(No Model.)

I. A. DUNHAM.

Cutter for Sole or Welt Trimmers.

No. 235,075. **Patented Dec. 7, 1880.**

Fig. 1.

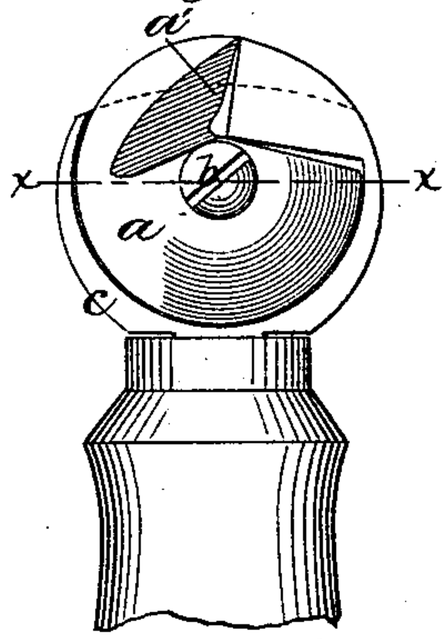


Fig. 2.

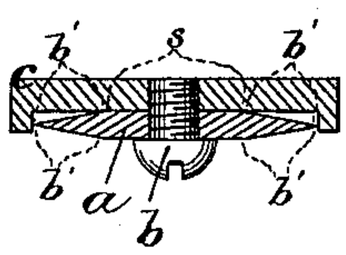


Fig. 3.

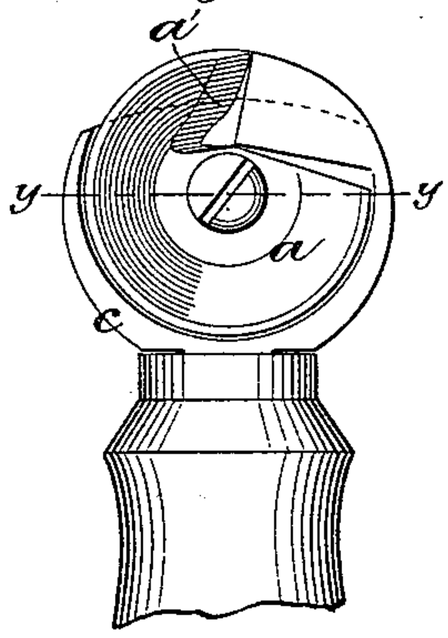


Fig. 4.

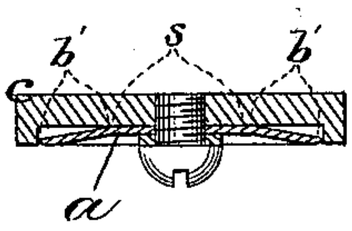


Fig. 5.

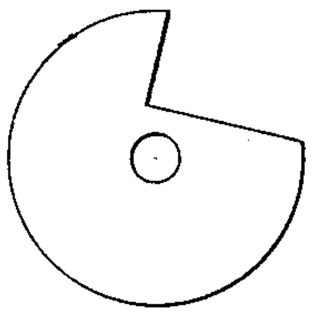
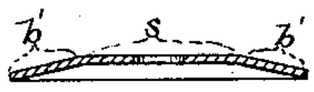


Fig. 6.

Fig. 7.



Witnesses.
Geo. W. Pierce —
W. Elmo.

Inventor:
Isaac A. Dunham
by Wright Brown
Attys.

UNITED STATES PATENT OFFICE.

ISAAC A. DUNHAM, OF BROCKTON, MASSACHUSETTS.

CUTTER FOR SOLE OR WELT TRIMMERS.

SPECIFICATION forming part of Letters Patent No. 235,075, dated December 7, 1880.

Application filed October 19, 1880. (No model.)

To all whom it may concern:

Be it known that I, ISAAC A. DUNHAM, of Brockton, in the county of Plymouth and State of Massachusetts, have invented certain Improvements in Cutters for Sole or Welt Trimmers and the Method of Making the Same, of which the following is a specification.

