(No Model.) 2 Sheets—Sheet 1.

H. T. BUTLER.

COTTON CHOPPER.

No. 310,493. Patented Jan. 6, 1885.

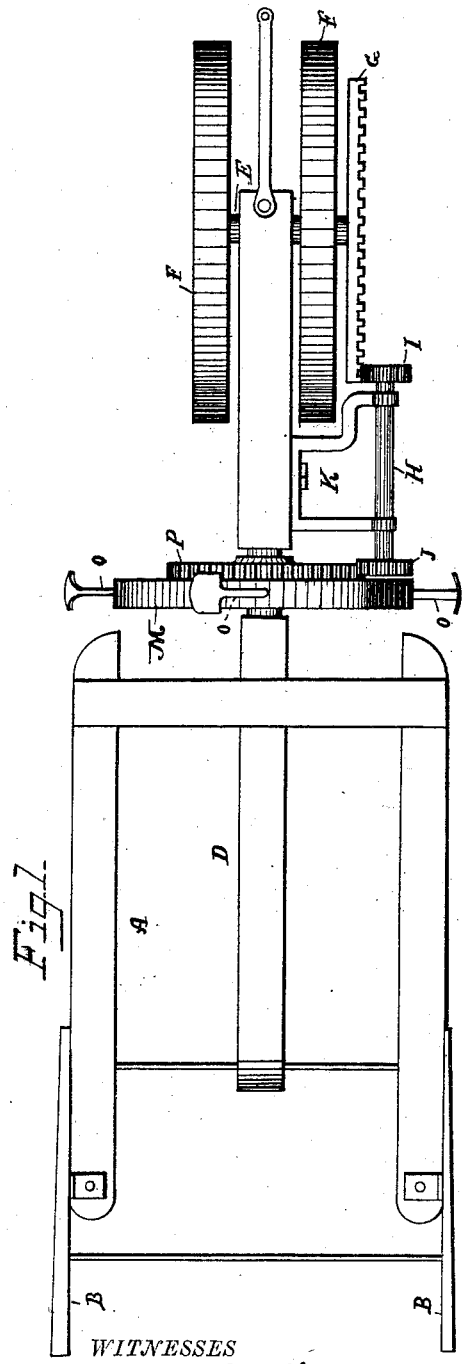

Fig. 1.

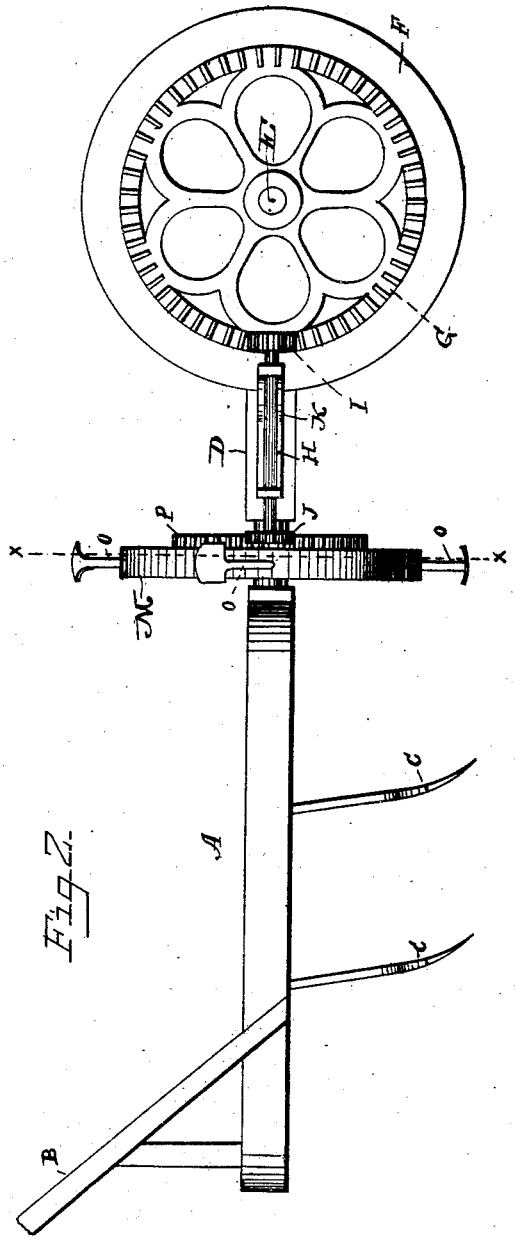

Fig. 2.

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Fig. 3.

