

(No Model.)

L. H. ABERNATHY.
COMBINED COTTON CHOPPER AND CULTIVATOR.

No. 479,083.

Patented July 19, 1892.

Fig. 1.

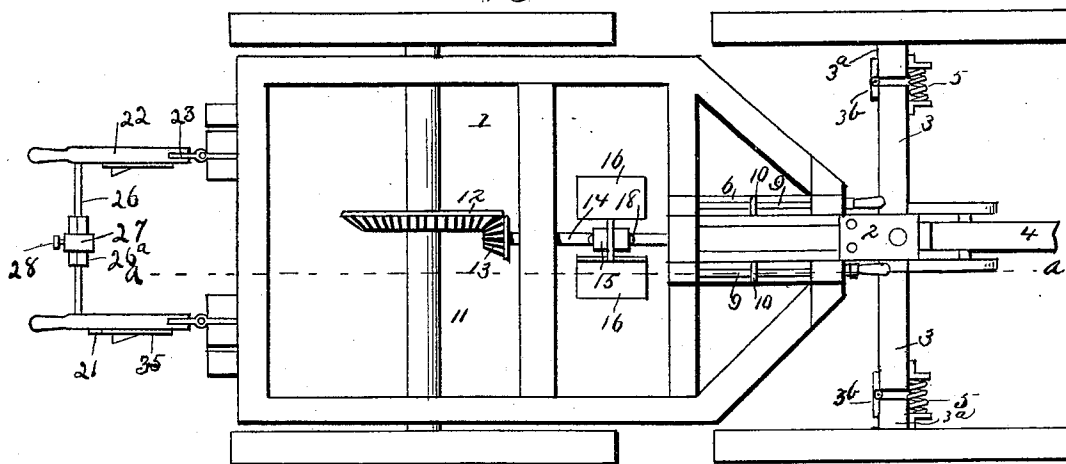


Fig. 2.

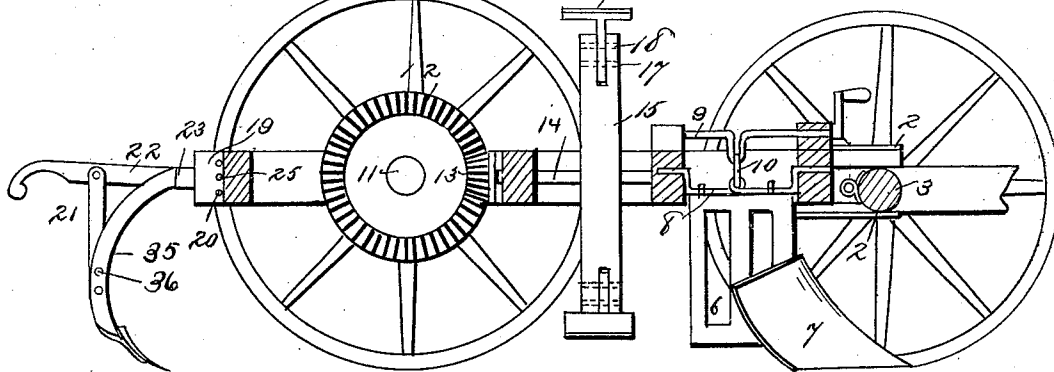
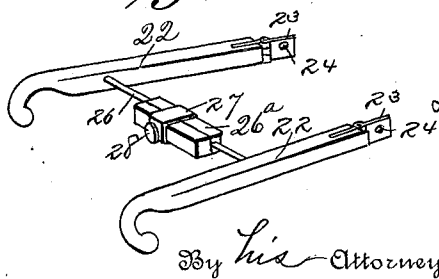


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

LORANZY HINSON ABERNATHY, OF HOLLAND, ARKANSAS, ASSIGNOR OF
ONE-HALF TO S. W. LEWELLING, OF SAME PLACE.

COMBINED COTTON CHOPPER AND CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 479,083, dated July 19, 1892.

Application filed June 20, 1891. Renewed June 16, 1892. Serial No. 436,997. (No model.)

To all whom it may concern:

Be it known that I, LORANZY HINSON ABERNATHY, a citizen of the United States, residing at Holland, in the county of Faulkner and State of Arkansas, have invented certain new and useful Improvements in a Combined Cotton Chopper and Cultivator; and I do hereby 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.

My invention consists in a new and improved combined cotton chopper and cultivator in which are combined many novel and valuable features and which will be hereinafter fully described and claimed.

Referring to the accompanying drawings, Figure 1 is a top plan view of my new and improved machine. Fig. 2 is a longitudinal sectional view taken on the line *a a* of Fig. 1. Fig. 3 is a detail perspective view hereinafter described.

The same numerals of reference indicate corresponding parts in all the figures.

Referring to the several parts by their designating-numerals, 1 indicates the main frame of the machine, which converges to a point at its front end and is there provided with the upper and lower plates 2 2. Between these plates is centrally pivoted on a suitable king-bolt the main section 3 of the front axle, to which the tongue 4 is attached.

Connected to the rear side of the main section 3 of the axle, at the ends thereof, are the inner wings of hinges 3^b, the outer wings of which are connected to the axle-sections 3^a, as better shown in Fig. 1 of the drawings. The wings of the hinges 3^b are flexibly connected in such a manner that while the outer wings are adapted to swing rearwardly of the vertical plane of the inner wings, yet they are prevented from swinging forwardly.

