A. P. Hazard,

Edge Plane.

No. 107,491. Patented Sep. 20. 1870.

Fig 1.

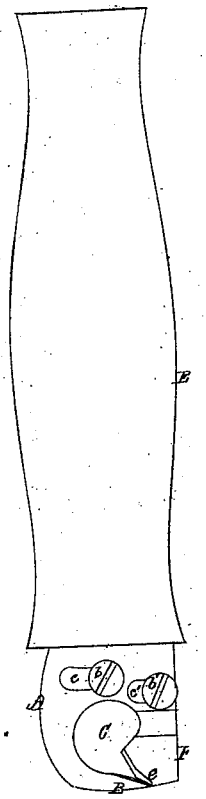


Fig 2.

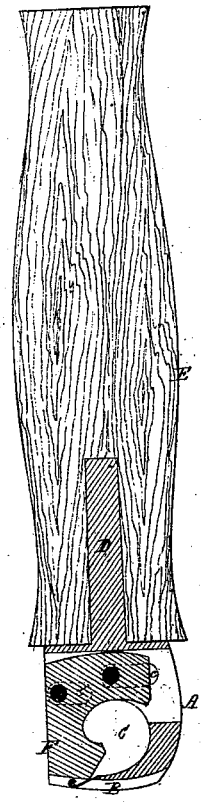


Fig 3.

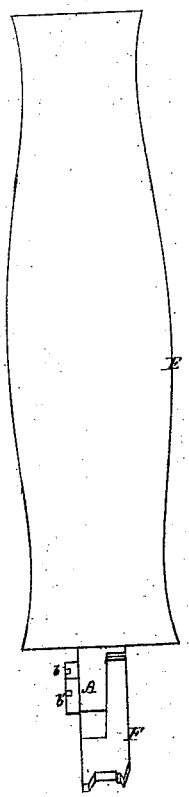
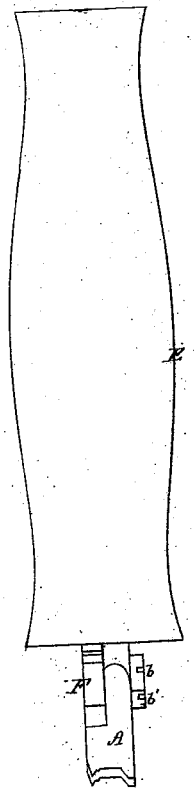


Fig 4.



Witnesses

G. E. Bent

Carlos Page

Arthur P. Hazard.

by his attorney

F. P. Hale.

United States Patent Office.

ARTHUR P. HAZARD, OF NORTH BRIDGEWATER, MASSACHUSETTS.

Letters Patent No. 107,491, *dated September* 20, 1870.

IMPROVEMENT IN SHOEMAKERS' EDGE-PLANES.

The Schedule referred to in these Letters Patent and making part of the same

To all persons to whom these presents may come:

Be it known that I, ARTHUR P. HAZARD, of North Bridgewater, in the county of Plymouth and State of Massachusetts, have invented a new and useful Improvement in Shoemakers' Edge-Planes; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 denotes a side elevation;

Figure 2, a longitudinal section;

Figure 3, a front end elevation; and

Figure 4, a rear end elevation of a shoemakers' edge-plane, as constructed in accordance with my invention.

My present invention, like that patented by me on the 19th day of July, A. D. 1870, relates to that class of devices termed "edge-molding planes," as employed by shoemakers in forming and molding the edges of boots and shoes, in which the molding-edge or part of the implement is formed in two portions, one of which is on the cutter, and the other on the guard; and

My present invention consists in a peculiar mode of applying the adjustable guard to the implement, whereby the guard, as the cutter becomes worn, may be so moved toward the cutter as not only to preserve the cutting-edge of the latter, in due relation to the guard, to enable it to take off the desired thickness of shaving, but to so bring into correspondence the molding-surface of the guard as to cause it to maintain its normal or proper curvature, with respect to the molding-surface of the cutter, in order that both the molding-surface of the cutter and that of the guard may rest in contact with the edge of a sole while being reduced.

Edge-molding planes, as heretofore constructed with a cutter and a movable guard, have possessed no certain, reliable, and accurate means by which the guard, as the cutter becomes worn, could be so accurately adjusted as to preserve its due relations with respect to the cutter and its molding-surface, but, as the edge of the cutter became more or less worn, and the guard was moved toward it to compensate for the wear, the requisite and nice correspondence of the molding-surface of the guard and that of the cutter was destroyed, as neither a vertical nor a horizontal movement of the guard alone can bring it into its true relative position with the edge of the cutter and its molding-surface. To accomplish this result it became necessary to take the implement to the factory for readjustment or filing away of the parts, to enable them to be brought into their normal or relative correspondence.

To provide a simple and effective means by which a shoemaker or workman, as the cutter becomes worn, can readily so adjust the guard with respect to the cutting-edge and molding-surface of the cutter as to preserve all the parts in their due correspondence until the cutter becomes worn out or unfit for use, is the object of my invention.

In the said drawing—

A denotes the stock of the said implement, the same being made of a block or piece of steel, and having an acute angular cutter, B, formed on its lower part, as shown in figs. 1 and 2.

C denotes the throat or chip-passage the same extending transversely through the tool, as shown in the drawing.

D is the tang, which extends up from the stock into the handle E.

F is the adjustable guard, which has the form, as shown in figs. 1, 2, and 3, and is attached to the side or scarfed face of the stock A by means of two screws, *b b'*, arranged in different horizontal planes, and which pass through slots, *c c'*, made in the stock, and screw into the guard; or the slots may be made in the shank of the guard, and the screws passed through them into the stock.

These slots I make of a slightly curved, elongated form, and of a width somewhat greater than the diameter of the shanks of the screws.

By means of these screws and slots a compound movement can be given to the guard, whereby the guard may not only be readily adjusted to the edge of the cutter, but the curved molding-surface of the guard can be easily and accurately adjusted to the desired degree of curvature, to operate to the best advantage with the curved molding-surface of the cutter, and so that each part shall have a firm bearing upon the edge of the sole to be reduced or molded, whereby the tool is not only firmly supported, and enabled to cut an even shaving from the edge of the sole, but, at the same time, to more or less condense and polish it.

In adjusting the guard in its proper position with respect to the cutter, I first bring the scarfed edge *c* of the guard to bear on the scarfed edge of the cutter, and with the molding-surface of the guard a little above the molding-surface of the cutter, and fasten the screw *b*.

Next, to adjust the guard at the proper distance from the edge of the cutter, we have simply to move the contiguous part of the guard away from the edge of the cutter a distance equal to the thickness of the shaving we desire to remove, and tighten the screw *b'*, and the tool is ready for use.

I do not claim, in a sole-edge plane provided with

a cutter and a movable guard, making the guard thereof adjustable in a single plane, whether vertical or horizontal, as I am aware that such is not new.

Nor do I claim attaching the guard to the shank or stock in manner as shown in Letters Patent Nos. 20,882 or 27,840, as such will not effect the result attained by my invention.

What I claim as my invention is—

My improved sole-edge plane, having its movable guard applied to the stock A by means of the screws *b b'*, and the slots *c c'*, as described, the same enabling the said guard to be adjusted with respect to the edge of the cutter and its molding-surface, in manner and for the purpose set forth.

ARTHUR P. HAZARD.

Witnesses:

F. P. HALE,

ISAAC LOWE.