(No Model.)

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COTTON CHOPPER.

No. 447,046. Patented Feb. 24, 1891.

Fig. 1.

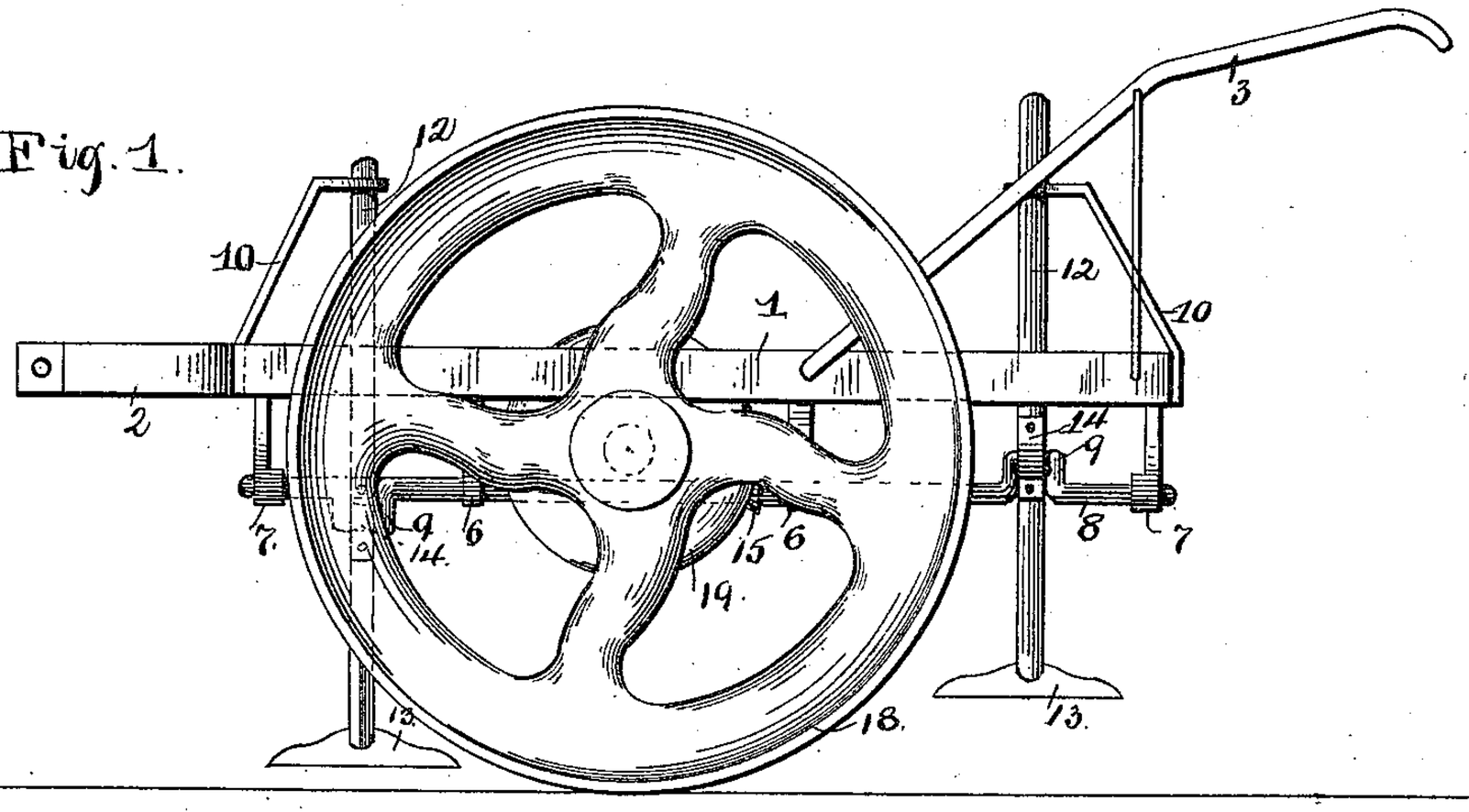
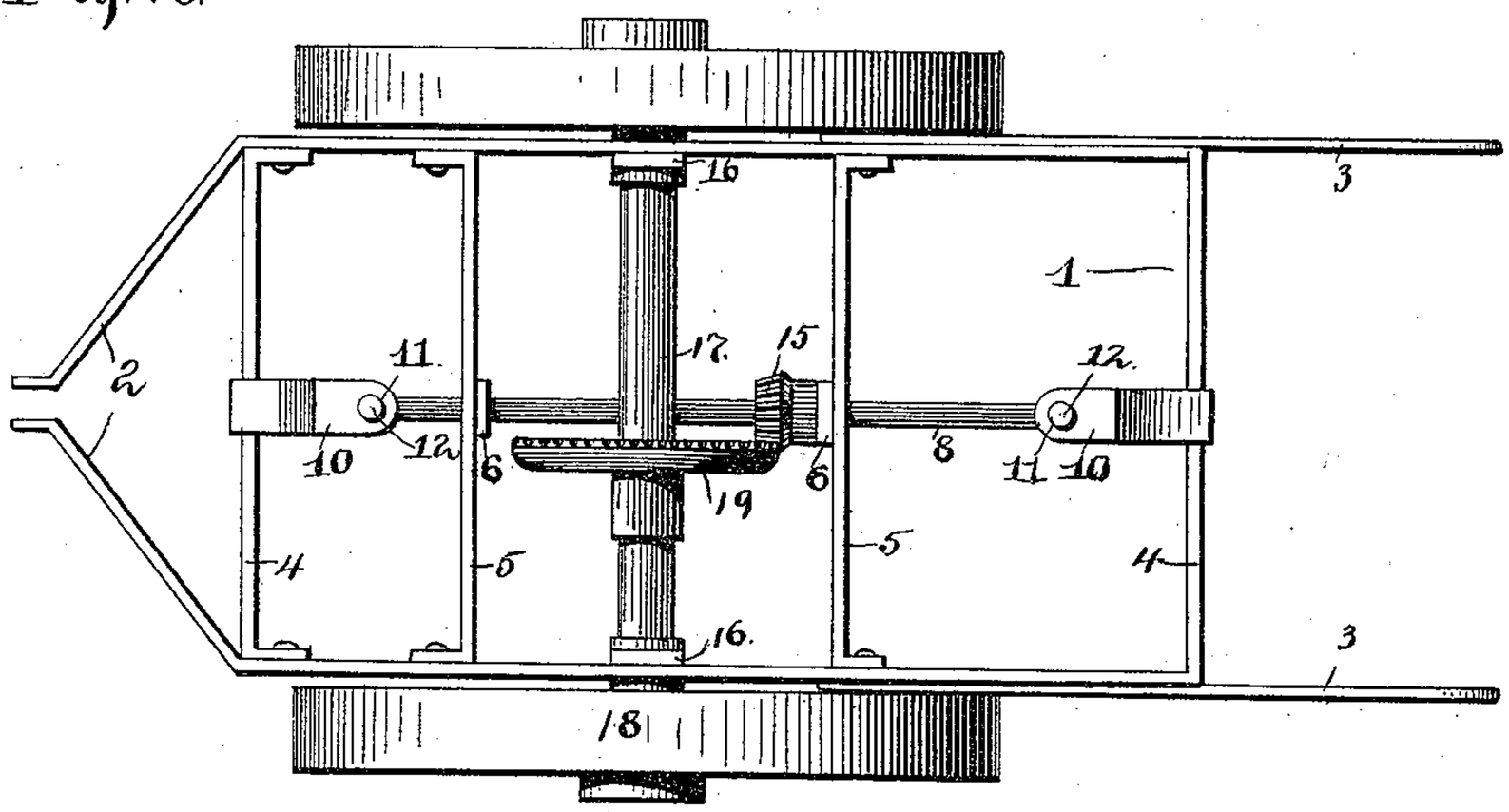


