

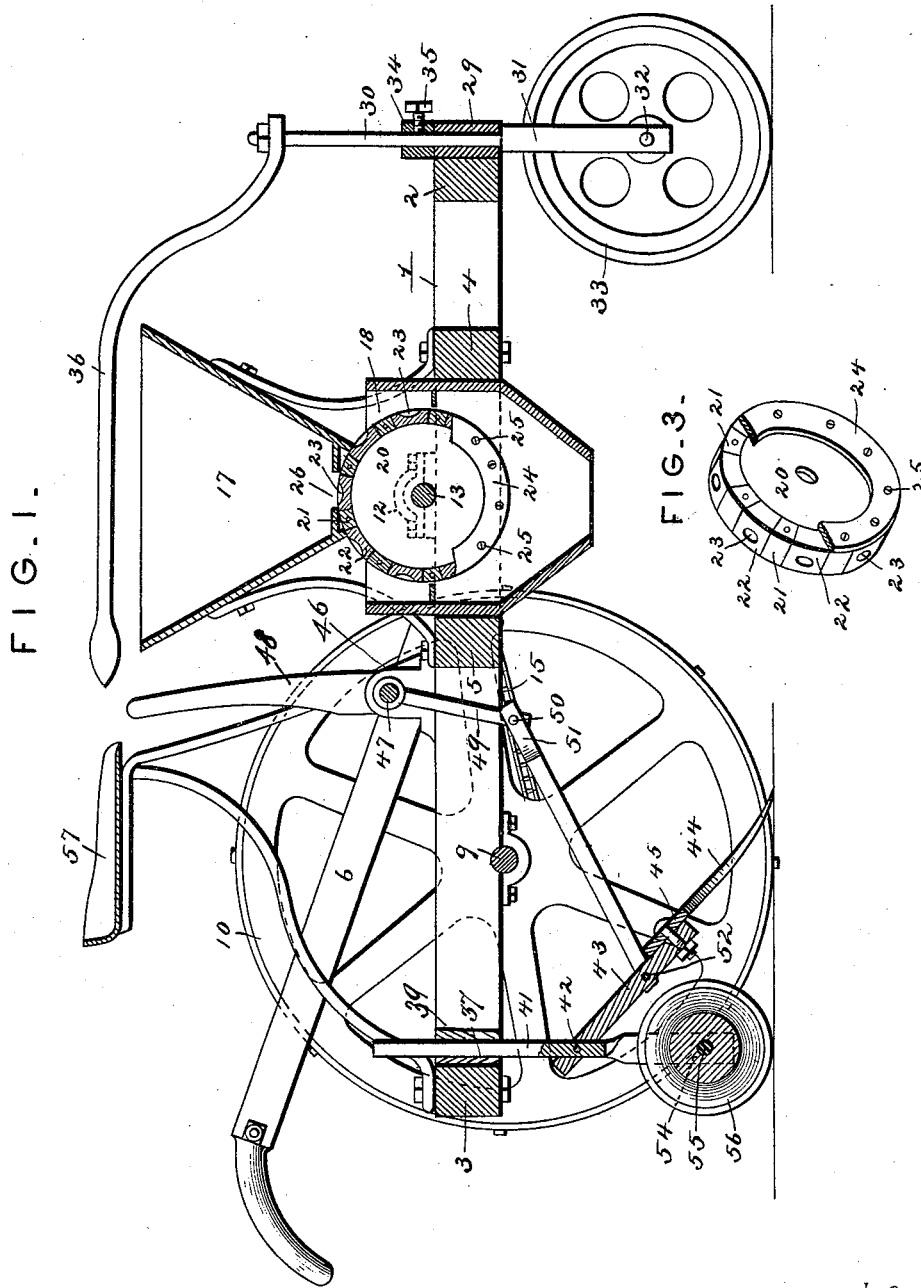
(No Model.)

2 Sheets—Sheet 1.

G. W. MURRAY.
PLANTER.

No. 520,887.

Patented June 5, 1894.



Inventor

George W. Murray.

Witnesses

Harry L. Amer.

By his Attorneys.

