

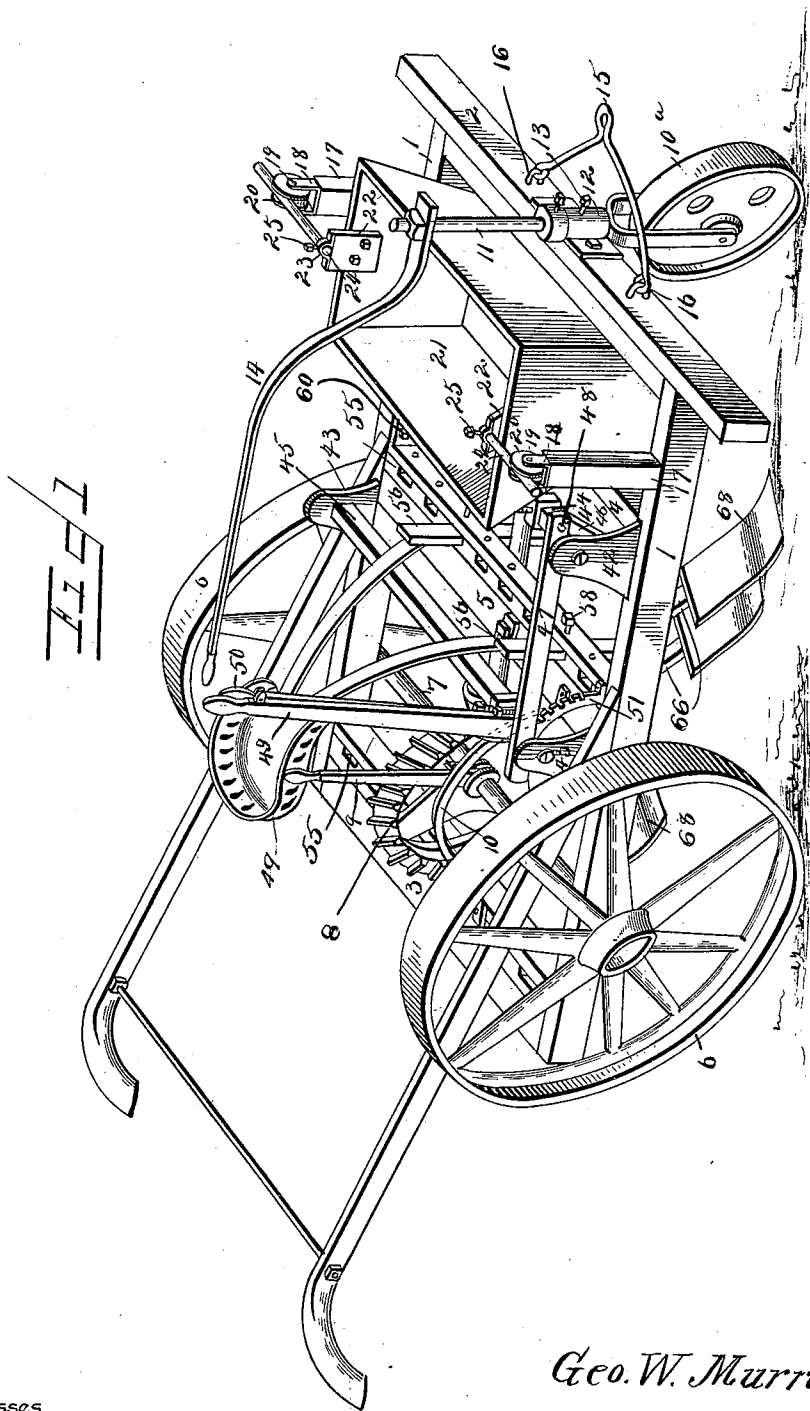
No Model.)

2 Sheets—Sheet 1.

G. W. MURRAY.
PLANTER.

No. 520,890

Patented June 5, 1894.



