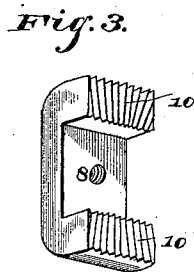
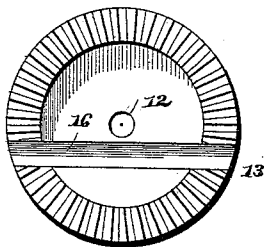
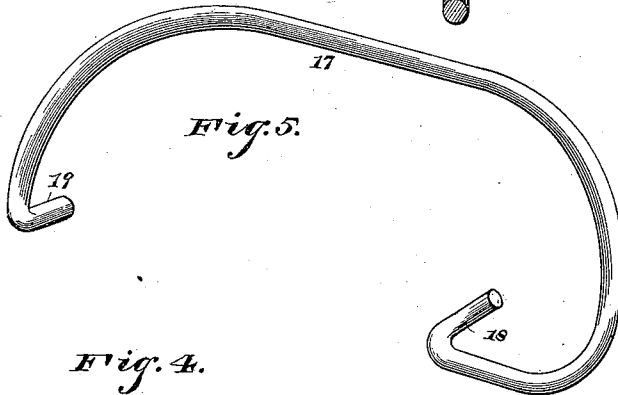
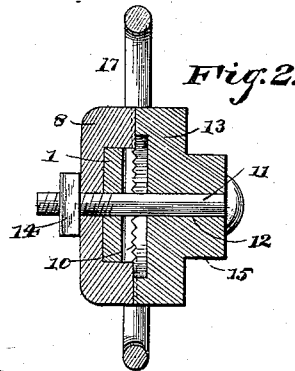
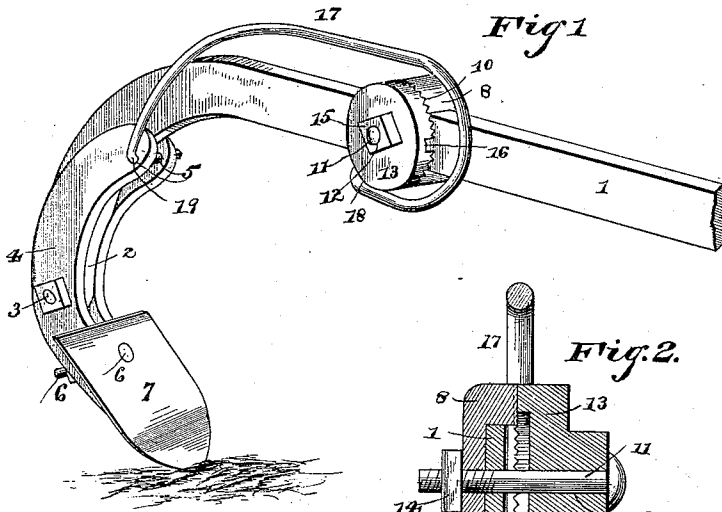


(No Model.)

C. H. HILBERT.
CULTIVATOR.

No. 469,140.

Patented Feb. 16, 1892.



Witnesses:

B. S. Ober
W. J. Duval

Inventor

Calvin H. Hilbert,

By his Attorneys,

Chas. H. Snow & Co.

UNITED STATES PATENT OFFICE.

CALVIN H. HILBERT, OF RUTLEDGE, MISSOURI.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 469,140, dated February 16, 1892.

Application filed August 19, 1891. Serial No. 403,110. (No model.)

To all whom it may concern:

Be it known that I, CALVIN H. HILBERT, a citizen of the United States, residing at Rutledge, in the county of Scotland and State of Missouri, have invented a new and useful Cultivator, of which the following is a specification.

This invention relates to improvements in cultivators or plows, the objects in view being to provide a connection between the beam and plow-shovel whereby the latter is adapted to yield to any sudden contact with such objects as stumps, bowlders, &c., calculated to destroy the same and thus pass safely thereover, said shovel resuming its normal position thereafter.

With the above objects in view the invention consists in certain features of construction hereinafter specified, and particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of a cultivator constructed in accordance with my invention. Fig. 2 is a transverse section through the beam and spring-fastener. Fig. 3 is a detail in perspective of the toothed saddle. Fig. 4 is an elevation of the toothed locking-disk. Fig. 5 is a perspective in detail of the spring.

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

1 designates the plow-beam, the rear end of which is downwardly curved to form a standard 2, and said beam has pivoted thereto by means of a bolt 3 the bifurcated plow-foot 4. The upper ends of the plow-foot are curved in front of the plow-standard and perforated, as at 5, while the lower end of the foot has bolted thereto by the heel-bolt 6 the shovel 7. Upon the beam, at one side of the same, is located a U-shaped fastener 8, the upper and lower edges of the beam being embraced thereby. This fastener has its terminals projecting slightly beyond the opposite face of the beam and provided with teeth 10. A bolt 11 is passed through the fastener, securing it to the beam, and also passes through a central opening 12, formed in a locking-disk 13, located at the opposite sides of the beam. The inner face of the disk is toothed to engage with the teeth of the fastener, and the fastener and disk may be drawn together and their teeth locked in engagement with a nut

14, mounted on the bolt. The outer face of the disk is provided with a central rectangular boss 15, adapted to afford a wrench-hold, and the periphery of the disk is provided with an opening 16.

17 designates a spring-rod of substantially convolute form, and the same has its front end entered in the opening 16 of the disk, for which purpose the end of the spring is bent abruptly at an angle, as at 18. The spring is then carried under and in front of the disk, over and in rear of the same, and at its rear extremity is laterally bent, as at 19, and secured in the perforations 5 of the plow-foot. The tendency of the spring is to straighten, and consequently it forces the upper end of the plow-foot to the rear and yieldingly forces the lower end of the plow-foot and the shovel to the front. It will be evident that should the shovel meet with any hard obstruction, as the stump or root of a tree, a large rock, &c., it will swing upon its bolt and against the tendency of the spring and thus pass over the obstruction, and immediately after its passage will be returned to its normal position by the spring.

The tension of the spring may be increased or decreased by slightly loosening the nut of the bolt that passes through the fastener and disk and applying a wrench to the disk and slightly rotating the same a sufficient number of notches, and while holding said disk in this position retightening the nut. In this manner the tension of the spring may be increased or diminished for different purposes, and especially for adapting the plow for hard or soft soil.

Having described my invention, what I claim is—

1. The combination, with the plow-beam curved at its rear end, the foot bifurcated and embracing the beam, the bolt passing through the bifurcations and beam, and the shovel secured to the lower end of the foot, of a U-shaped fastening-plate embracing the beam and having its terminals toothed, a disk having an opening in its periphery, an inner toothed face, and an outer square boss, a bolt passing through the disk, beam, and fastener and provided with a nut, and the spring-rod having one end inserted in the opening of the fastener, said rod being forwardly, upwardly,

and rearwardly curved and at its rear end laterally bent and passed through perforations formed in the upper end of the bifurcated foot in front of the bent end of the beam, substantially as specified.

2. The combination, with the beam, the pivoted foot carrying a shovel, and the bolt passing through the beam and foot, of the U-shaped fastener embracing the beam and having its terminals toothed, the toothed disk located at the opposite side of the beam and having a wrench-receiving surface, a bolt con-

necting the disk, beam, and fastener and provided at one end with a clamping-nut, and a spring-rod connected to the disk and to the upper end of the foot, substantially as specified. 15

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

CALVIN H. HILBERT.

Witnesses:

JOHN W. COMLEY,
LEE H. GOLDEN.