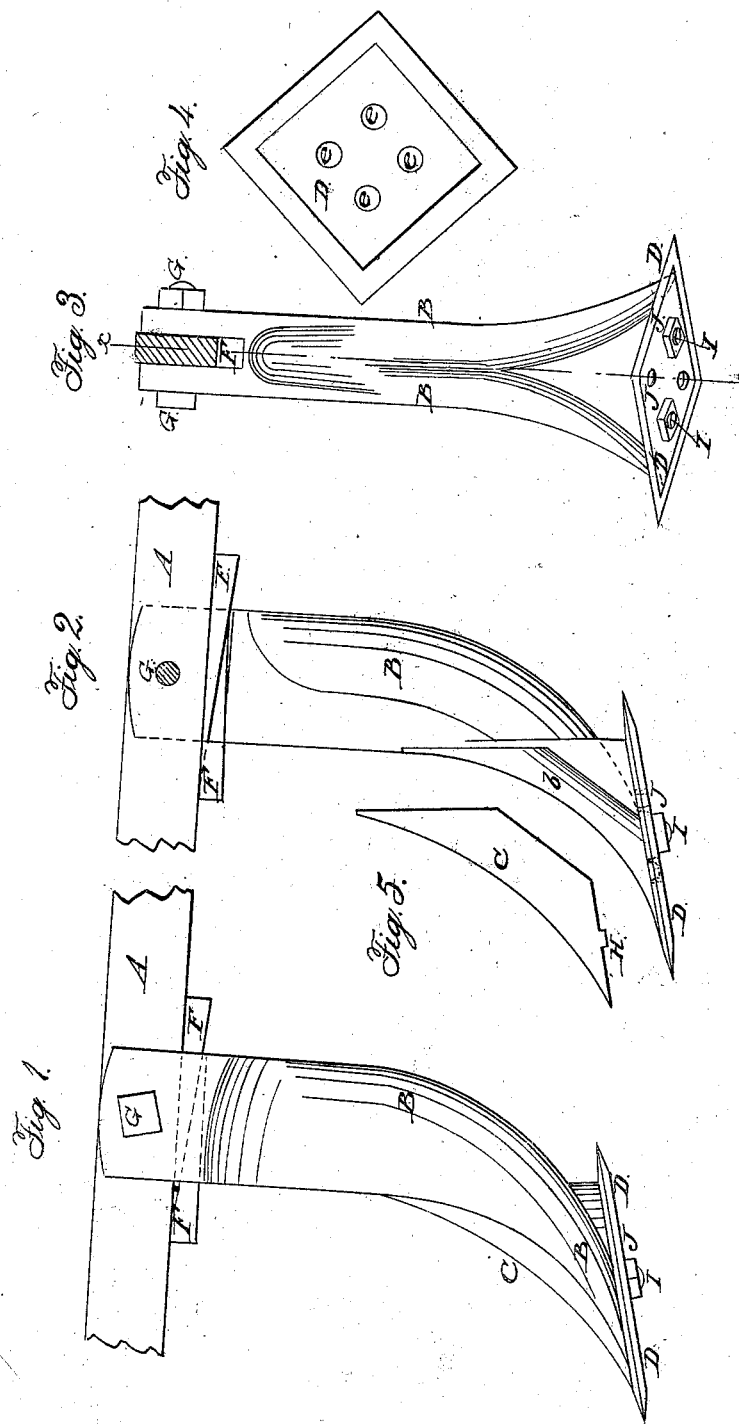


L. LAMBORN.  
Cultivator-Teeth.

No. 7,220.

Patented Mar. 26. 1850.



# UNITED STATES PATENT OFFICE.

LEWIS LAMBORN, OF KENNETT SQUARE, PENNSYLVANIA.

## IMPROVEMENT IN CULTIVATOR-TEETH.

Specification forming part of Letters Patent No. 7,220, dated March 26, 1850.

*To all whom it may concern:*

Be it known that I, LEWIS LAMBORN, of Kennett Square, in the county of Chester and State of Pennsylvania, have invented a new and useful Improvement in the Teeth of Cultivators for Tilling Land, which is described as follows, reference being had to the accompanying drawings of the same, making part of this specification.

