

(No Model.)

W. H. WILSON.
CULTIVATOR HARROW.

No. 460,418.

Patented Sept. 29, 1891.

Fig. 1.

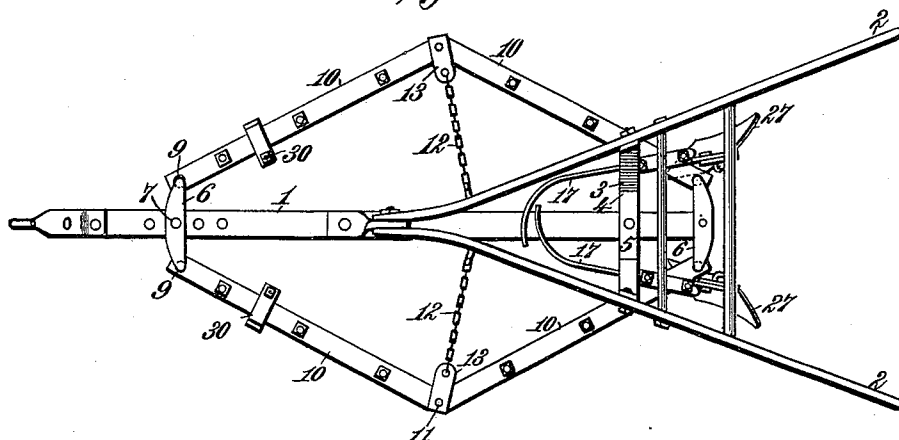


Fig. 1.

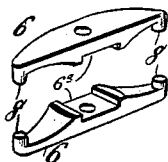


Fig. 2.

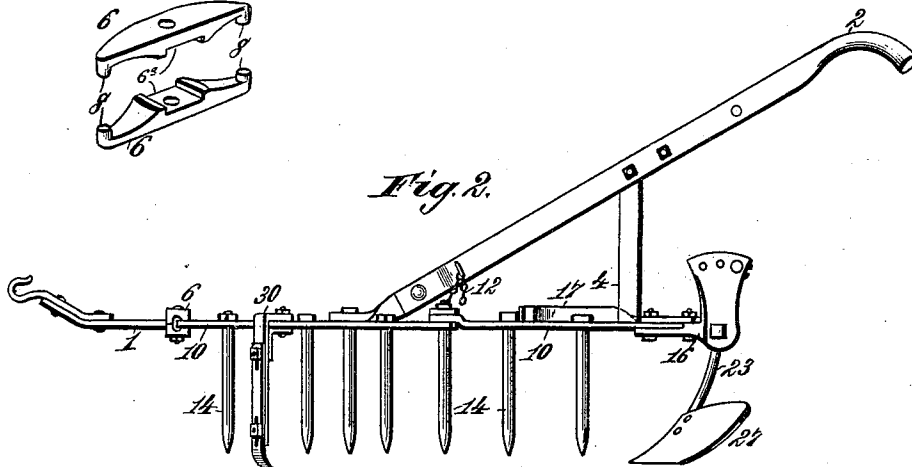


Fig. 3.

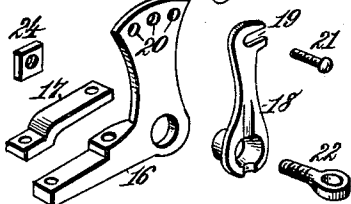


Fig. 4.

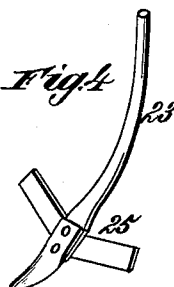
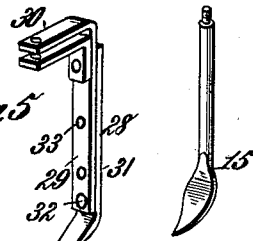


Fig. 6.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM H. WILSON, OF GROESBECK, TEXAS.

CULTIVATOR-HARROW.

SPECIFICATION forming part of Letters Patent No. 460,418, dated September 29, 1891.

Application filed December 31, 1890. Serial No. 376,350. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. WILSON, a citizen of the United States, residing at Groesbeck, in the county of Limestone and State of Texas, have invented new and useful Improvements in Cultivator-Harrows, of which the following is a specification.

This invention relates to that class of cultivator-harrows in which an adjustable harrow-frame is adapted to the attachment of various forms of interchangeable cultivating plows, sweeps, scrapers, harrow-teeth, or other cultivating devices, as hereinafter described.

The invention consists in certain novel features of construction and in the combination and arrangement of parts in a cultivator-harrow, as hereinafter particularly described and claimed.

In the annexed drawings, illustrating the invention, Figure 1 is a plan of my improved cultivator-harrow. Fig. 2 is a side elevation of the same. Fig. 3 is a detail perspective view of the adjustable shank-holder and its parts. Fig. 4 is a detail perspective view of a scraper. Fig. 5 is a detail perspective view of an adjustable cultivator-tooth. Fig. 6 is a detail perspective view of a shovel-tooth. Fig. 7 is a detail perspective view of the beam-clamp.

