(No Model.)

H. J. CROCKER, Jr.

COMBINED CULTIVATOR, HARROW, AND MARKER.

No. 420,336. Patented Jan. 28, 1890.

Fig. 1.

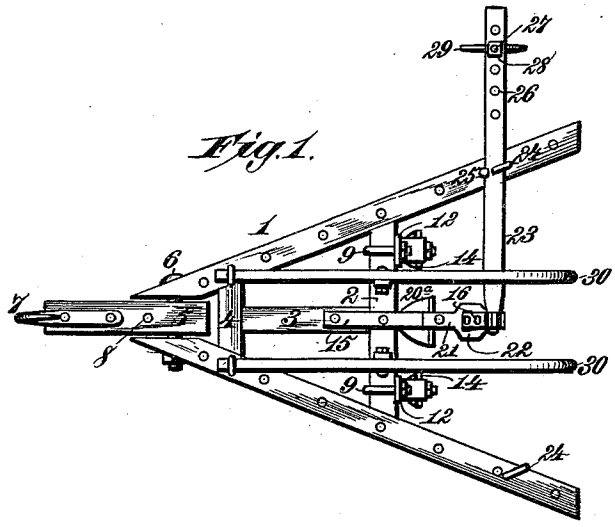


Fig. 2.

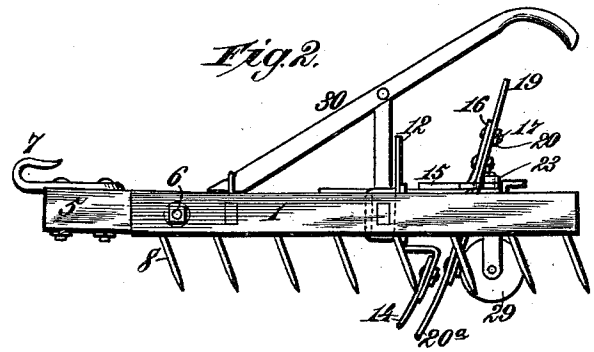


Fig. 3.

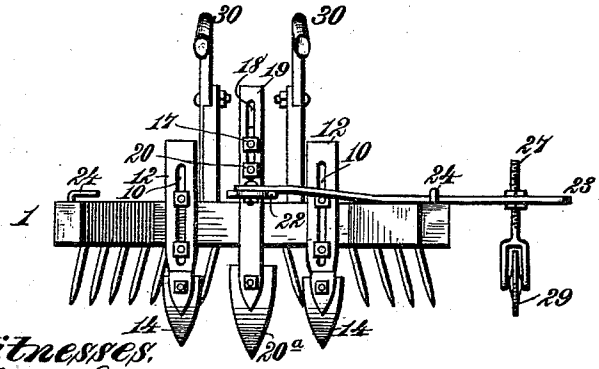
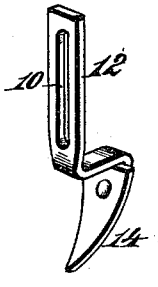


Fig. 4.



Witnesses.
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UNITED STATES PATENT OFFICE.

HENDERSON J. CROCKER, JR., OF ORLINDA, TENNESSEE.

COMBINED CULTIVATOR, HARROW, AND MARKER.

SPECIFICATION forming part of Letters Patent No. 420,336, dated January 28, 1890.

Application filed March 23, 1889. Serial No. 304,401. (No model.)

To all whom it may concern:

Be it known that I, HENDERSON J. CROCKER, Jr., a citizen of the United States, residing at Orlinda, in the county of Robertson and State of Tennessee, have invented new and useful Improvements in a Combined Cultivator, Harrow, and Marker, of which the following is a specification.

My invention relates to cultivator-harrows, or that class of harrows in which adjustable cultivator shovels or plows are connected with the harrow-frame.

It is the purpose of said invention to provide simple and readily-adjustable means for setting or removing any one or more of the cultivator-plows, either as regards the depth of working or the interval between the furrows, and to combine the same in a convenient and compact manner with the frame of the harrow.

It is my further purpose to combine with said harrow and plows a hand-marker which may be used upon either side of the same at pleasure, and which is capable of adjustment upon its support to render the intervals between the furrow-marks, or rows of planting, greater or less, as may be desired.

It is my purpose, finally, to provide a harrow of this class with a rocking-tongue connection or bar carrying the central tooth of the harrow to enable the draft-animals to pass over inequalities in the ground without disturbing the horizontal movement of the harrow.