W. S. Duval.

C. A. Snow & Co.

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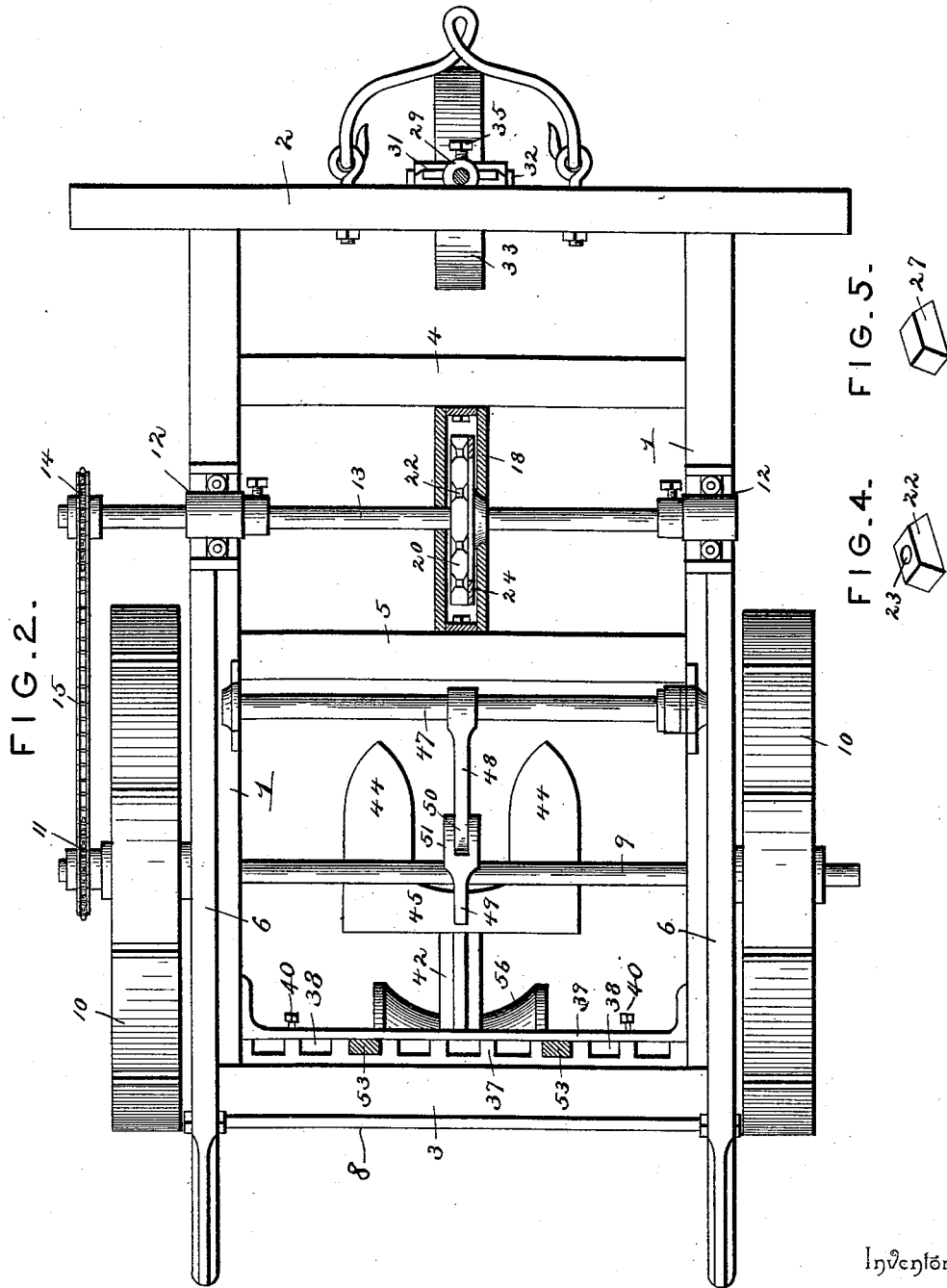


FIG. 2.

FIG. 5.

FIG. 4.

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UNITED STATES PATENT OFFICE.

GEORGE W. MURRAY, OF SUMTER, SOUTH CAROLINA.

PLANTER.

SPECIFICATION forming part of Letters Patent No. 520,887, dated June 5, 1894.

Application filed July 19, 1893. Serial No. 480,931. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. MURRAY, a citizen of the United States, residing at Sumter, 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 produce a planter designed for dropping at predetermined distances apart corn, peas, &c.; to provide means for covering the seed after dropping and for blocking the drill or shaping the same subsequent thereto, the whole being carried on continuously.

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 vertical longitudinal sectional view of a machine constructed in accordance with my invention. Fig. 2 is a top plan view of the same. Fig. 3 is a detail in perspective of the seed-wheel. Fig. 4 is a detail in perspective of one of the cups. Fig. 5 is a similar view of a blank cup.

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

In carrying out my invention I employ a pair of opposite side-beams 1, connecting the same at their front and rear ends by transverse-beams 2 and 3 respectively, and by intermediate-beams 4 and 5. The beams have secured to their upper sides and rising therefrom handle-bars 6, whose rear ends terminate in handles and in advance of the same are connected by a transverse-rung 8. The beams 1 are provided with suitable bearings, in which is journaled a transverse axle 9 whose ends project beyond the bearings and are provided with ground-wheels 10, that revolve with the axle, and one of which ends is furthermore provided beyond the ground-wheel with a sprocket-wheel 11. Bearings 12 are located upon the beams 1 in advance of the axle and between the transverse beams 4 and 5, and they accommodate a transverse shaft 13 which at one end, namely, that corresponding with the axle, is provided with a sprocket-wheel 14 which is connected with the sprocket-wheel 11 by a sprocket-chain 15,

whereby motion is conveyed from the axle to the shaft 13.