Referring to the drawings in detail, the numeral 1 designates a central beam of suitable length, to which the handles 2 are secured in any convenient manner. To each handle is secured one arm 3 of a bail-shaped brace 4, that has its cross-piece 5 firmly secured to the beam 1 by a bolt or otherwise. At or near the ends of the beam 1 are attached loops 6, which may be adjusted longitudinally along said beam and held thereon at any desired point by means of a bolt 7, passed through the loop and through one of a series of perforations in the beam. These loops 6 are made in separable upper and lower parts, each having an angular socket 6^a centrally between its extremities to receive the central beam 1, and through each of which the central fastening-bolt 7 is passed, and formed on and integral with the ends of each part of said loops are vertical lugs 8, that project toward and are the counterpart of each other and are adapted to be loosely or pivotally en-

gaged in perforations 9, formed in the ends of the four separable sections 10 of the adjustable harrow-frame. By this construction there is no need of bolts to connect the loops with the harrow-frame. The separable sections 10 on each side of the beam 1 are pivotally connected to each other at 11, preferably by means of the shank of a harrow-tooth located at that point. By adjusting one of the loops 6 forward or back on the beam 1 the harrow-frame can be expanded or contracted, as desired, in a manner similar to that shown and described in the Letters Patent, No. 373,709, granted to me November 22, 1887, so as to increase or diminish the distance between the cultivating devices on the opposite sides of the machine. If desired, chains 12 can be employed as additional connections between the handle-frame and the adjustable harrow-frame, and the outer ends of these stays can be attached to inward-projecting arms 13 on the harrow-frame.

Instead of the straight harrow-teeth 14 I may employ the curved teeth 15, having their lower ends suitably shaped, as shown, and these teeth may be attached to the harrow-frame 10 in any convenient or ordinary manner.

The harrow-frame is adapted to the ready attachment of cultivators, plows, sweeps, scrapers, and various forms of cultivating devices which are interchangeable with each other and can be used either with or without the harrow-teeth, according to the character of work to be done.

The numeral 16 designates an elbow-casting, the horizontal portion of which is reduced in thickness at one end and provided with a clamping-bar 17, by which the said casting can be adjustably secured to the harrow-frame, as shown. The outer portion of this elbow-casting 16 is extended upward and preferably made segment-shaped. At the angle of the casting 16 is pivoted a shank-holder 18, having in its upper end a notch or slot 19, which coincides with a series of perforations 20 in the upper portion of the casting, so that by passing a pin 21 through said notch and through one of the perforations in the casting the shank-holder 18 can be secured at any desired angle. The pivoted connection of the

shank-holder 18 and casting 16 consists of an eyebolt 22, in which the shank 23 of the cultivator device is securely held by means of a nut 24 on said bolt. The eyebolt 22 is adapted to turn with the shank-holder 18, and it will thus be seen that by withdrawing the pin 21 the cultivator device, whether a plow, sweep, or scraper, can be turned to any desired angle and be again secured in the desired position. To each shank 23 may be secured a scraper 25 or a heel sweep or scooter or shim-plow 27, or other device, as preferred. When the plows 25 are used, the clamping-bars 17 are preferably made of sufficient length to extend inward to the beam 1, and these extended bars are curved forward and formed with a twist, as shown, so as to rest on top of the beam against which they are thus adapted to bear and serve as braces for the plows to counteract any tendency of the plows pulling back under the draft of the machine and the resistance thereto consequent on the employment of broad plow-blades.

The horizontal arms of the castings 16 may be of varying length, so as to cause the cultivator devices to project at varying distances beyond the frame 10, as desired.

I may also attach to the harrow-frame 10 a number of vertically-adjustable cultivator devices 28, composed of the vertically-depending bars 29, provided with clamps 30, by which they are adjustably secured in place, and the vertically-adjustable shanks 31, attached to the depending bars 29 by means of bolts or rivets 32, passed through perforations 33 in the blade shank and bar, each of which is provided with a series of such perforations, so as to permit the desired vertical adjustment of the cultivator-blade. The adjustable shanks 31 on the bars 29 also fulfill the conditions required to regulate the depth of plowing when the harrow-teeth 14 are removed.

It will be seen that by arranging and connecting the parts in the manner described and providing a variety of interchangeable cultivating devices the cultivator-harrow can be used to advantage for various agricultural purposes with great readiness and convenience.

What I claim as my invention is—

1. A cultivator-harrow consisting of a cen-

tral longitudinal beam 1, the loops 6, adjustably supported on said beam, the pivoted laterally-expandible frame 10, engaged with the loops, the cultivator teeth or plows, and clamps attaching the teeth or plows to the expandible frame and comprising horizontal clamping-arms extending forward between the sides of such expandible frame and overlying and engaging the central longitudinal beam, substantially as described.

2. A cultivator-harrow consisting of a central longitudinal beam 1, the loops 6, adjustably supported on the beam, the pivoted laterally-expandible frame 10, engaged with the loops, and the interchangeable cultivator plows or teeth having supporting-arms 16, engaging the expandible frame, and clamping-bars 17, which clamp said supporting-arms to the expandible frame and extend forward between the sides of the latter and overlie and engage the central longitudinal beam, substantially as described.

3. A cultivator-harrow consisting of a central longitudinal beam 1, the loops 6, adjustably supported on said beam, the pivoted frame 10, engaged with said loops, the elbow-castings 16, having clamping-bars 17, the pivoted shank-holders 18, having eyebolts 22, and the cultivator-shanks 23, held in said eyebolts and adjustable with the shank-holders, substantially as described.

4. A cultivator-harrow consisting of a central longitudinal beam 1, the loops 6, adjustably supported on said beam, the pivoted adjustable frame 10, engaged with said loops, the elbow-castings 16, having clamping-bars 17, extended inward and adapted to bear against the beam 1, the pivoted shank-holders 18, having eyebolts 22, the cultivator-shanks 23, held in said eyebolts and adjustable with the shank-holders, and the cultivators 25, attached to said shanks, substantially as described.

In testimony whereof I have hereunto set my hand and affixed my seal in presence of two subscribing witnesses.

WILLIAM H. WILSON. [L. S.]

Witnesses:

THOS. H. JONES,
W. H. BROUCK.