

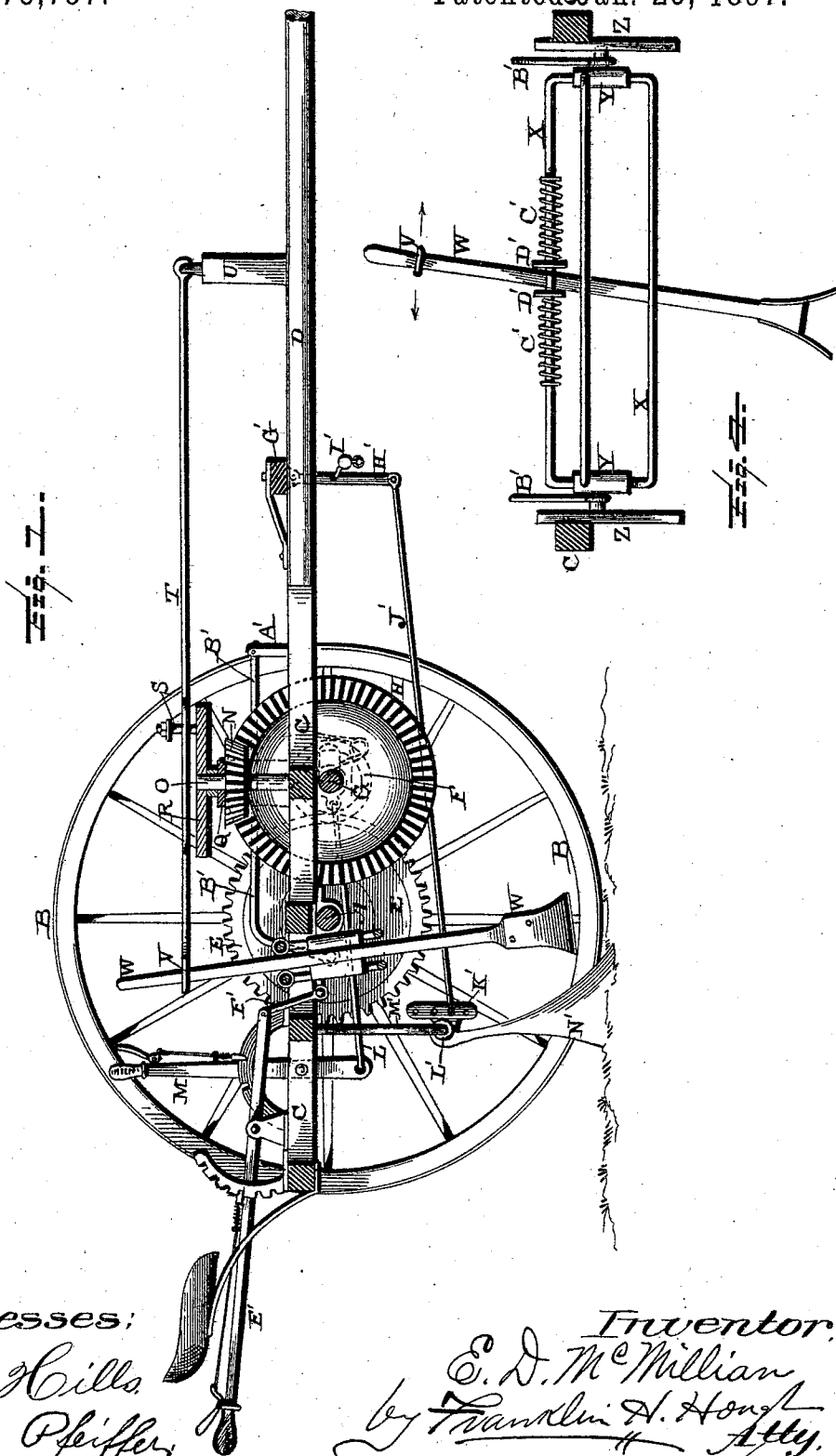
(No Model.)

2 Sheets—Sheet 1.

E. D. McMILLIAN.
COMBINED CULTIVATOR AND COTTON CHOPPER.

No. 575,757.

Patented Jan. 26, 1897.



Witnesses:
L. C. Hills
J. M. Pfeiffer

Inventor:
E. D. McMillian
by Franklin H. Hough
Atty.

