

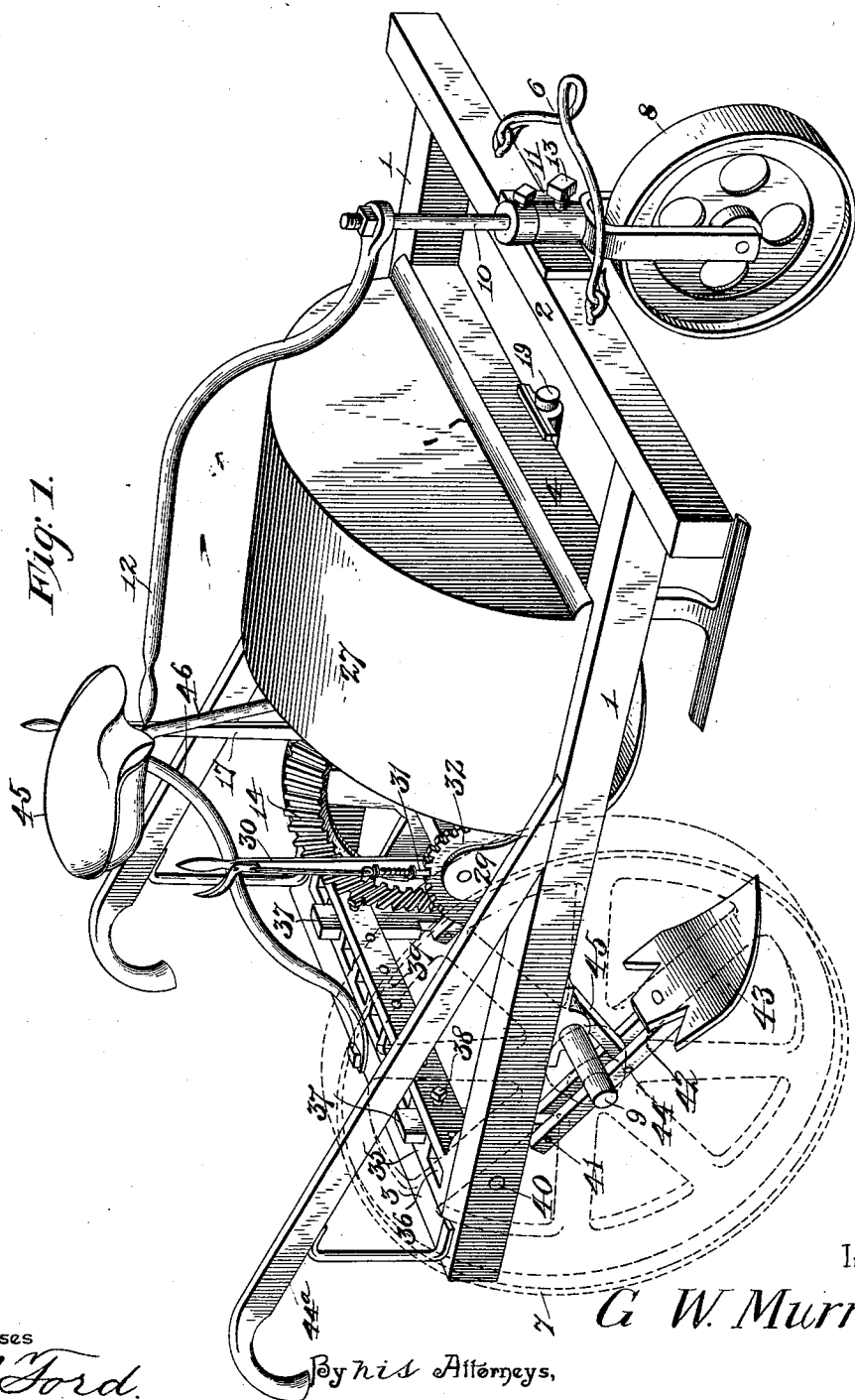
(No Model.)

2 Sheets—Sheet 1.

G. W. MURRAY.
COTTON CHOPPER.

No. 520,888.

Patented June 5, 1894.



