

(No Model.)

E. A. ELLIS & W. C. S. WOOD.
COTTON CHOPPER.

No. 478,158.

Patented July 5, 1892.

Fig. 1.

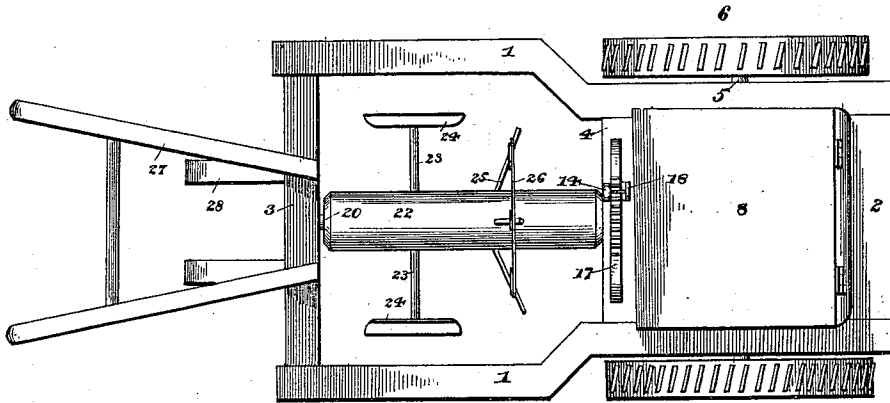


Fig. 2.

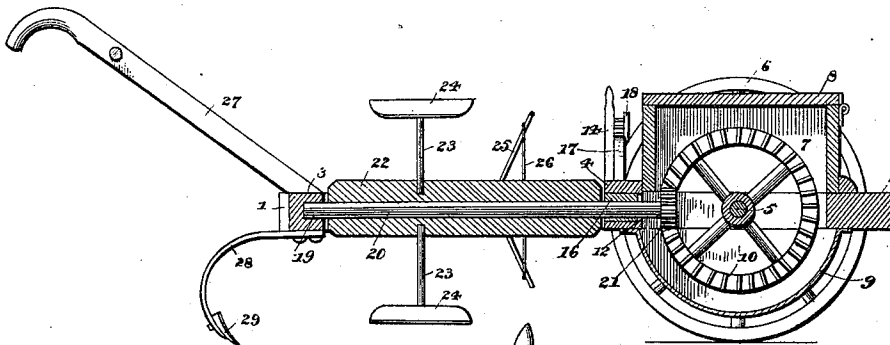
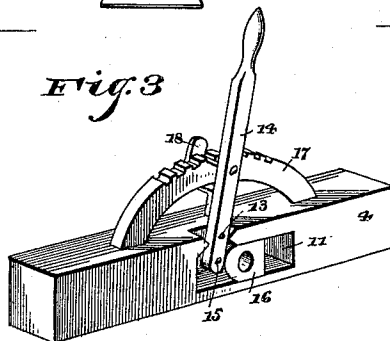


Fig. 3.



Witnesses:

B. S. Ober,
W. F. Duwall.

Inventors

E. A. Ellis and
W. C. S. Wood,

By their Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

ELISHA A. ELLIS AND WILLIAM C. S. WOOD, OF GRASSY POND, SOUTH CAROLINA.

COTTON-CHOPPER.

SPECIFICATION forming part of Letters Patent No. 478,158, dated July 5, 1892.

Application filed November 17, 1891. Serial No. 412,172. (No model.)

To all whom it may concern:

Be it known that we, ELISHA A. ELLIS and WILLIAM C. S. WOOD, citizens of the United States, residing at Grassy Pond, in the county of Spartanburg and State of South Carolina, have invented a new and useful Cotton-Chopper, of which the following is a specification.

This invention relates to improvements in cotton-choppers; and the objects of our invention are to provide a cheap and simple machine adapted to be drawn over a field of cotton and to chop or thin the same, thus forming stands.

A further object of our invention is to guard the mechanism for operating the choppers and prevent the same from becoming clogged by dust, &c., and, furthermore, to provide for a change of speed of rotation or revolution of the cutters or hoes.