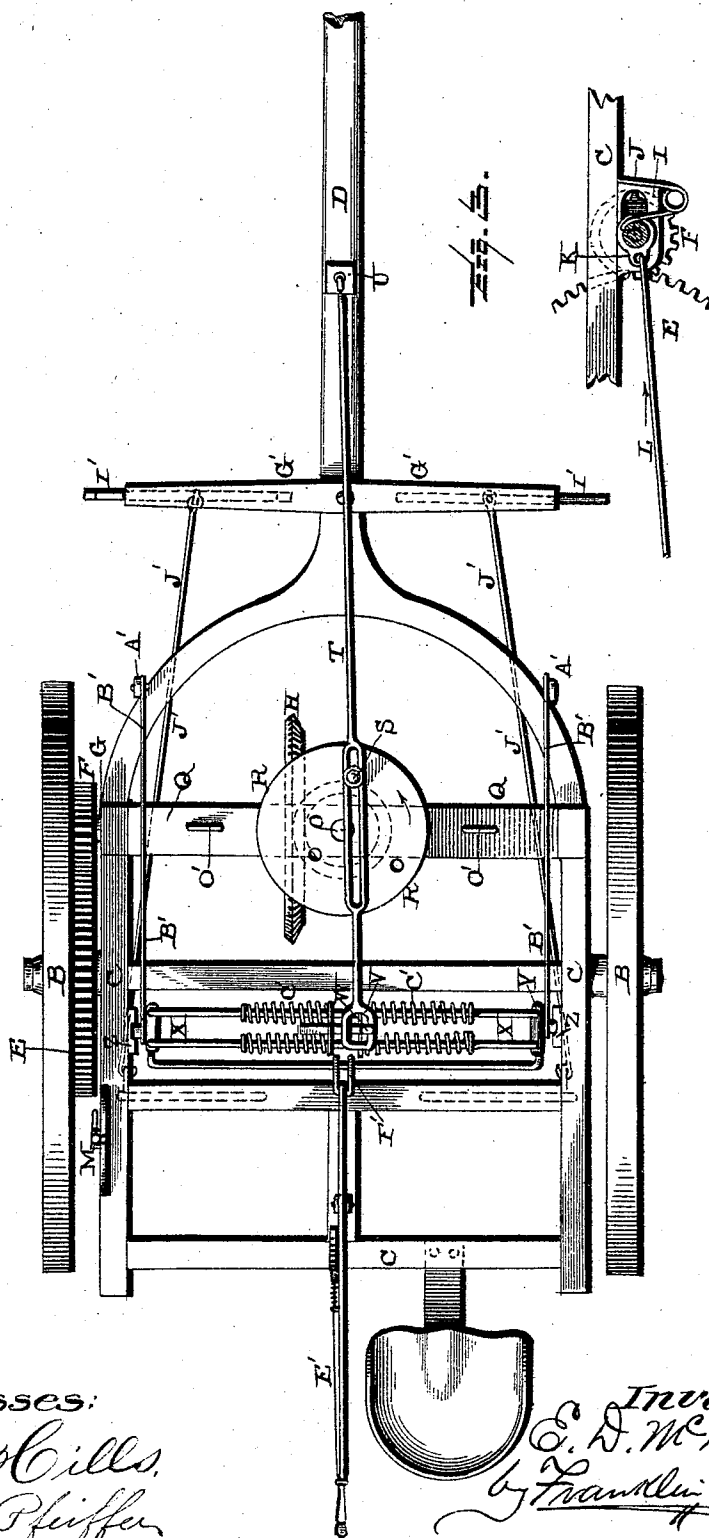
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UNITED STATES PATENT OFFICE.

EDWARD D. McMILLIAN, OF WADE, INDIAN TERRITORY, ASSIGNOR OF TWO-THIRDS TO FELIX G. WILLIAMS AND ENOCH A. WHITE, OF SAME PLACE.

COMBINED CULTIVATOR AND COTTON-CHOPPER.

SPECIFICATION forming part of Letters Patent No. 575,757, dated January 26, 1897.

Application filed September 24, 1896. Serial No. 606,818. (No model.)

To all whom it may concern:

Be it known that I, EDWARD D. McMILLIAN, a citizen of the United States, residing at Wade, in the county of Blue, Indian Territory, have invented certain new and useful Improvements in a Combined Cultivator and Cotton-Chopper; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to an improvement in cotton cultivators and choppers; and it consists in vertical rods to which the singletrees are attached and horizontal draft-rods which extend backward from the lower ends of the vertical rods, and which draft-rods have their rear ends fastened to perforated adjusting-plates which are secured to sleeves to which the cultivators are secured and by means of which adjusting-plates the angles of the cultivators are regulated at will.

It also consists in an operating mechanism and a revolving disk provided with a wrist-pin, combined with a slotted operating-rod which has its front end secured to an upright which rises from the tongue and its rear end connected to the chopping-lever, whereby the rotary movement of the disk causes the chopping-lever to vibrate or rock in its frame.

It still further consists in a chopping-lever which is pivoted in a suitable frame, combined with coiled springs which are placed upon each side of the chopping-lever and by which the chopping-lever is held in position, but allowed to give in case its lower end strikes some object which it cannot move.

It still further consists in the arrangement and combination of parts which will be more fully described hereinafter.

The object of my invention is to produce a combined cotton cultivator and chopper by means of which, as the machine is drawn along, the cotton is chopped in the rows and the ground in between the rows is cultivated at the same time.