Supported by suitable standards that are bolted to the transverse beams 4 and 5 is a hopper 17, the same being of the usual construction, and arranged below the hopper, and considerably larger than its discharge-end, is a rectangular frame 18, while below said beams and the rectangular frame a discharge-spout is located. The shaft 13 passes through the rectangular frame 18 and is there provided with a cast-metal seed-wheel 20 that revolves with the said shaft 13. This seed-wheel 20 has dovetailed blocks 21 cast thereon and located at intervals. Into the spaces formed by these blocks is inserted a series of reversely beveled seed-cups 22, each of which has a seed-cavity 23 formed in its outer face. These seed-cups are maintained in position within the dovetail recesses by means of a cast-metal ring 24 applied to the face of the wheel against the cups, said ring being provided at intervals with perforations, through which are passed screws 25 into threaded openings formed in the dovetail blocks 21. The periphery of the wheel projects upward into the bottom of the hopper a short distance, and the bottom of said hopper is slotted, as at 26, so as to expose each cup successively to the seed in the hopper, so that as each cup is successively brought opposite the opening it receives its quota of seed. It will be understood that where it is desired to plant farther apart some of the cups may be removed and blank-cups 27 inserted in their places.

The cross-bar 2 is provided at its center with a vertically disposed bearing-eye 29 in which is loosely swiveled a cylindrical shank 30 formed upon the upper end of a fork 31, in which is journaled the axle 32 that supports a cast-wheel 33. A collar 34 is located upon the cylindrical shank, and a binding-screw 35 passes through the collar and impinges upon the shank. The upper end of the shank has secured thereto a handle 36 which projects rearward over the hopper and is bent upward to avoid the same.

To the rear beam 8 there is secured a metal plate 37, the same having its front face provided with a series of vertical recesses 38, and applied to the front face of this plate is a

clamping-bar 39, through which screws 40 are passed at intervals into corresponding threaded openings formed in the plate 37. Located in this plate in one of the center openings is a vertical standard 41, and the same is pivotally connected, as at 42, to a slotted inclined shovel-carrying standard 43, the said shaft being of the twin-pattern and consisting of opposite blades 44 connected by an intermediate web 45, the recess within the shovel conforming to the shape of the drill to be formed. These blades 44 lie at opposite sides of the path traversed by the hopper so that seed dropped by the hopper is covered by the combined action of the two blades.

In suitable bearings 46 located upon the opposite sides of the beams 1 there is journaled a transverse rock-shaft 47, said rock-shaft being provided with a lever 48, which may be rocked for the purpose of operating the shaft. A rock-arm 49 depends from the rock-shaft and is pivoted, as at 50, to a link 51, whose rear end is pivotally connected, as at 52, to the inclined standard 43. It will thus be seen that by the movements of the lever 48 the said standard 43 with its shovel may be elevated out of the ground or depressed in position for operation.

A pair of vertical standards 53 is located in the recess 38 at opposite sides of the standard 41 and are maintained in position by means of the clamping-bar 39. These standards at their lower ends are provided with bearings 54 which accommodate a transverse axle 55 upon which is mounted a blocking-wheel 56. This blocking-wheel, or roller, as it might better be called, has a concaved periphery which agrees with the contour in cross-section of the drill, and following after the double-shovels 44 serves to shape or block the drill in a manner that will be obvious.

This completes the construction, with the exception of a suitable seat that may be provided for the driver, which I have shown and designated as 57, the same being supported upon suitable standards rising from the transverse beams 3 and 5.

It will be seen that both of the levers 36 and 48 are within convenient reach of the operator when perched upon the seat, and that the movements of the machine may be thus readily controlled.

In the operation of planting each cup moving consecutively under the hopper, as before stated, receives its quota of seed, and the same is dropped down through the discharge 19 into the ground. The shovels straddle the path

traversed by the hopper and cast the loose dirt over the seed, thus forming a drill. The shovels are followed by the roller, and it being concaved, blocks or shapes the drill into a ridge in a manner that will be at once obvious to any one skilled in this class of machines.

Suitable draft appliances are located at the front end of the machine, and it is obvious that the same may be followed by the operator, or he may ride upon the machine as desired.

I do not limit my invention to the exact details herein shown and described, but hold that I may vary the same to any degree and extent within the knowledge of the skilled mechanic without departing from the spirit of the invention or sacrificing any of the advantages thereof.

Certain features of construction herein shown and described, but not claimed, are included in the subject-matter of a companion contemporaneously pending application, Serial No. 486,449.

Having described my invention, what I claim is—

1. In a planter, the combination with the framework, and the superimposed hopper arranged thereover, of a shaft arranged under the hopper and transverse to the opening therein, a wheel arranged upon the shaft and having at intervals integrally formed peripheral blocks of dovetail-shape and combining to form intermediate dovetail-recesses, seed-cups removably arranged in the recesses, a clamping-ring arranged at the side of the wheel and bearing against the cups and blocks, and bolts passing through the rings and into the blocks, substantially as specified.

2. In a planter, the combination with the hopper shovels, and framework for supporting the same, of the rear plate 37 provided in its front face with vertical recesses 38, the standards 53 depending from and located in the recess and having bearings at their lower ends, the axle 55 mounted in the bearings, the concaved roller mounted on the axle, a clamping-bar arranged across the recess, and clamping-bolts passed through the bar and into the plate, 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.

GEORGE W. MURRAY.

Witnesses:

HENRY W. PURVIS,
JOHN L. C. SMALLS.