Fig. 2.



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UNITED STATES PATENT OFFICE.

STEPHEN SIMPSON KENT, WILLIAM GARY BOLER, AND WILLIAM WARREN KENT, OF MACON, GEORGIA.

COTTON-CHOPPER.

SPECIFICATION forming part of Letters Patent No. 447,046, dated February 24, 1891.

Application filed November 24, 1890. Serial No. 372,513. (No model.)

To all whom it may concern:

Be it known that we, STEPHEN SIMPSON KENT, WILLIAM GARY BOLER, and WILLIAM WARREN KENT, citizens of the United States, residing at Macon, in the county of Bibb and State of Georgia, have invented a new and useful Cotton-Chopper, of which the following is a specification.

This invention relates to cotton-choppers of that class employing vertically-reciprocating and laterally-vibrating choppers or hoes; and the objects in view are to provide a chopper of the aforesaid class of cheap and simple construction, adapted accurately to perform its work, and particularly to provide a simple means for guiding the choppers in their vibrations and reciprocations, and this without the necessity of expensive joints, and to avoid constructing the hoe or chopper handles in sections.

The invention consists in certain features of construction and novel combination of parts hereinafter specified, and particularly pointed out in the claim.

Referring to the drawings, Figure 1 is a side elevation of a cotton-chopper constructed in accordance with our invention. Fig. 2 is a plan view.

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

In practicing our invention we employ a rectangular frame 1, formed of light metal and having its two terminals converged at its front end, as at 2, to be clamped to the opposite sides of a draft-beam. To the rear sides of the frame are secured the usual handles 3 to be grasped by the operator following after the chopper. Between the two end bars 4 of the frame there is located a pair of transverse bars 5, which are provided at their centers with depending bearing-hangers 6, which register with a similar pair of hangers 7, depending from the end bars 4. In these four hangers there is journaled a longitudinal shaft 8, which shaft, near its ends and between the pairs of hangers 6 and 7, is provided with cranked portions 9, said cranks being oppositely disposed with relation to each other. Extending upwardly from each end bar is a standard 10, the upper end of which is inwardly bent and provided with an opening 11, which loosely receives the upper end of a hoe-handle 12, adapted to reciprocate and vibrate therein, said handles being provided at their lower ends with a chopper or hoe 13 of ordinary construction. The hoe-handles 12 are provided with bearing-clips 14 a slight distance below their centers, each of said bearing-clips serving to loosely connect a crank portion 9 and the handle. Adjacent to the rear bearing-hanger 6 there is secured upon the shaft 8 a beveled pinion 15.

In suitable bearings 16, depending from the sides of the frame, is journaled an axle 17, which extends beyond the frame and carries a pair of ground-wheels 18 of usual form. At one side of the center there is secured to the axle a large pinion 19, which engages with and operates the small pinion 15.

The machine being put in motion, the axle is rotated by reason of its rigidity with the ground-wheels, and through the medium of the gears 19 and 15 the shaft 8 is rotated, and by reason of its cranks 9 the chopping-hoes are vertically reciprocated and laterally vibrated to and from contact with the growing plant, which is thus effectually thinned.

It will be observed that the construction of our machine is extremely simple and the operation thereof extremely efficient. It will also be observed that the hoe-handles 12, usually formed in jointed sections, are here formed rigidly, whereby they are greatly strengthened, less liable to break by their constant pounding upon the plant, and the formation of expensive joints wholly avoided, and yet at the same time this is accomplished by a cheap and simple means and one which does not affect the positiveness of the movement of the hoes.

Having described our invention, what we claim is—

The combination, with the rectangular frame having the transverse bars 5 and the end bars 4, the depending bearing-hangers 6 and 7, secured to the transverse and the end bars, the shaft 8, journaled in the hangers and provided near its ends with oppositely-disposed cranks, the upwardly and inwardly bent standards 10, perforated at their upper

ends above the cranks, the rigid hoe-handles 12, mounted for reciprocation and vibration in the perforations of the standards, the clip 14, connecting the handles to the cranks, and the hoes connected to the handles, of the axle journaled in the frame, the ground-wheels thereof, the large pinion mounted on the axle and the small pinion mounted upon the crank-shaft and engaged and driven by the large pinion, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

STEPHEN SIMPSON KENT.
WILLIAM GARY BOLER.
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Witnesses:
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