In the accompanying drawings, Figure 1 is a longitudinal vertical section of a machine

which embodies my invention. Fig. 2 is a vertical section of the same. Fig. 3 is a detail of the mechanism for throwing the operating parts out of gear. Fig. 4 is a detail view of the chopping-lever and its frame.

A represents the axle, and B the driving-wheels. These wheels are placed upon the ends of the axles and provided with suitable mechanism in their hubs, so that the wheels will revolve the axle when the machine is drawn forward, but revolve loosely thereon when the machine is backed. The frame C is of any suitable construction and has the tongue D extending outwardly from its front end.

Secured to the axle A, inside of one of the driving-wheels B, is the gear-wheel E, which meshes with the pinion F, placed upon the outer end of the shaft G. This shaft G extends but half-way across the frame and has secured to its inner end the large gear-wheel H. The outer end of the shaft G is journaled in the slotted bearing I, as shown in Fig. 3, and bearing against the end of the shaft, so as to force the pinion F always in gear with the wheel E, is the spring J. Connected to the sleeve K on the axle G is the operating-rod L, which extends back to the lever M, by means of which the pinion F is thrown in and out of gear at the will of the driver.

The gear-wheel H meshes with the pinion N on the short vertical shaft O, which is journaled at its lower end in a suitable bearing in the frame C and at its upper end in a brace Q, which extends across the top of the machine, as shown in Fig. 2.

To the upper end of the shaft O is secured the revolving disk R, which is provided with a wrist-pin S, which passes up through a slot or loop formed in the operating-rod F. The front end of the rod T is loosely connected to the upright U, which rises from the top of the tongue D, and the rear end of the rod is formed into a loop V, up through which the upper end of the chopping-lever W passes. As the disk R is caused to revolve, the wrist-pin S causes the rear end of the rod or lever T to vibrate or sweep back and forth horizontally, and thus cause the chopping-lever W to vibrate or rock in its supporting-frame X.

The frame X is rectangular in shape and

provided with a suitable guide Y at each end for the purpose of moving in the vertically-grooved parts Z, secured to the inner sides of the frame C. Rising from two standards A', upon the top of the frame, are the two supporting and guiding rods B', which are connected at their rear ends to the frame X, and which rods cause the two ends of the frame to rise and fall evenly in all of its movements. The frame, as shown in Figs. 1 and 2, is made double and the chopping-lever W extends vertically through it and is held in position by means of the springs C', placed upon the rods of the frame, and which springs are secured at their outer ends to the frame and at their inner ends bear against the disks D', which press against opposite sides of the lever W and allow it to freely give in case its upper end strikes against any object which it cannot freely move. As the machine is drawn forward the lever W rocks or vibrates and chops the cotton in the usual manner. In order to throw the chopper in and out of action, the frame X is made vertically adjustable in the parts Z by means of the lever E', pivoted upon the rear end of the frame C and connected to the frame by means of the connecting-rod F'. As the frame is raised the lower end of the lever W is raised above the ground or the depth of its cut is regulated at will.

Pivoted upon the rear end of the tongue D is the doubletree G', and from the ends of this doubletree hang the vertical rods H', to which the singletrees I' are fastened. To the lower ends of the vertical rods H' are connected the draft-rods J', which extend backward and have their rear ends fastened to the vertical plates K', which are provided with a series of adjusting-holes, as shown in Fig. 1. These perforated plates K' are secured at the outer ends of the sleeves L', which are placed loosely upon the lower ends of the supporting-frames

M', which hang from the frame C. To the sleeves L' are secured the cultivators N' of any suitable construction, and which are adjusted to any desired angle by means of the perforated plates K' and the draft-rods J'. By changing the rear ends of the draft-rods from one hole to another in the plates K' the angles of the cultivators N' are adjusted to cultivate either shallow or deep. These cultivators N' are arranged so as to cultivate upon both sides of the row of plants which is being chopped.

Upon the top of the brace Q are secured rings O', which serve as guides to the reins and thus prevent them from being caught in the machinery.

Having thus described my invention, I claim—

1. In combination with the shaft G carrying pinion F, geared wheel E, the slotted sleeve in which an end of the said shaft G is journaled, the spring J adapted to bear against the shaft to hold the pinion F in contact with the wheel E and a lever for throwing the pinion F into and out of gear, substantially as shown and described.

2. In a cotton-chopper, a double vertically-adjustable frame X, supporting and guiding rods B' connected to opposite ends thereof, and an adjusting-lever by means of which the frame is adjusted vertically, combined with a chopping-lever which extends up through the frame, springs connected to the frame for bearing against opposite sides of the lever, and an operating mechanism for rocking or vibrating the chopping-lever in its frame, substantially as described.

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

EDWARD D. McMILLIAN.

Witnesses:

W. L. RICHARDS,
S. H. HANCOCK.