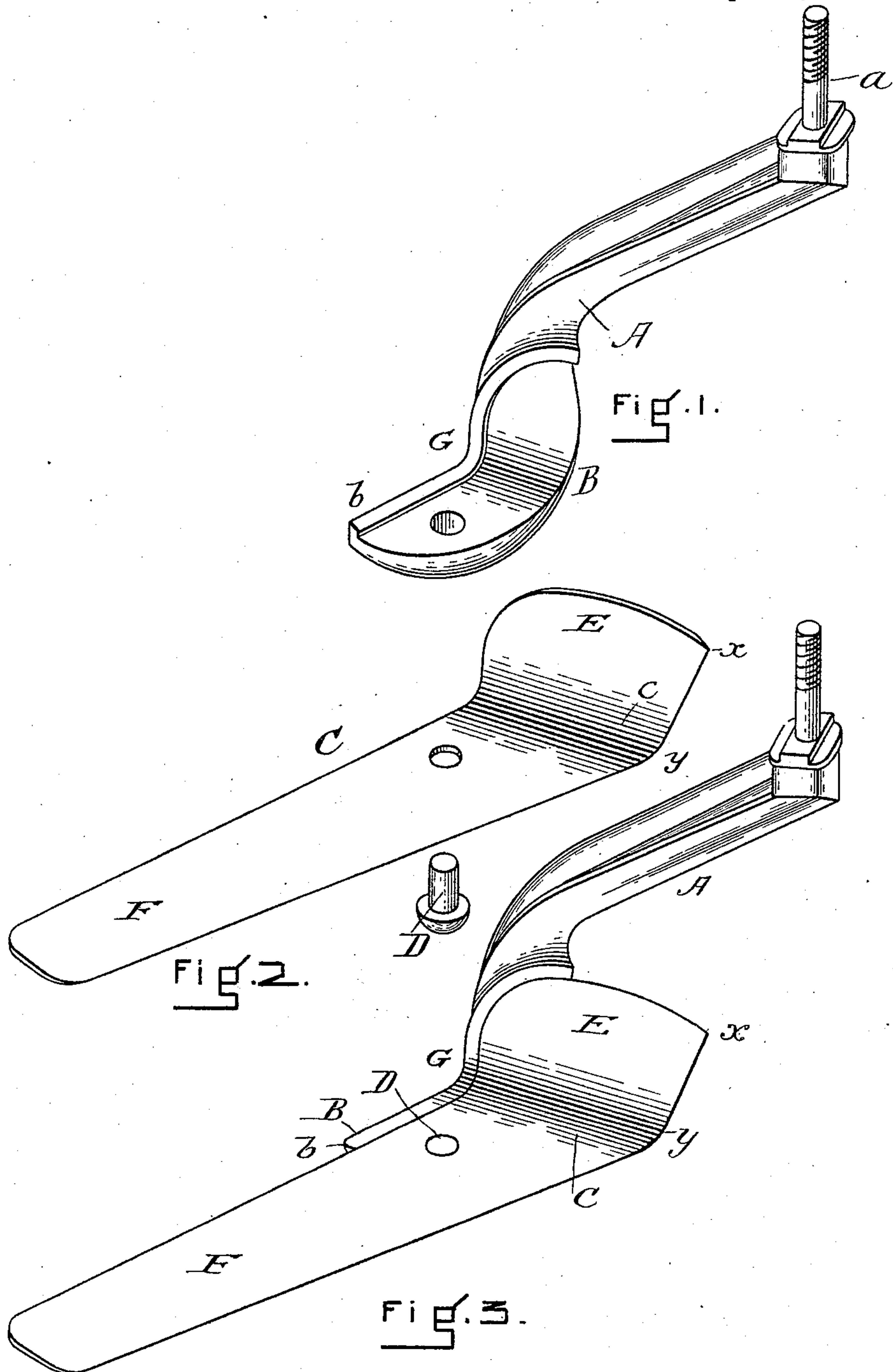


(No Model.)

S. L. ALLEN.  
HORSE HOE OR CULTIVATOR TOOTH.

No. 539,402.

Patented May 21, 1895.



WITNESSES.

*E. H. Gilman.*

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# UNITED STATES PATENT OFFICE.

SAMUEL L. ALLEN, OF CINNAMINSON, NEW JERSEY.

## HORSE-HOE OR CULTIVATOR TOOTH.

SPECIFICATION forming part of Letters Patent No. 539,402, dated May 21, 1895.

Application filed April 30, 1894. Serial No. 509,459. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL L. ALLEN, a citizen of the United States, residing at Cinna-  
minson, in the county of Burlington and State  
5 of New Jersey, have invented an Improvement in Horse-Hoe or Cultivator Teeth, of which the following is a full specification.

My invention relates to improvements in the standard and blade of horse hoe or culti-  
10 vator teeth, as hereinafter described in detail, reference being had to the accompanying drawings, in which—

Figure 1 shows a perspective view of the iron standard for supporting the blade of the  
15 tooth. Fig. 2 shows the blade of the tooth; and Fig. 3 shows a perspective view of the complete tooth, consisting of standard and blade.

The construction is such that the forward  
20 portion E of the blade is broadened and upturned, so that in combination with the forward slant of the front cutting edge  $\alpha y$ , it cuts the ground close to the young plants without raising the crust and endangering them.  
25 At the same time the broad upturned portion acts as a shield to prevent the loosened earth from falling over and covering the row, while the remainder of the blade increases in width from the narrow rear end F to the shield and  
30 past the rivet hole, so as to produce a uniformity of strength proportionate to the strain to which the different parts are subjected. A new combination of special fitness is thus formed. In ordinary cultivator teeth of this  
35 construction great difficulty has also arisen heretofore from the method of attaching the blade to the standard with a single rivet, in such a way that it is possible by the bending of the blade for the dirt and soil to be forced  
40 in between the blade and standard, with the result that the blade soon becomes warped, loosened, and twisted out of line, or entirely broken off. In my improved tooth I overcome this difficulty by using a standard which  
45 has a horizontal end B and having a recessed

horizontal and vertical seat G for the blade. I also strengthen the blade by widening it gradually toward the rivet hole, so as to make it impossible for it to break or bend, at that  
usually weak point.

The standard A, Fig. 1, of the shape shown in the drawings, is attached by its upper end  $\alpha$  to the machine, while its lower end B is  
nearly at right angles to the upright part. An angular seat is made in the end of the  
50 standard in its vertical and horizontal parts.

The irregular shaped end E of the blade is made to fit the angular recess G and is locked and supported thereby. The shape of the  
55 standard resists any pressure at either end of the tooth.

The blade C and standard A are riveted together by a bolt D in the horizontal portion B of the standard, nearest the point of the  
60 greatest resistance, and are thus firmly secured. The end B of the standard supports the blade, and the manner in which the blade fits into the standard prevents its twisting and makes it impossible for dirt to work in  
65 between the blade and standard and loosen them.

I claim—

1. A hoe or cultivator blade C having a broadened upturned forward end E having the  
cutting edge  $\alpha y$ ; and a tapering rear portion  
75 F substantially as described.

2. A hoe or cultivator tooth consisting of the combination of a standard A, blade C, and bolt D, the standard A having an angular ver-  
tical and horizontal recessed seat G, and the  
80 blade C having a horizontal and vertical angular end E corresponding to the seat G of the standard, substantially as described.

In witness whereof I have hereunto set my hand.

SAML. L. ALLEN.

Witnesses:

H. E. GARSED,  
CHAS. DUBREE.