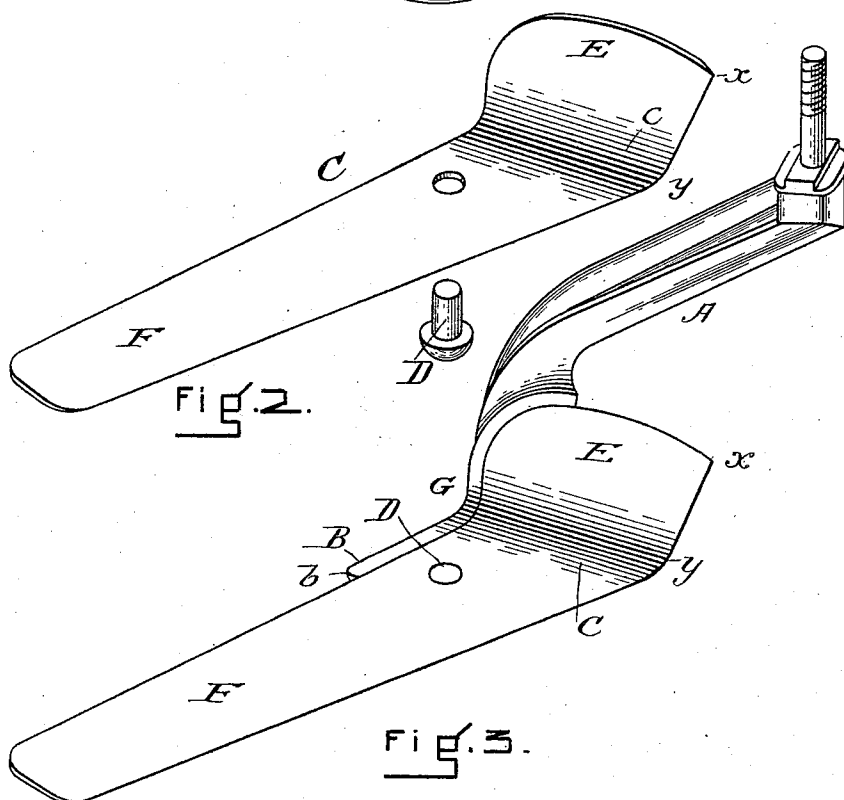
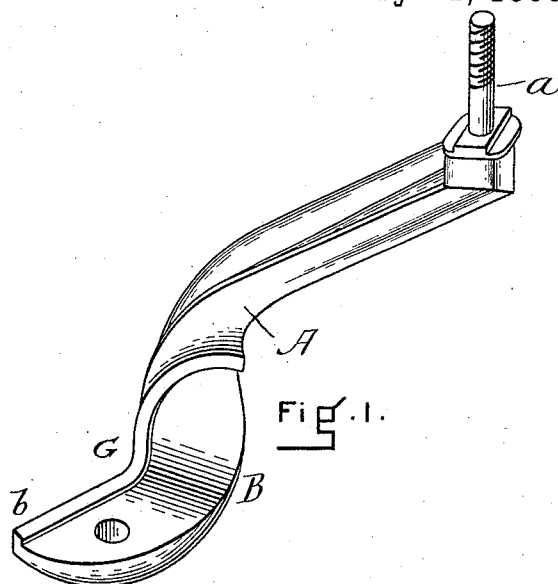


(No Model.)

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

No. 539,402.

Patented May 21, 1895.



WITNESSES.

E. H. Gilman.
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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 Cinnaminson, in the county of Burlington and State 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 cultivator 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 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 portion E of the blade is broadened and upturned, so that in combination with the forward slant of the front cutting edge αy , it cuts the ground close to the young plants without raising the crust and endangering them. 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 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 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 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 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 α 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 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 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 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 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 αy ; and a tapering rear portion 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 vertical and horizontal recessed seat G, and the 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.