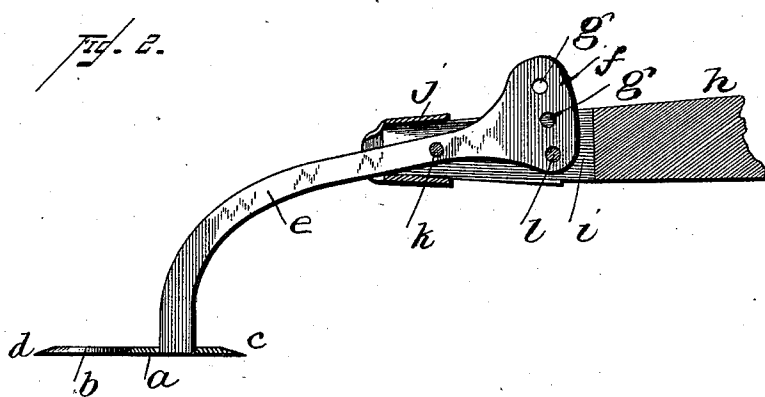
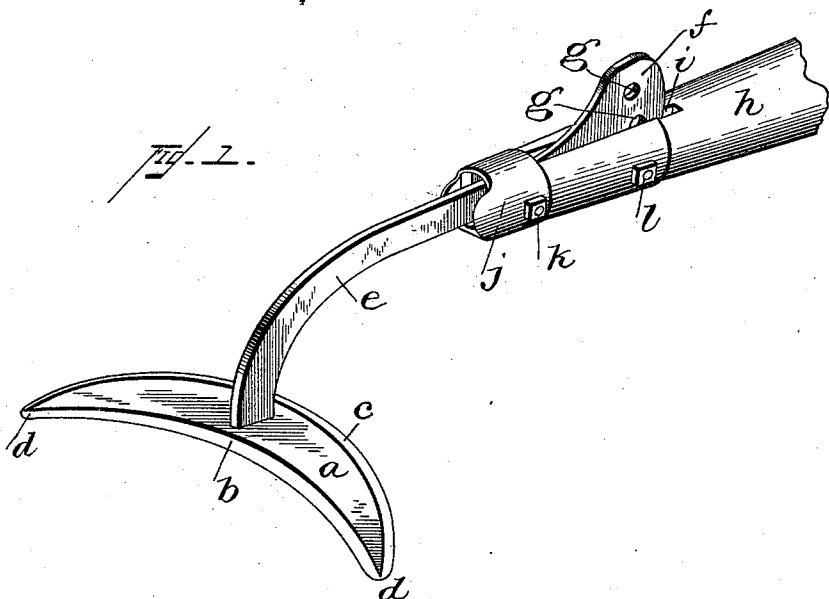


(No Model.)

M. RUFÉ.
DOUBLE ACTING WEEDING HOE.

No. 417,444.

Patented Dec. 17, 1889.



WITNESSES
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UNITED STATES PATENT OFFICE.

MORGAN RUFÉ, OF DOYLESTOWN, PENNSYLVANIA.

DOUBLE-ACTING WEEDING-HOE.

SPECIFICATION forming part of Letters Patent No. 417,444, dated December 17, 1889.

Application filed July 5, 1888. Serial No. 279,137. (No model.)

To all whom it may concern:

Be it known that I, MORGAN RUFÉ, of Doylestown, in the county of Bucks, and in the State of Pennsylvania, have invented a certain new and useful Improvement in a Hoe, or more particularly described and intended for and as a double-acting weeding-hoe; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to certain improvements in hoes.

The object of the invention is to provide an improved cheap and simple hoe, especially adapted for weeding, scraping, or hilling, or for trimming walks, and which is capable of various adjustments for these different uses, and which can be operated with great ease and rapidity, whether by pushing from or pulling toward the operator, and is exceedingly effective in cutting weeds, &c. These objects are accomplished by and my invention consists in certain novel features of construction and in combinations of parts more fully described hereinafter, and particularly pointed out in the claim.

Referring to the accompanying drawings, Figure 1 is a perspective of the hoe, the handle being broken away. Fig. 2 is a partial sectional elevation.

In the drawings, the reference-letter *a* indicates the hoe-blade, which is composed of a thin narrow flat piece of metal, usually adapted when in use to lie substantially flat upon the ground. This blade is crescent-shaped, as shown, having the continuous front concave cutting-edge *b* and the corresponding continuous rear convex cutting-edge *c*, thus forming the two forwardly-projecting cutting-points *d d*. The continuous cutting-edges of the blade are formed by a wide downward and outward bevel upon the upper face of the same. A curved rod *e* is rigidly and firmly secured at its lower end to the center of the blade and curves upwardly and rearwardly from the upper face thereof, and at its rear end said rod is flattened to form a vertical enlarged end or head *f*, provided with a vertical series of transverse

apertures *g*. The end of the handle *h* is provided with a longitudinal slot *i*, and is fitted with a ferrule *j*. The rod *e* extends through said ferrule, and its head or enlarged end is located and free to move in the inner open portion of the slot *i*. The rod is pivoted to swing vertically by means of a pivot-bolt *k*, passed through the same and the ferrule and handle, and the blade is held in the desired adjustment by a clamping or adjusting bolt *l*, removably extending through the handle and an aperture in the head of the rod *e*.

The operation of the hoe is obvious. When it is desired to use the hoe as a scraper, the blade is adjusted, by means of the pivoted rod and adjusting-bolt and aperture, to lie flat upon the surface of the ground, so that both the front and rear edges can be brought into play by reciprocating the blade back and forth. By reason of the thin and narrow blade and its wide bevel the loosened dirt and weeds will slide over the blade and the surface of the ground will not be materially disturbed. When it is desired to cut deeper and loosen hard earth or cut heavy weeds, the adjusting-bolt is placed in the lowest aperture *g*, so that the points of the blade are directed downwardly and forwardly, and the operator has merely to push the hoe forwardly from him and the points and front concave edge will enter hard and dry ground with the ease of a spade or fork and with a minimum pushing force, and will cut heavy and tough weeds and roots which the concave edge will not allow to slip or slide by without cutting, as would be the case if the front edge were convex.

By having the front edge concave the blade can be worked by pushing from the operator with greater power, ease of movement, and rapidity than if the front edge were convex and the rear concave, and yet more effective work can be performed, and the operator can work on the uncultivated ground ahead of the loosened earth, and will not have to walk and trample over the freshly-loosened earth.

If the hoe is to be used for hilling or trimming, the adjusting-bolt is placed through the upper aperture *g*, so that the points *d d* are inclined upward and the rear convex edge downward. The hoe is very effective when adjusted to this position. By reason of the

rear convex edge the blade can be turned edgewise and used for trimming walks.

Having thus fully described my invention, what I claim, and desire to secure by Letters

5 Patent, is—

A hoe consisting of a single flat crescent-shaped metal blade having the front concave and the rear convex cutting-edges, a curved rod at its lower end rigidly secured to the
10 upper flat side of the blade, a handle having a slotted end in which the outer end of said

rod is pivoted to allow vertical swing, and means to lock the rod and blade in the desired adjustment, substantially as described.

In testimony that I claim the foregoing I 15 have hereunto set my hand this 28th day of June, A. D. 1888.

MORGAN RUFÉ.

Witnesses:

J. L. KRAMER,

Q. H. BIGLEY.