Geo. W. Murray

Inventor

Witnesses

W. E. Schneider, By his Attorneys,

W. S. Duval.

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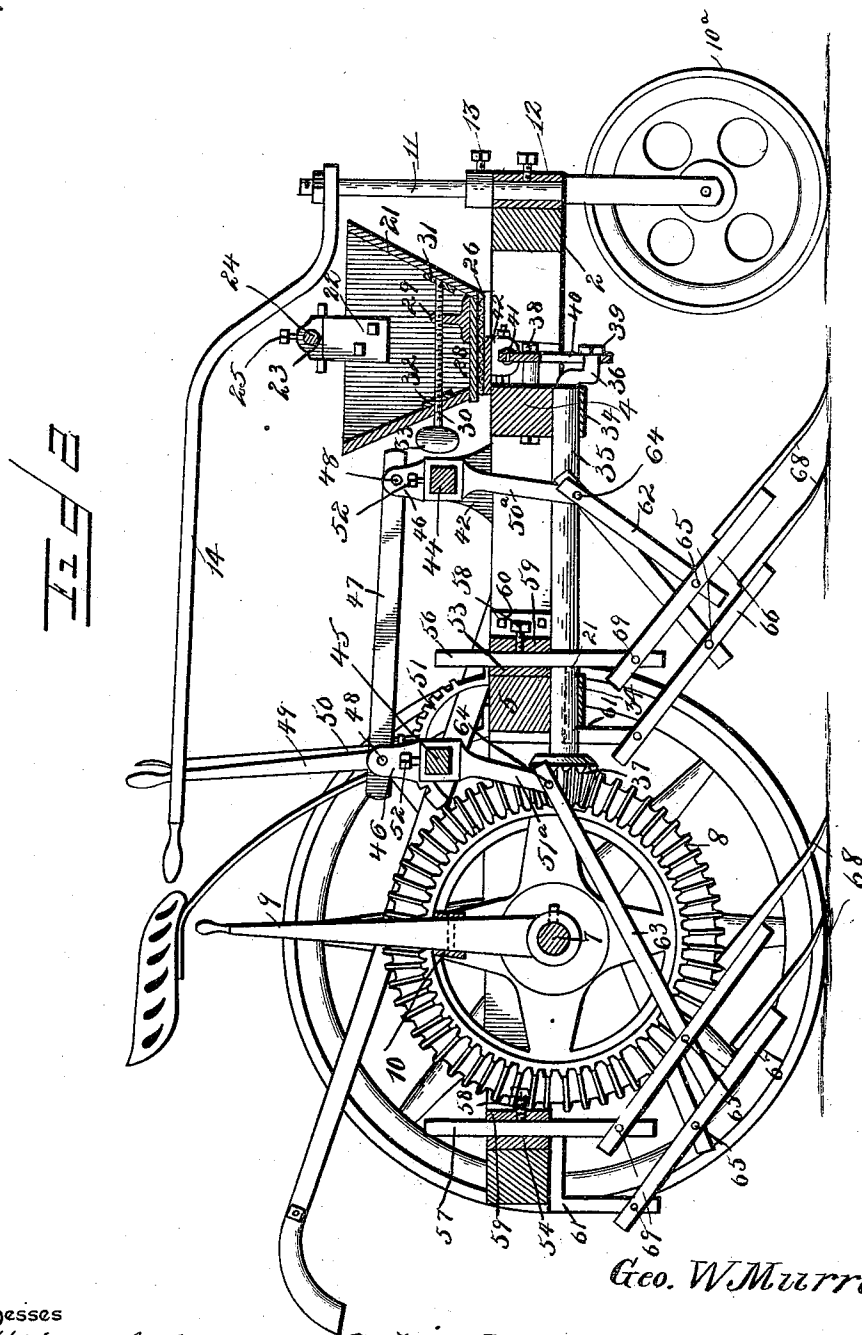
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UNITED STATES PATENT OFFICE.

GEORGE W. MURRAY, OF REMBERT, SOUTH CAROLINA.

PLANTER.

SPECIFICATION forming part of Letters Patent No. 520,890, dated June 5, 1894.

Application filed September 15, 1893. Serial No. 485,613. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. MURRAY, a citizen of the United States, residing at Rembert, in the county of Sumter and State of South Carolina, have invented a new and useful Planter, of which the following is a specification.

My invention relates to improvements in planters; the objects in view being to provide a cheap and simple machine designed to discharge broadcast various kinds of seed; to provide for a regulation of the discharge; and for a feed for the hopper.