Inventor

G. W. Murray,

By his Attorneys,

Witnesses

C. A. Ford.

W. S. Duwall.

C. A. Snow & Co.

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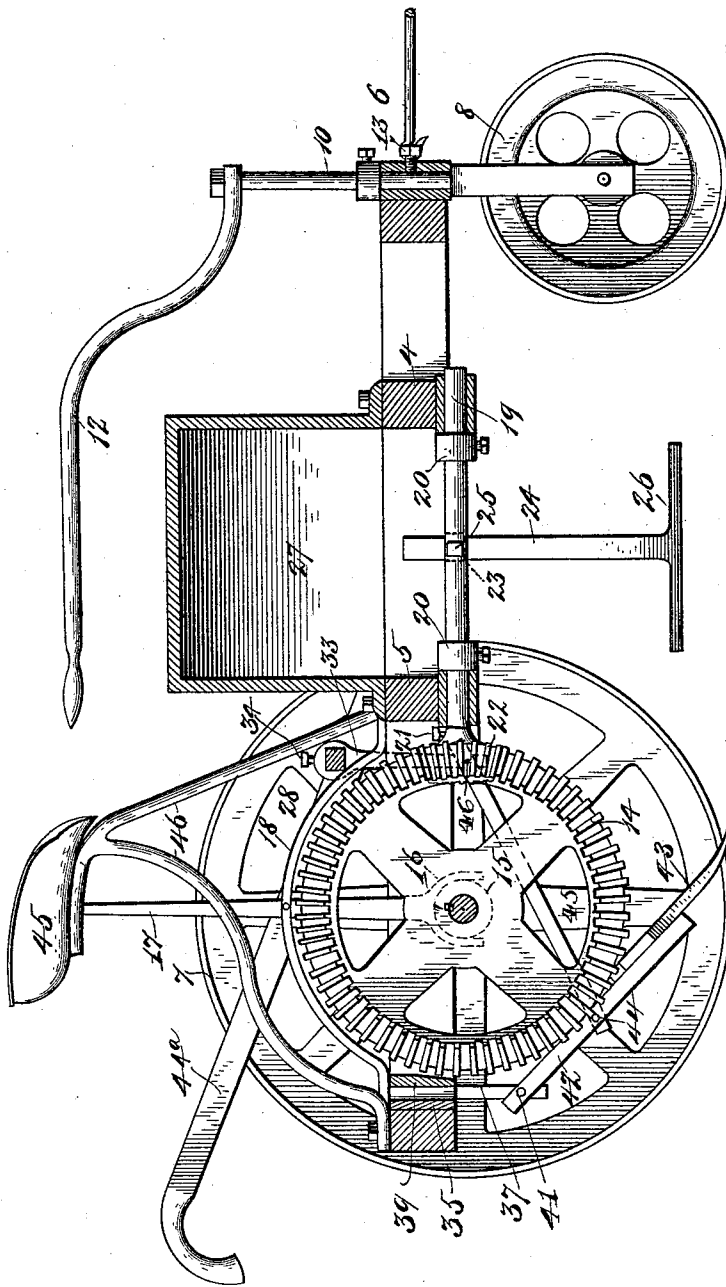
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Fig. 2.



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UNITED STATES PATENT OFFICE.

GEORGE W. MURRAY, OF REMBERT, SOUTH CAROLINA.

COTTON-CHOPPER.

SPECIFICATION forming part of Letters Patent No. 520,888, dated June 5, 1894.

Application filed September 15, 1893. Serial No. 485,610. (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 Cotton-Chopper, of which the following is a specification.

My invention relates to cotton choppers; and the objects in view are to produce a cheap and simple machine adapted to chop rows of cotton, thus bringing the plants to stands, and to so construct the machine as to simultaneously form the rows with the chopping operation, and to provide for an adjustment of the machine, whereby stands of different sizes may be produced.

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

Referring to the drawings:—Figure 1 is a perspective view of a cotton-chopper embodying my invention. Fig. 2 is a vertical longitudinal sectional view.

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

In the practice of my invention I employ the oblong framework comprising the opposite longitudinal frame-bars 1 connected at their front and rear ends by the usual cross-bars 2 and 3 respectively, and between the same with the intermediate cross-bars 4 and 5. Any suitable draft-appliance, as for instance a bail 6, may be employed at the front end of the machine.

Various means may be provided for supporting the framework, but in the present instance I employ rear ground-wheels 7 and a front caster-wheel 8. The ground-wheels 7 are mounted upon the opposite ends of a rotatable axle 9 which is journaled in the opposite frame-bars 1. The caster-wheel 8 is journaled in the lower end of a forked shank 10, which is swiveled in a bearing-eye 11 and is operated through the medium of a handle or lever 12. Various means may be provided for locking the shank against rotation in the eye, as, for instance, by means of a binding-bolt 13. A master-gear 14 is splined upon the axle 9 and designed to rotate therewith and to move longitudinally thereon. This gear is provided with an annular grooved hub

15 and the same is engaged by the forked-end 16 of a hand-lever 17 that is pivoted or fulcrumed upon a yoke 18 that straddles the axle, and has its ends bolted to the cross-bars 5 and 3. By means of this lever it will be obvious that the master-gear may move upon the axle, whereby it may be thrown into and out of operative engagement with a herein- after described gear or pinion.

