

(No Model.)

J. H. WENDEL.
CULTIVATOR.

No. 487,807.

Patented Dec. 13, 1892.

Fig. 1.

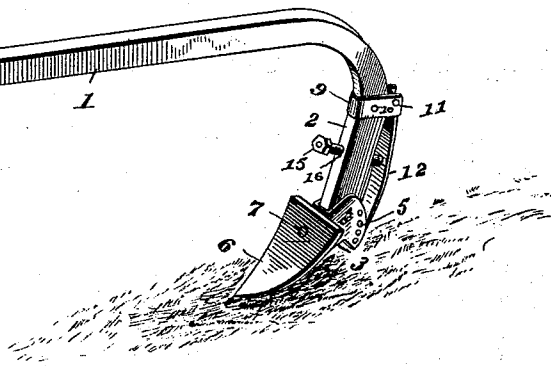


Fig. 2.

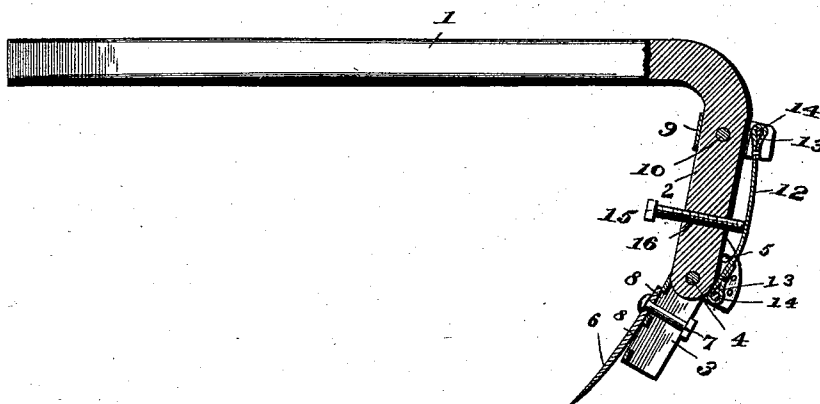
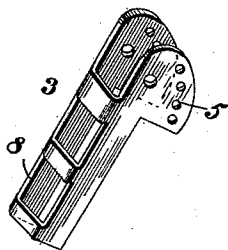


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN H. WENDEL, OF NORTH TOPEKA, KANSAS.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 487,807, dated December 13, 1892.

Application filed July 9, 1892. Serial No. 439,503. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. WENDEL, a citizen of the United States, residing at North Topeka, in the county of Shawnee and State of Kansas, have invented a new and useful Cultivator, of which the following is a specification.

My invention relates to improvements in cultivators; and the objects in view are to provide a yielding connection between the cultivator foot and standard, whereby the former, being pivoted to the latter, will yield and pass over any obstructions that may lie in its path and of sufficient importance to otherwise injure the cultivator tooth, shovel, or beam.

A further object is to provide means for regulating the tension or resistance of such yielding connection in accordance with the nature of the soil in which the cultivator is to operate.

The other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective view of a cultivator constructed in accordance with my invention. Fig. 2 is a section of the standard, cultivator-foot, and shovel. Fig. 3 is a perspective view in detail of the cultivator-foot.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates the cultivator-beam, which, as is usual, terminates at its rear end in a standard 2.

3 designates the cultivator-foot, and the same is of U shape when viewed in cross-section and has its upper end embracing the opposite sides of the standard, to which latter it is pivoted by a transverse bolt 4. The upper rear edges of the foot are rounded or curved and are provided with a curved series of pairs of perforations 5.

6 designates the shovel, and 7 the heel-bolt, the latter passing through a slot 8, with which the front edge of the foot is provided. A clip 9 of U shape embraces the standard near its upper end and is connected thereto by means of a transverse bolt 10, passing through the terminals of the clip and through the stand-

ard. Perforations 11 are formed in the rear ends of the clip.

12 designates a flat spring having one or more leaves whose ends are provided with eyes 13, and through the eyes bolts 14 pass, the upper bolt loosely engaging the perforations in the clip and the lower bolt engaging in the pair of perforations in the foot. The spring extends nearly parallel with the standard or may be bowed more or less through the medium of a set-screw 15, which passes through a threaded perforation 16, formed in the standard between the foot and clip.

It will be readily observed that by reason of the spring a certain amount of resistance will be given the cultivator-foot and that such resistance must be overcome before said foot with its shovel will swing to the rear to pass over any obstructions that may lie in the path of the shovel and with which the latter contacts. By such an arrangement it will be seen that breaking of the shovel or destruction of its point or destruction of the beam may be avoided, as immediately upon contact with any object—such as a stump, stone, or anything immovable or having greater weight than the resistance of the spring—said foot will yield and swing to the rear upon its pivot, and thus travel over such obstruction, and then is forced back to its normal position through the medium of the spring.

As some soils are naturally hard and others soft, I have provided means for regulating the resistance of the spring, and such resistance may be increased by a withdrawal of the screw or be decreased by a further insertion of the screw, in which latter instance the rear end of the screw, bearing against the spring between its points of connection with the clip and shoe, will cause said spring to bend or yield rearward, and hence be more readily overcome and offer less resistance.

By means of a series of perforations formed in the rear upper edges of the foot the angle of the latter may be altered at pleasure.

From the foregoing description, in connection with the accompanying drawings, it will be seen that I have provided a cultivator of great simplicity, strength, and durability, the foot of which is adjustable at any desired angle and which will offer a predetermined de-

gree of resistance which, having been overcome by the meeting with an obstruction, will permit of the foot to swing rearward, and thus the shovel passes over such obstruction without danger of breakage and back again.

Although I have herein shown the invention as applied merely to a cultivator, the same may be applied to other agricultural implements, as planters, drills, harrows, &c.

Having described my invention, what I claim is—

1. The combination, with the standard, the foot U-shaped in cross-section embracing the lower end of the standard pivoted thereto and having its rear upper edges curved and provided with a series of pairs of perforations, and a U-shaped clip embracing the standard near its upper end, bolted thereto, and provided at its rear ends with a pair of perforations, of a flat spring terminating at its ends in eyes, pins passed through the eyes and connecting the spring with the perforations of the foot and clip, substantially as specified.

2. The combination, with the standard, the U-shaped foot embracing the lower end thereof and pivoted to the standard and having its rear upper corner curved and provided with opposite series of pairs of perforations, and the U-shaped clip bolted to the standard and having its rear ends provided with perforations, of the flat spring terminating at its ends in eyes, pins passing through the eyes of the spring and through the perforations of the clip and shoe, a threaded opening formed in the standard between the points of connection of the spring, and a threaded bolt or regulating-screw passed through the opening and at its rear end bearing on the spring, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN H. WENDEL.

Witnesses:

JOSIAH JORDAN,
T. C. WILKERSON.