Various other objects and advantages of the invention will appear in the following description, and the novel features thereof will be 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 vertical longitudinal sectional view thereof.

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

In the practice of my invention I employ a rectangular frame, which consists of opposite side-bars 1 connected at their front and rear ends by cross-bars 2 and 3 respectively and between their ends by intermediate cross-bars 4 and 5. The framework is supported at its rear end by a pair of ground-wheels 6 which are arranged upon a rotatable shaft 7. Splined upon this shaft is a master-gear 8, and the same is reciprocated so as to throw it into and out of gear with a hereinafter described pinion by means of a lever 9 whose lower forked end engages with an annular groove formed in the hub of the gear. This lever 9 is fulcrumed on a yoke 10, which curves over the axle and is bolted at its ends to the bars 3 and 5 as shown. The front end of the machine is, in the present instance, supported by a caster-wheel 10^a, the shank 11 of which passes vertically through a bearing-eye 12 in which it is swiveled and is made adjustable by means of a set bolt 13. Other means may be provided for supporting the front end of the machine. The upper end of the shank is provided with a suitable operating handle 14. A draft-bail 15 has its terminals secured to the front end of the framework by means of eyes 16. A pair of vertical standards 17 rise from the opposite frame-

bars 1 on the front ends of the latter, and said standards have located in their upper ends bearings 18 for the reception of opposite axles or shafts 19 upon which grooved rollers or sheaves 20 are mounted. These sheaves are therefore at opposite sides of the framework and in transverse alignment.

The hopper 21 is oblong, but not equal in length to the width of the frame or the distance between the sheaves, and is provided at its opposite ends with vertical plates 22 in whose upper ends eyes 23 are formed. In each eye there is mounted a rod 24, said rods being adjustable by means of binding-bolts 25 passed through the upper sides of the eyes 23 and binding upon the rods. These rods extend to opposite sides of the framework and rest in the grooves of the rollers or sheaves 20, so that as will be obvious the hopper is capable of oscillating from side to side of the framework. The lower end of the hopper is preferably provided with a reticulated screen or bottom 26 and above the same and passed through a slot in the back-wall is mounted a sliding cut-off 28. An eye 29 is located upon the slide near its front end and is screw-threaded interiorly to receive an adjusting-rod or screw 30 whose front end is loosely journaled in a metal bearing-plate 31, and whose rear end is likewise journaled in a similar plate 32. In rear of the hopper the rod is provided with a head 33 by which it may be readily grasped and rotated in order to feed or move the cut-off over the reticulated screen bottom. It will be obvious that by adjusting this bottom the quantity of seed discharged thereby may be regulated and in fact may be entirely cut-off or discontinued.

In bearings located upon the under side of the bars 4 and 5, and designated as 34, a short longitudinal shaft 35 is journaled, the ends of the shaft extending beyond the bearings. The front end of the shaft is provided with a crank 36 and the rear end with a pinion 37, the latter being in a position to engage with the master-gear 8 heretofore described. By operating the hand-lever heretofore described it will be seen that the master-gear 8 may be thrown into or withdrawn from engagement with the aforesaid pinion 37. Fulcrumed between its ends upon a pin 38 which is located upon the cross-bar 4 at the front side

thereof is a vibratory-lever 39, the lower end thereof being slotted as at 40 to receive the crank-pin 36 of the shaft 35, while the upper end of said vibratory-lever is pivoted as at 41 to a pair of brackets 42 that depend from the under side of the hopper. It will thus be seen that rotations of the ground-wheel and axle will cause the master-gear 8 to rotate, through the medium of the pinion 37, the shaft 35, whose front cranked-end is revolved and thus the vibratory-lever 39 operated, causing the hopper to move laterally back and forth upon the grooved rollers or sheaves 20, so that the seed therein is constantly agitated and sifted through the reticulated bottom to the ground.

Any desired means may be provided for covering the seed or turning the soil, but in the present instance, I have provided one convenient for the purpose, though it will be understood that I do not limit my invention to such means nor to other details but hold that variations may occur without departing from the spirit or sacrificing any of the principles thereof.