This invention relates to that class of trimming-cutters for shoe-makers' use in which the cutter itself is composed of a notched disk sharpened at one side of the notch to form a cutting-edge, as shown in Letters Patent of the United States granted to me for an improvement in edge-planes, September 22, 1857, No. 18,237.

The object of my present invention is to provide certain improvements in the form of the cutter over that shown in said patent, whereby, first, uniformity in all the cutters manufactured is secured, so that the cutters can be readily duplicated and interchanged; and, secondly, the labor of sharpening the cutting-edge and keeping it sharp is reduced to the minimum.

To these ends my invention consists in the improved cutter and the method of making the same, all of which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a side view of a trimming-tool having a cutter as made under my above-named patent. Fig. 2 represents a section on line *x x* of Fig. 1. Fig. 3 represents a side view of a trimming-tool having a cutter embodying my present invention. Fig. 4 represents a section on line *y y*, Fig. 3. Figs. 5, 6, and 7 represent views of the blank from which the cutter is made.

The same letters of reference indicate the same parts in all the figures.

In the tool shown in my above-named patent the cutting edge or blade *a'* is formed on a circular plate, *a*, having a central aperture for a screw, *b*, whereby said plate is attached to the stock *c*. The plate *a* is notched or cut away, so as to remove a portion of its periphery, and the cutting-edge is formed by sharpening one side of the notch. It is essential that the side of the plate *a* adjacent to the stock should have a flat seat, *s*, surrounding the screw-aperture, (in order that it may have a firm central bearing on the stock,) and a marginal bevel, *b'*, surrounding the seat *s*, said bevel being interrupted by the notch of the plate *a*, and terminating at one side of the notch in the cutting-edge *a'*, which is formed by grinding the front side of the plate until a bevel is formed which meets the beveled back *b'* at an acute angle. Heretofore the plate *a* has had the form in cross-section shown in Fig. 2, the plate being turned from a thick blank of steel with a thick central portion and a marginal bevel, *b'*, on each side.

The following objections attend the described construction, viz: First, each cutter has to be formed by the use of a lathe, so that exact uniformity of thickness and size in all the cutters made cannot be insured, it being difficult, if not impossible, for a workman to turn a number of plates in succession each practically a fac-simile of the others; consequently, when a worn-out cutter is to be replaced by a new one a perfect fit of the new cutter to the stock is not always certain, and it is often necessary to especially adapt the cutter to the stock, thus involving expense and loss of time; second, the thickness of the plate at its central portion required to enable it to be held steadily on a center while being turned necessitates the removal of a considerable quantity of metal in forming the cutting-edge *a'* and in subsequently sharpening the same.

In carrying out my invention, which is designed to obviate the above-named objections, I make the plate *a* from sheet-steel, employing the following mode of operation: I first stamp from a sheet of steel of suitable thickness, preferably No. 20 gage, a flat notched blank, as shown in Figs. 5 and 6. I then, with suitable dies, give the blank a dish form, as shown in Fig. 7, thus forming the seat *s* and bevel *b'* upon its back. I then, after suitably tempering the blank, grind one side of the notch to form the cutting-edge *a'*, and grind off the corners of the blank on its outer side to give it a suitable finish.

The cutter thus produced has the following advantages over the old form: First, it is practically an exact fac-simile of all the others made by the same method, so that no difficulty is experienced in fitting it to an old stock; second, it is of uniform thickness, so that in

forming the cutting-edge comparatively little metal has to be removed and the minimum of time and labor is required; third, its dish form enables it to be held to better advantage by the workman while forming its cutting-edge, the dished plate being less liable to slip than the plate having the old form.

I claim as my invention—

1. As an improved article of manufacture, a trimming-cutter of the class described, composed of a notched disk of sheet-steel dished to form a central seat and a marginal bevel on its back side, and sharpened at one side of the notch to form a cutting-edge on the beveled back, as set forth.

2. The improved method of making cutters of the class described, consisting in stamping a flat notched blank from a sheet of steel, dishing said blank to form a central seat and a marginal bevel on its back side, and sharpening one of the sides of the notch to form a cutting-edge on the beveled back, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 11th day of October, A. D. 1880.

ISAAC A. DUNHAM.

Witnesses:

C. F. BROWN,

W. CLIMO.