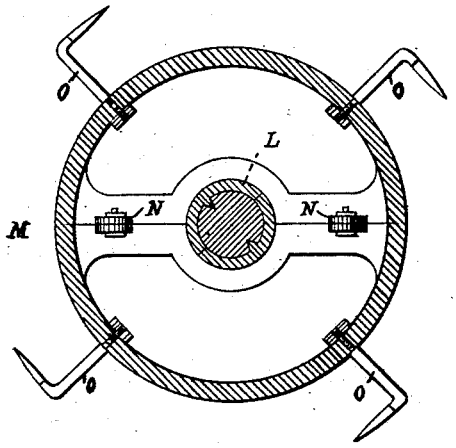
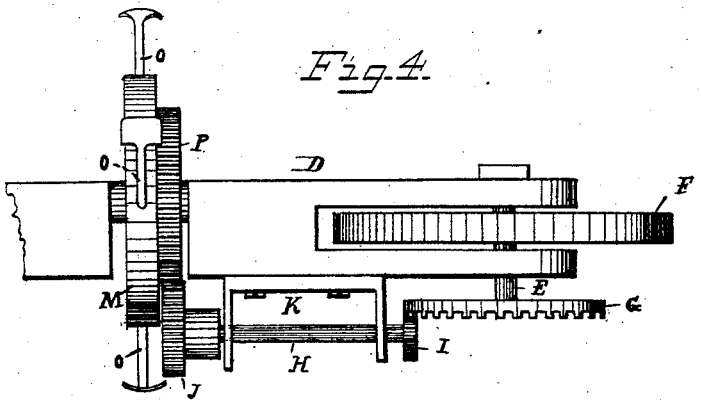


Fig. 4.



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UNITED STATES PATENT OFFICE.

HENRY T. BUTLER, OF SPARTANBURG, SOUTH CAROLINA.

COTTON-CHOPPER.

SPECIFICATION forming part of Letters Patent No. 310,493, dated January 6, 1885.

Application filed May 15, 1884. (No model.)

To all whom it may concern:

Be it known that I, HENRY T. BUTLER, a citizen of the United States, residing at Spartanburg, in the county of Spartanburg and State of South Carolina, have invented certain new and useful Improvements in Cotton-Choppers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in cotton-choppers; and it has for its objects, first, to so arrange the chopping-hoes relatively with the supporting-wheels as that the latter shall straddle the row, and, second, to so arrange the chopping-hoes relatively with the handles or point where the operator walks as that he can readily see the work which the hoes are performing.

In the accompanying drawings, forming a part of this specification, and on which like letters of reference indicate the same or corresponding features, Figure 1 represents a plan view of my improved apparatus; Fig. 2, a side elevation of the same; Fig. 3, a sectional view taken on the line *x x* of Fig. 2; and Fig. 4, a plan view of a portion of the center beam, showing a modified arrangement of the devices for operating the hoes.

The letter A designates the frame of my improved machine, the same being constructed in the usual manner, and provided at its rear end with the handles B and with the covering-plows C, which may be of any approved form. The center beam, D, of the frame is extended forwardly some distance beyond the frame itself, and near its end is mounted upon an axle, E, which in turn is mounted upon the supporting-wheels F. These wheels are of such distance apart as to straddle the row and clear the plant, and the shaft at one end is provided with a beveled gear-wheel, G. A shaft, H, having at each end thereof the pinions I and J, is mounted in journals formed in the bracket K, secured firmly to the center beam, D. This shaft H receives rotation through its pinion I intergearing with the gear-wheel G, and through its pinion J transmits rotary motion to the hoe-wheel. The center beam, D, a short distance forward of the frame is rounded, so as to receive the metallic divided collar-bearing L. The members of this collar are provided with one or more spurs which take into the beam, and thereby prevent themselves from revolving with the hoe-wheel M. This wheel is constructed of two parts, which are firmly held together by the lugs and bolts N, the bore in the hub of the same being adapted to fit over the sleeve L, whereby a smooth bearing is formed. The periphery of the wheel is bored radially at intervals, and I provide the shanks of the hoes O, which fit within apertures, with nuts, by which they are firmly held in place. By this means the hoes may also be removed and sharpened or replaced by new ones. The hoe-wheel is further provided with a gear-wheel, P, which is also divided, and which intergears with the pinion J, by which rotary motion is imparted to the hoes. The object of dividing these wheels into two parts is to admit of their application to the journal on the center beam without the necessity of either reducing the size of the beam to agree with the bore in them, and placing the wheels thereon before the beam is made part of the frame, or of making a joint in the beam.

It is the design of this invention that the hoes shall revolve in a plane slightly below that occupied by the periphery of the supporting-wheels, and that the plows in turn shall extend slightly below the plane occupied by the hoes. This arrangement will effect a regulation of the respective depths at which the hoes and plows shall enter the ground.

As shown in Fig. 4, the forward end of the center beam is bifurcated, one supporting-wheel only being used, and mounted on its shaft within the members of the bifurcation; and the axis of the journal of the hoe-wheel is placed at one side of the supporting-wheel sufficiently far to preserve the first object of my invention—namely, to cause the wheel to travel at one side of the furrow while the hoes act thereon.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a cotton-chopper, the combination, with the center beam extended forward of the frame, and the supporting-wheels mounted at either side thereof and carrying a driving gear-wheel, of the hoe-wheel mounted on the said center beam and provided with a series

of hoes, and with the gear-wheel and the intermediate pinions mounted on a common shaft and adapted to intergear, respectively, with the said gear-wheels.

2. In a cotton-chopper, the combination, with the center beam extended forward of the main frame, and the supporting-wheels mounted on either side of the divided journal-sleeves, of the divided hoe-wheel mounted on said beam and provided with a series of hoes, and the intermediate pinions mounted on a common shaft and adapted to communicate motion from the driving-wheels to the hoe-wheel.

3. In a cotton-chopper, the combination, with the center beam provided with the divided journal-sleeve, of the divided hoe-wheel having means to unite its parts.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY T. BUTLER.

Witnesses:
W. A. BOMAN,
L. P. MURPHY.