Other objects and advantages of the invention will be obvious from the following description, and the novel features in which the invention consists will be hereinafter specified, and be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a plan of a cotton-chopper constructed in accordance with our invention. Fig. 2 is a longitudinal section of the same. Fig. 3 is a detail in perspective of the cross-bar for supporting the rear end of the cutter or chopper shaft.

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

In constructing our chopper we employ a substantially oblong frame-work comprising opposite side bars 1, connected at their front and rear ends by cross-bars 2 and 3, respectively. The side bars 1 are also connected near their centers by the cross-bar 4, and between the cross-bar 4 and front cross-bar 2 there is journaled in suitable bearings a transverse axle 5, designed for rotation. The ends of the axle carry ground-wheels 6, and between its bearings the axle is covered by a box 7, having a hinged lid 8 and a curved sheet-metal bottom 9, extending below the frame-work. Within this box the axle is provided with a master-gear 10. The cross-bar 4 is provided at its rear face with a longitudinal slot

11, the bottom of which has an opening 12. Above the slot or recess 11 the bar 4 has loosely pivoted thereto, as at 13, a lever 14, the upper end of which terminates in a handle and the lower end of which is loosely pivoted at 15 to a bearing-block 16, which is mounted for longitudinal movement in the slot or recess 11. The bar has mounted thereupon a toothed locking-bar 17, which is loosely embraced by an L-shaped bracket 18, secured to lever 14, and a pin mounted in the bracket is adapted to engage any point of said bar and by reason of the loose connections to ride over the teeth thereof.

A bearing 19 is formed in the rear cross-bar 3 of the frame, and in the same and the sliding bearing-block a chopping-shaft 20 is mounted for rotation, the front end of the shaft extending through the bearing-block and through the opening 12 of the cross-bar 4 and terminating adjacent to the axle, at which point it is provided with a removable gear-wheel 21. By changing the gears upon the end of this shaft the shaft may be rotated at relatively different speeds with relation to the master-gear, the teeth of which engage those of said removable gear. Between its bearings the shaft has mounted thereon a hub 22, in which at diametrically-opposite sides are threaded the shanks 23, carrying hoes or choppers 24, adapted to operate in the usual manner and to be adjusted as may be desired. In advance of the hoes there radiate from the hub a series of spokes 25, the outer ends of which are connected by a continuous wire 26.

Handles 27 rise from the rear cross-bar 3, are suitably connected, and below the handles there extends rearwardly from the rear cross-bar a pair of curved shanks or standards 28, carrying shovels 29.

In operation it will be seen that as the machine moves along motion is imparted from the ground-wheels to the axle and through the medium of the two gears to the rotatable chopper-shaft, which, being provided with the hoes through the medium of the same, chops or thins the cotton, forming rows of stands. The spokes located in front of the choppers serve to cast aside from the path of the chop-

pers any stones, and hence preserve the choppers from becoming broken or injured by contact therewith.

Having described our invention, what we claim is—

5 1. In a cotton-chopper, the combination, with the frame, the transverse axle, the ground-wheels, and the master-gear upon the axle, of the cross-bar of the frame-work having a longitudinal slot 11, the bottom of which has an
10 opening 12, a sliding guiding-block mounted in the slot, a lever loosely connected with the bearing-block and fulcrumed loosely upon the bar, a curved toothed locking-bar mounted
15 upon the cross-bar in front of the lever, the L-shaped bracket secured to the lever and loosely embracing the locking-bar, a transverse locking-pin extending from the bracket and engaging the teeth of the locking-bar, the
20 chopper-shaft having its front end journaled

in the bearing-block and extending through and beyond the same, and the gear-wheel mounted on the chopper-shaft and adapted to be thrown into engagement with the master-gear, substantially as specified.

25 2. In a cotton-chopper, the combination, with the frame-work, the chopping-shaft, and means for operating the same, of a hub mounted upon the shaft, hoes mounted on the hub, spokes radiating from the hub in front of the
30 choppers, and a wire connecting the ends of the spokes, substantially as specified.

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

ELISHA A. ELLIS.

WILLIAM C. S. WOOD.

Witnesses:

J. M. SWAFFORD,

J. E. WEBSTER.