Connected at their inner ends to brackets fixed upon the forward side of the main section 3 of the axle are the inner ends of strong coil-springs 5, which are connected at their outer ends to brackets fixed upon the forward sides of the axle-sections 3^a and serve in practice to normally hold the sections 3^a in alignment with the main section 3 and to return

said sections 3^a to their normal position when the same have been swung rearwardly. By this construction it will be seen that when the forward wheels strike a stone or other obstruction they will be turned outwardly and will pass the obstruction, instead of going over the same.

In the forward end of the machine-frame are adjustably mounted the scraper-frame 6, carrying at their forward lower ends the inclined scraping-blades 7. These frames 6 are each mounted upon a longitudinal crank-shaft 8, above which is arranged a second crank-shaft 9, having a suitable end handle by which it may be turned, and the crank-shafts 8 and 9 are connected by a link 10, so that by turning the upper crank-shafts 9 by their handles the scraper-frames 6 can be raised or lowered to raise and lower the scraping-blades 7, as will be readily understood. By hanging the inclined scraper-blades in the manner described it will be seen that should said blades strike a stone or other obstruction they will be swung laterally, so as to avoid the same.

Upon the rear axle 11 of the machine is secured a large cog-wheel 12, the teeth of which mesh with the pinion 13, secured on the rear end of a horizontal shaft 14, which is mounted in bearings, as shown, in the cross-pieces of the machine-frame. Upon the central part of this shaft is secured a cross-bar 15, in slot-bearings in the ends of which are placed the hoes 16. The hoes are secured each by two pivot-pins 17 18, the pins 18 being formed of wood, so that when the hoes or the plow-blades strike an immovable obstruction the wooden pins will break and the hoes or plow-blades will fly back without being injured or broken by said obstruction.

To the rear cross-bar of the machine-frame are secured side by side the series of bearing-blocks 19, which are so arranged as to leave a narrow space between them. In each bearing-block is formed a series of transversely-disposed apertures 20. To the forward end of the plow-handles 22 are hinged the vertically-arranged metal plates 23, the forward ends of which are formed each with an aperture 24. Fixedly connected to the handles 22, adjacent to the rear ends thereof, are hang-

ers 21, which are provided adjacent to their lower ends with transverse apertures arranged one above the other. Journaled in the lower apertures of the hangers 21 are the pivot-bolts of the plow-feet 35, which feet are provided above their pivotal point with a transverse aperture designed to align with the upper aperture of the hangers and receive a wooden pin 36, which serves to hold the foot and the plow in their normal position. By this construction it will be seen that when the plows strike an obstacle the wooden pins 36 will break and allow the plows to swing rearwardly. The bearing-blocks 19 are preferably four in number, and the vertical metal plates 23 at the ends of the plow-standards can be inserted between any of these blocks, so as to regulate the distance between the plows, and the plates are held between the blocks by a transverse removable rod 25, which can be inserted through any of the series of apertures 20 in said blocks, so that the plates at the inner end of the standards can be secured at any desired height. It will be seen by this arrangement that the plows can be moved separately to either side, that the inner ends of their handles can be secured at various heights, so as to better suit operators of different heights, and that the entire plow can be raised, turning on the pivot-rod 25, so as to clear an obstruction when the latter is seen by the operator. The handles of the plows are preferably provided with pivot-rods 26, the inner ends of which pass through the bearing-blocks 26^a and are there secured by a clamping-screw 28, which takes through a band 27, surrounding the bearing-blocks, so that the distance between the free ends of the handles of the plows can be adjusted and regulated as desired by the operator.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of my new and improved machine will be readily understood without further description. It will be seen that it combines in the one machine a scraper,

a cotton-chopper, and cultivating plows or shovels, the scraping-blades working on each side of a row of cotton-plants, the chopping-hoes thinning out the plants to the requisite extent, and the plows cultivating between the rows.

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

1. The combination of the pivoted front axle-section 3, the end sections 3^a, hinged to the ends of the main section 3, and the spiral springs 5, secured at their inner ends to the main section and at their outer ends to the hinged sections 3^a, substantially as set forth.

2. The combination, with the machine-frame, of the scraper-frames 6, having the inclined blades 7 and mounted on the longitudinal crank-shafts 8, the upper crank-shafts 9, having the operating-handles, and the links 10, connecting the crank-shafts 9 and 8, substantially as and for the purpose set forth.

3. The combination, with the main frame and the series of bearing-blocks 19, connected thereto and having a series of apertures 20, of the plow-handles, the vertical plates 23, hinged to the forward ends of said handles and having the apertures 24, and the removable pivot-rod 25, substantially as and for the purpose set forth.

4. The combination of the machine-frame formed with the pointed or V-shaped forward end and having the horizontal bearing-plates 22 arranged as specified, the main axle-section 3, centrally pivoted between said plates, the end axle-sections 3^a, hinged to the ends of the main section 3, and the springs 5, connecting the hinged sections with the main section, substantially as set forth.

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

LORANZY HINSON ABERNATHY.

Witnesses:

SAMUEL P. BECK,
J. C. HIGGS.