The invention consists in the several novel features of construction and new combinations of parts hereinafter fully set forth, and then pointed out in the claims following this specification.

Referring to the accompanying drawings, Figure 1 is a plan view illustrating my invention. Fig. 2 is a side elevation of the parts shown in Fig. 1. Fig. 3 is a rear elevation of the same. Fig. 4 is a detail view of one of the cultivator-shovels and its supports detached.

In the said drawings, the reference-numeral 1 denotes the A-frame of the harrow, having any suitable construction and provided with the usual transverse brace 2, which I prefer to re-enforce by a central longitudinal brace 3, which is connected to a buttress 4 and meets the cross-brace 2 centrally. Between the converging side bars 1 of the A-frame, at their apex or forward end, is mounted a tongue-beam 5, lying between the interior beveled and parallel faces of the side bars, to which it is pivotally connected by a horizontal bolt 6, whereby the tongue-beam is permitted to swing upward to any required angle. Upon said beam is mounted a suitable connection 7 for the doubletree, and projecting from the lower face of the tongue-beam is a tooth 8, which is the central tooth of the harrow-frame. Upon the transverse brace 2, upon each side of the central longitudinal brace 3, is mounted a metallic loop 9, embracing three sides of said cross-brace, its rearwardly-projecting ends lying in a vertical slot 10, formed in a stock or plate 12 and hold it firmly in place against the brace. The lower end of each stock or plate is bent rearwardly and then downward, and a cultivator-shovel 14, of any suitable form, is mounted thereon in any suitable manner, a convenient fastening being a bolt or nut. Upon the central longitudinal brace 3 is mounted a metallic supporting-plate 15, crossing the transverse brace and projecting in rear thereof. At a suitable point in the rear the end of the plate is turned upward at a proper angle, forming an inclined support 16, from which bolts 17 project rearwardly. These bolts pass through a vertical slot 18, formed in a stock or plate 19, and receive nuts 20, which clamp the stock closely against the support 16 and hold it firmly in place. A cultivator-shovel 20^a is mounted on the stock 20 in any suitable manner. Upon the horizontal end of the plate 15 is lapped and bolted a bracket 21, having an eye 22, which surrounds the upwardly-bent support 16, as well as the stock 19, the bracket being extended to the rear sufficiently to form a point of pivotal attachment for an arm 23, which projects over the side bar of the harrow, to which it is detachably secured by a hook or keeper 24, in which it is held by a pin or peg 25, set in a hole in the bar. The projecting end of the arm is provided with a series of openings 26, in any one of which is placed the end of a drop-bar 27, fastened by nuts 28, turned thereon upon each side of

the arm. The lower end of the drop-bar carries a land-marking wheel or other device 29, suitable for marking the furrow and preserving the intervals between furrows.

By means of the construction described I am able to adjust the cultivator-shovels 14 laterally and vertically and to impart a similar vertical adjustment to the central cultivator 20^a. I may also operate the land-marker upon either side of the frame and at any desired adjustment, thus harrowing the ground and laying it off at the same time that the succeding furrow is marked or its position indicated.

The invention is well adapted to corn and tobacco crops, as will readily be seen, and the plows may be used upon any land containing small vegetation of any kind, the harrow being used simultaneously.

The harrow is guided by handles 30, mounted upon the frame in any suitable manner.

It will readily be understood that the central plow or cultivator is exceedingly useful in laying off the ground at the same time that it is harrowed.

What I claim as my invention is—

1. A cultivator consisting of the converging side bars having pendent teeth, a buttress 4 between the side bars, adjacent to their junction, a cross-brace connecting the side bars and having slotted shovel carrying stocks clamped to and vertically adjustable on the cross-brace, and a center brace having its ends abutting, respectively, the buttress and the shovel-carrying cross-brace, substantially as described.

2. A cultivator consisting of the converging side bars having pendent teeth, a buttress adjacent to the junction of said bars, a cross-brace carrying vertically-adjustable shovels and connecting the side bars, a center brace abutting, respectively, the buttress and the shovel-carrying brace, a metallic plate secured to the center brace and extending in rear of the shovel-carrying brace and provided at its rear end with a bracket, a shovel-carrying standard secured to the rearwardly-extending plate, and a reversible arm detachably engaging the bracket on said plate, resting on one of the converging arms and carrying a marker at its outer end, substantially as described.

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

HENDERSON J. CROCKER, JR.

Witnesses:

J. W. VIRGIN,

W. L. BURNEY.