Figure 1 is a side elevation and a section of the beam. Fig. 2 is a vertical longitudinal section on the dotted line *xx* of Fig. 3, the cutter being detached and showing the recess in which it is placed and secured. Fig. 3 is a rear elevation. Fig. 4 is a plan of the share. Fig. 5 is a plan of the changeable cutter for cutting its way through the matted grass, roots, and other obstructions.

Similar letters in the several figures refer to corresponding parts.

The cutters, wings or moldboards, and sheth of the common cultivator-tooth are usually cast or swaged in a single piece.

My invention and improvement consists in so forming the wings or mold-boards, cutter, and share that the cutter may be made of steel and changeable at pleasure and with a single share that may be changed eight times before it is rendered unfit for use.

The sheth, as well as the main body of this improved cultivator-tooth, is divided vertically into two equal and similar parts, having a dovetailed recess, *b*, on the inner face of each half, next the front, of the size and shape of one-half of the rear or thick portion of the steel cutter *C*, which is to fit therein, so that when the two halves are brought together a space is formed of the exact shape of the rear portion of the cutter, which is to fit therein, and when the two halves of the tooth are well secured together by the bolt *G*, that passes horizontally and transversely through the divided ends of the sheth and the beam *A*, and by means of two screws, *I*, that pass through the share, which lies nearly in a horizontal position beneath the lower ends or sole of the two halves of the tooth, it is impossible for the cutter to leave its seat. The upper ends of the two similar and equal halves of the tooth are so cast as to form, when brought together, a rectangular mortise of a width equal to the

thickness of the beam *A* of the cultivator-frame, which is to fit therein, and of a depth greater than the depth of the beam, so as to admit wedges *F* between the shoulders formed on the sheth next the mortise and the under side of the beam for the purpose of changing the angle of inclination of the share in order to increase or diminish the depth of culture of the land, the beam remaining horizontal, or nearly so. The hole through the upper end of the divided sheth and the beam is drilled horizontally through the same, of a diameter equal to the diameter of the bolt *G*, that is to be passed through the same for the purpose of confining the parts together, and at the same time to allow the sheth to turn on said bolt while driving up the wedges *F* to set the share.

The cutter is made of the best cast-steel, concave on its cutting-edge and convex or obtuse angled on its rear or thick edge. It may, however, be made of other shapes. That which is represented at Fig. 5 of the drawings has been found to answer very well.

The ears or wings of the tooth may be cast of the form usually adopted in the cultivator-tooth, or of the form represented at Fig. 3. The fastenings for securing it to the share may be the screws *I* and nuts *J* (represented at Figs. 1, 2, and 3;) or they may be dovetailed knobs cast on the bottom of the two halves of the tooth to pass through correspondingly-shaped openings cast in the share, so that when the upper ends of the sheth are brought toward each other and fastened to the beam by the bolt *G* it will be impossible for the lower end of the tooth to become detached from the share. This mode of fastening would do away with the screws and nuts *J*. There are other modes of securing the parts together equally effective.

The share *D* is made of a square form, thicker in the middle than at the edges, and is provided with openings *e*, corresponding with the screws or knobs or other projections on the soles of the two halves of the tooth, which are designed to pass through or into said openings to secure the parts together. When the screws *I* are employed nuts *J* are screwed on them against the under surface of the share. The openings in the share must be so arranged as to correspond with the various changes which the share is made to undergo. By making the

share of a square form and arranging the openings in the manner represented in Fig. 4 it can be changed eight times.

The confining-bolt G, that passes through the sheth and beam, may be secured by a key and mortise instead of the screw and nut.

A knob, H, should be cast on the lower side of the cutter, designed to enter one of the holes *e* in the share for the purpose of giving additional strength to the connection of the cutter and share with the tooth.

Having thus fully described my improved cultivator-tooth, &c., what I claim as my invention, and desire to secure by Letters Patent, is—

The manner of constructing the cultivator-tooth, substantially as above described, by which a separate steel cutter is embraced be-

tween the two halves of the tooth, removable at pleasure, and by which wedges can be applied against the shoulders of the tooth and the under side of the beam for the purpose of changing the angle of inclination of the share in order to increase or diminish the depth of culture, the tooth turning on the bolt passing through the head of the same and the beam while inserting the wedges, the wings of the tooth being secured to the four-sided changeable share by means of screws and nuts or other equivalent means.

In testimony whereof I have hereunto signed my name before two subscribing witnesses.

LEWIS LAMBORN.

Witnesses:

WM. P. ELLIOT,

LUND WASHINGTON.