I will now proceed to describe these details:—Upon the frame-bars 1, I locate transversely opposite pairs of standards 42 and 43 respectively, and locate therein rock-shafts 44 and 45 respectively, the same being rectangular in cross-section. Short rock-arms 46 extend from each shaft near one end, and these are connected by an intermediate bar 47, whose ends are pivoted as at 48 to the aforesaid rock-arm. The rear rock-shaft 45 has a lever 49, by which it may be operated, and carries a locking-pawl or bolt 50, which may be engaged with a segmental locking standard 51, so that the rock-shafts may be held in any desired position. From the front and rear rock-shafts there depend standards 50^a and 51^a respectively, one pair being located upon each shaft, and they are adjustable through the medium of binding-bolts 52. To the front face of each of the cross-bars 5 and 3 metal bars 53 and 54, respectively, are secured. Each metal bar has a series of recesses 55 formed in its front face, the front bar receiving a pair of standards 56, and the rear bar a pair of standards 57 of similar nature. These standards are secured in position through the medium of binding-bolts 58 which pass through perforations formed in a transverse clamping-bar 59 located in front of each of the bars 53 and 54 and having their ends forwardly extended and bolted as at 60 to the framework. One of the standards 56 and likewise one of the standards 57 have their lower ends rearwardly as well as downwardly bent, or in other words are made angular, as indicated at 61. From the standards 50^a and 51^a depend, respectively, link-bars 62 and 63, the same being pivoted at their upper ends as at 64 to said standards. These links are pivoted at their lower ends, as at 65, to intermediate points of a pair of

front and rear shovel-carrying standards 66 and 67, which carry shovels 68, as shown. By reason of one standard of each pair being made angular, as at 61, it will be seen that one shovel-carrying standard of each pair may be located in rear as well as to one side of its companion standard. The upper ends of these shovel-carrying-standards 66 and 67 are pivoted as at 69 to the lower ends of the standards 56 and 57. It will thus be obvious that through the medium of the hand-lever 49 the several shovel-carrying standards may be raised and lowered from contact and into contact with the ground. These shovels operate upon the usual principle and serve to cover the seed and thoroughly intermingle the soil therewith. It is seen that they are arranged alternately so as to thoroughly cultivate and loosen the soil upon which the seed is cast.

Certain features shown and described herein, are claimed in applications serially numbered 486,449, 485,611, and 480,931.

Having described my invention, what I claim is—

1. In a planter, the combination with a framework, opposite standards rising therefrom, and grooved rollers arranged in the standards, of an intermediate hopper, plates extending from the ends thereof and having eyes, adjustable rods extending from the plates through the eyes and resting in the grooves of the rollers, binding-bolts passing through the eyes and impinging upon the rods, and means for vibrating the hopper, substantially as specified.

2. In a planter, the combination with a framework, opposite bearings, an intermediate hopper guide-rods extending from the ends of the hopper through the bearings, of an axle, an intermediate shaft terminating at its front end in a crank, a lever pivoted between its ends to the framework, slotted at its lower end to receive the crank, and at its upper end pivoted to the hopper, and means for communicating motion from the axle to the shaft, substantially as specified.

3. In a planter, the combination with a framework, a hopper arranged thereon and adapted to vibrate thereover an intermediate longitudinal shaft terminating at its front end in a crank and provided at its rear end with a pinion, a vibratory lever pivoted between its ends to the framework, slotted at its lower end to receive the crank, and pivoted at its upper end to the hopper, of an axle, ground-wheels therefor, a master-gear arranged on the axle for engaging the pinion, substantially as specified.

4. In a planter, the combination with a framework, and planting-mechanism, of front and rear notched bars extending transverse the framework, a front clamping-plate having binding-screws, a pair of standards arranged in each of the notched bars, one standard of each pair being angularly disposed as at 61, front and rear rock-shafts, connections

between the two, a lever for operating the
shafts, standards adjustably arranged upon
the shafts, link-bars pivoted to the lower ends
of the standards, and shovel-carrying stand-
ards pivoted to each of the rear standards
5 and between their ends to the link-bars, sub-
stantially as specified.

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

GEORGE W. MURRAY.

Witnesses:

E. G. SIGGERS,
W. S. DUVALL.