In bearings formed in the cross-bars 4 and 5 and in longitudinal alignment with each other there is journaled a short longitudinal shaft 19 having collars 20 adjacent to the bearings, whereby it is maintained in position. The rear end of the shaft has removably secured thereto, by a suitable binding-bolt 21, a pinion 22, which engages with and is driven by a master-gear 14. The short shaft 19 is furthermore provided with a mortise 23, and into the same is let one end of a chopping arm 24, the same being adjustable in the mortise by means of a binding-screw 25. The arm carries at its lower end a hoe 26, the same being disposed at such angle with relation to the arm 24 as to cause it to approach the ground in a proper position to chop out any growth whatever that may lie in its path. This shaft 19 and its hoe 26 are covered by a housing 27.

In transversely opposite bearings 28 with which the frame-bars 1 are provided, a rock-shaft 29 is loosely mounted, the same being rotated in either direction by a hand-lever 30, the same carrying a locking-pawl 31 designed to engage with a locking-standard 32 located adjacent to one of the bearings. A pair of hangers 33 are adjustably mounted upon the rock-shaft 29, and for this purpose are provided with rectangular eyes for fitting the shaft which is likewise rectangular. Binding-bolts 34 serve to secure the hangers in position at any desired points on the shaft.

A metal bar 35 is arranged upon the front face of the rear cross-bar 3, and is provided with a series of vertical recesses 36, any two of which are occupied by depending standards 37 which are secured in position by means of binding-bolts 38 passed through perforations formed in a front clamping-bar 39 whose opposite ends are bolted to the frame-bars 1 as indicated at 40. Pivoted as

at 41 to the lower ends of the standards 37 is a pair of inclined standards 42, the same having sweep-plows 43 at their lower ends, and these standards 42 have pivoted as at 44 the lower ends of link-bars 45, whose front ends are connected, as at 46, to the lower ends of the standards 33 that depend from the rock-shaft 29.

Suitable handles 44 may be mounted upon the frame-bars 1, and in addition to these, or as a substitute for them, a seat 45 may be arranged over the framework and supported by standards 46, the said seat being adapted for the support of the driver and operator.

This completes the construction of the machine, and the operation of the same is as follows:—When the field has been reached the clutch-lever is swung away from the operator so as to throw the lower end of said lever inward and hence the master-gear 14 into operative engagement with the pinion 22. The axle rotating causes the master-gear to communicate motion to the pinion 22 which is more rapidly revolving in that it is smaller than the master-gear, and said pinion operates the shaft 19 and revolves the arm 24 together with the hoe, so that at each time that the hoe is brought into contact with the ground a swath is cut and weeds or cotton removed, and when said hoe is not in contact with the ground the cotton remains standing, so that at intervals swaths will be cut as will be obvious. The pinion 22 is removable, and hence larger pinions may be substituted, so that longer intervals will elapse between each cutting operation, and thus the length of the stands produced will be materially increased.

The sweep-plows following the rotary chopper clean out furrows at each side of the stand thus chopped, so that as a result the

stands complete are formed in rows at regular intervals and of a uniform size. The width of the stands, it will be observed, may be regulated by adjusting the standards 37 in the various openings 36, the standards 33 being adjusted on the rock-shaft accordingly.

I do not limit my invention to the precise details of construction herein shown and described, but hold that I may vary the same to any degree and extent within the knowledge of the skilled mechanic.

Having described my invention, what I claim is—

In a cotton-chopper, the combination with the rectangular framework comprising a series of cross-bars, a revoluble hoe-carrying shaft and means for operating the same, of a notched bar secured to the rear cross-bar, a pair of standards arranged removably in two of the notches of said bar, a clamping-bar located in front of said standard, a pair of clamping-bolts passing through the said clamping-bar and at their inner ends impinged upon the standards, plow-carrying feet pivoted to the lower ends of the standards, a pair of transversely opposite bearings arranged on the framework in front of the standards, a rock-shaft having depending rock-arms journaled in the bearings, links pivoted to the lower ends of the rock-arms and to intermediate points of the plow-feet, a supporting-lever for the shaft and means for locking the same, 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:

E. G. SIGGERS,
W. S. DUVAL.