the axle. A clevis 44 extends forward from the axle, and by a link 45 is connected to the rear end of the draft-bar. The clevis it will be seen is loosely hinged to the axle, as at 46, and a hand-lever 47 rises from the clevis adjacent to the seat for the driver, and may be manipulated by the driver when occupying the seat. A locking bolt 48 is mounted upon the hand-lever, and the lower end of said locking bolt may be engaged with any one of a series of perforations formed in a locking-standard 49 which is mounted upon and rises from the axle. In a pair of transversely opposite bearings 50, with which the rear end of the main frame is provided, there is loosely hung an L-shaped arm 51, at the rear end of which there is located a bearing-stud 52 upon which is rotatably mounted a wire-reel 53, having at one side an operating handle 54. This reel may be swung down or up so as to take up wire when the machine is moving toward the point where the wire is fastened, or to pay out wire when moving away from the point at which the wire is fastened. The rotary motion of this reel, necessary to wind the wire thereon, is obtained

by contact of the peripheral points or spurs of the reel with the ground while the machine is in motion, and therefore when it is necessary to reel the check-wire, said reel must be in its lowered position, and when paying out the check-wire, the reel may be either lowered as shown in Fig. 1, or elevated. If desired, this reel might be mounted upon the operating-shaft 36 of the machine, one of the star-wheels being removed for its reception.

55 designates an anchoring-spike, the same being designed to be driven or forced into the ground by the foot of the operator for which purpose I locate upon said spike a cuff 56 having a set-screw 57 which impinges at its inner end upon the spike. The cuff is provided at one side with a stirrup or step, against which the foot of the operator may be forced in operating the same, and at its opposite side is provided with a hook 58, having a keeper 59, the hook being designed to engage conveniently with the check-row wire 60. The upper end of the spike or anchor is provided with a hand-hold 61 by which the spike may be removed or withdrawn from the ground.

The check-row wire may be of any suitable formation or construction, and I have herein illustrated a construction which I prefer to employ. The wire consists of a series of short sections 62, the ends of each section passing through spherical buttons 63, and beyond these buttons, the ends adjacent to the buttons are given a twist to form eyes 64, the eyes of one section interlocking with those of the other, whereby a continuous wire is produced and one in which the buttons will not catch with the bifurcated check-row levers. Of course the anchoring devices may be of other constructions, as may also the check-row wire, and I may or may not employ the reel, though I prefer to do so.

It will be seen that by removing the check-row wire from the machine the latter may be employed to drill corn, the star-wheels operating to feed positively the corn to the runners. Of course the valves would be then secured open so that corn would readily fall from the discharges in the hoppers through the runners to the ground.

Various changes in the details of construction of my invention will readily suggest themselves, and I therefore do not limit the same to such details as I have shown, but hold that I may vary the construction to any degree and extent within the knowledge of the skilled mechanic.

Having described my invention, what I claim is—

1. In a planter, the combination with the runner-frame, standards rising from the opposite sides thereof, angle-arms projecting forward from the standards, levers fulcrumed at the rear ends of the standards, guides mounted upon the standards, brackets at the front ends of the standards, each provided

with a roller carrying stud, short levers pivoted to the arms adjacent to the roller carrying studs and themselves provided with roller carrying studs arranged at an angle to those of the arms, means for maintaining the studs of the short levers at an angle to those of the brackets, and wires leading from the upper ends of the short levers rearward to the hand-levers, of seed mechanism, means for operating the seed mechanism, valves arranged in the runners, check-row levers arranged in the path of the check-row wire, and connecting devices between the levers and valves, substantially as specified.

2. In a planter, the combination with the runner-frame, the standards rising therefrom, the angle-arms extending forwardly from the standards, the horizontally opposite pairs of roller-carrying studs at the rear ends of the arms, the vertical keepers traversing the same, the vertical pairs of roller-carrying studs at the angles of the arms, the front roller-carrying studs at the outer ends of the arms, the throw-off levers pivoted adjacent thereto, the hand-levers at the rear ends of the arms, wire connection between the throw-off levers and the hand-levers, and bifurcated check-row levers arranged in line with the pairs of roller-carrying studs of hoppers, feed-device for the hoppers, valves in the lower ends of the runners, and connecting-devices between the valves and the check-row levers, substantially as specified.

3. In a planter of the class described, the combination with the frame having eyes at its rear end, an L-shaped arm arranged in the eyes and adapted to be swung up or down at opposite sides of its pivot and provided at its rear end with a bearing-stud, and a reel arranged upon the stud and provided with a lateral handle and a peripheral series of studs or points to give rotary motion to the reel by contact with the ground to rewind the check-wire, substantially as specified.

4. The herein described anchoring-pin, the same having a handle at its upper end, a cuff adjustably mounted on the pin, a foot-rest at one side of the cuff, and a hook at the opposite side thereof, substantially as specified.

5. In a check-row planter, the combination with a runner frame, of angle-arms extending forwardly and laterally and terminating at their front ends at the sides of said frame, check-wire guides mounted upon said angle-arms whereby the check-wire is carried inward toward the center of the machine and thence rearward parallel with and upon that side of the longitudinal center of the machine which is adjacent to the line of the check-wire, check-row levers arranged to be engaged by the projections on the check-wire, feeding devices, means for operating the same, valves in the runners, and connections between the check-row levers and the valves, substantially as specified.

6. In a check-row planter, the combination with a runner frame, of angle-arms extending

forwardly and laterally and terminating near the sides of the runner frame, wire guides arranged upon the angle-arms whereby the check-wire is carried inward to a point near the longitudinal center of the frame and thence rearward parallel with said center, a throw-off device arranged to engage said check-wire and disengage it from said guides, check-row levers arranged in operative relation with the check-wire, feeding devices means for operating the same, valves in the runners, and connections between the check-row levers and the valves, substantially as specified.

7. In a check-row planter, the combination with a runner frame, of angle-arms extending forwardly and laterally and terminating near the sides of said frame, wire guides mounted upon said angle-arms to carry the check-wire inward to a point near the longitudinal center of the frame, a pivotal dog having a roll adapted to bear upon the check-wire to hold the same in engagement with the wire guide at the extremity of the angle-arm, means for displacing said dog to release the check-wire from engagement with the guide, whereby it may be removed from the succeeding guides, check-row levers arranged in operative relation with the check-wire, feeding devices means for operating the same, valves in the runners, and connections between the check-row levers and valves, substantially as specified.

8. In a check-row planter, the combination with a runner frame, of wire guides arranged to conduct a check-wire from the side of the frame inward adjacent to the center and thence rearward parallel with said center, an adjustable retaining device to hold the check-wire in engagement with the front wire guide, a throw-off lever operatively connected to said adjustable retaining device, whereby the trip wire may be disengaged from the guides, a check-row lever, feeding devices means for operating the same, valves in the runners, and connections between the check-row lever and the runners, substantially as specified.

9. In a check-row planter, the combination with a runner frame, of wire guides carried thereby and consisting of vertically-disposed roll-bearing studs, a pivotal spring-actuated dog provided with a roll-bearing stud arranged to co-operate with the front wire guide to hold the check-wire normally in engagement therewith, a throw-off lever operatively connected with said dog, a check-row lever, feeding devices, means for operating the same, valves in the runners, and connections between the check-row lever and the valves, 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 W. PARKER.

Witnesses:

WM. PETERSON,
S. C. FUGATE.