E. W. FRENCH.

Hand Sole-Cutter.

No. 130,291. Patented Aug. 6, 1872.

Fig. 1.

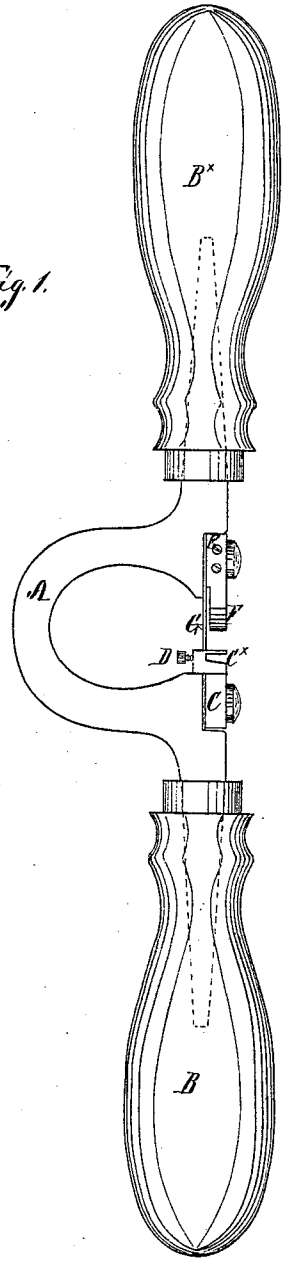
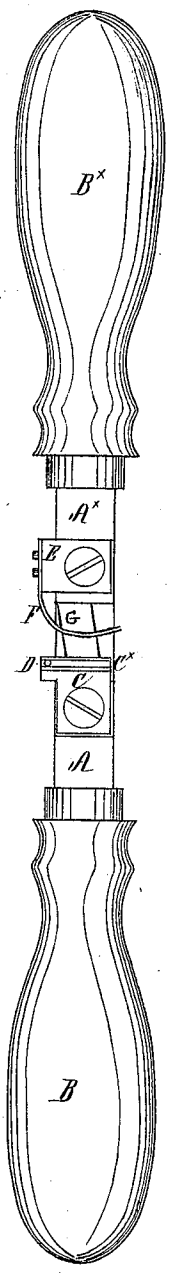


Fig. 2.



Witnesses,

Samuel P. Parks

Wm. S. Arnaud.

Inventor,

Edwin Washburn French

AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

EDWIN WASHBURN FRENCH, OF SOUTH SCITUATE, ASSIGNOR TO WILLIAM S. ARNAUD, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN HAND SOLE-CUTTERS.

Specification forming part of Letters Patent No. **130,291**, dated August 6, 1872; antedated August 3, 1872.

I, EDWIN WASHBURN FRENCH, of South Scituate, Plymouth county, State of Massachusetts, have invented a new Hand Sole-Cutter, of which the following is a full and exact description, reference being had to the annexed drawing.

Nature and Object of the Invention.

The nature of my invention is that of a simple hand-tool, which carries a blade and a guide and other devices, so arranged as that when a sole-pattern and a piece of sole-leather are held closely together the blade—being put in operation by the hand directly—directed by the guide, may follow the exact course of the edge of the pattern, cutting through the leather; and the object of the whole device is to cut the leather to the shape of the sole-pattern.

Description of the Drawing.

Figure 1 is a view from the front side of my hand sole-cutter. Fig. 2 is a view from the under or bottom side of the same.

Description of the Invention.

In the drawing, A, Fig. 1, (A $A^{\times}$, Fig. 2,) is a piece of iron, called "the bridge," of the shape of a Moorish arch, bearing at each side at the base a horizontal projection, terminating each in a point, (see dashed lines in the figures,) which thus make each a tang like that of a knife or fork. Each of these tangs bears a handle, B $B^{\times}$, Figs. 1 and 2. At the base of the arch, on each side, the substance of the same is cut away, as seen in Fig. 1, and the space is filled in with a block of metal, screwed on each of them with a single screw, as seen in Figs. 1 and 2. One of these, on the left side, C, Figs. 1 and 2, is called "the guide-block." It is seen from below in Fig. 2, and it bears at its right-hand end a deep groove, $C^{\times}$, Figs. 1 and 2, rounded at its bottom, and also at its lower corners, which groove, called "the guide-groove," runs at right angles to the axis of the whole device, and is narrower at the bottom (or highest portion in Fig. 1) than at the open part. Passing perpendicularly downward through the substance of the guide-block is a screw, D, Fig. 1, called "the graduating-screw," whose lower end passes down and emerges in the groove $C^{\times}$. (See its lower end in Fig. 2.) E, Figs. 1 and 2, is the other block mentioned above, (as being inserted in the cut-away space at the right hand of the bottom of the arch,) and is called "the spring-block." Its shape, in view from below, is seen in Fig. 2. This spring-block bears, screwed with two screws, on its front side (as seen in Fig. 1) a flat steel spring, F, Figs. 1 and 2, called "the guide-spring," which, after quitting the spring-block, proceeds in the same course a little distance, and is then, as seen in Fig. 2, curved inward, as shown at Fig. 2, so as to run parallel to and at a little distance from the outer edge of the guide-block, which forms one side of the guide-groove $C^{\times}$. Passing from one side to the other of the open space at the bottom of the arch (or bridge A) is the cutting-blade G, Figs. 1 and 2. This blade presents its sharp edge toward the front in Fig. 1, and is seen in Fig. 2 to run in a course diagonal to the axis of the whole device, going (see Fig. 2) from near the front of the device on the spring-block or right-hand side toward the rear or back of the device on the guide-block or left-hand side. One end of this cutting-blade passes between the guide-block and that part of the bridge to which it is screwed, and the other goes between the spring-block and its part of the bridge, and the same screws which hold the blocks to the bridge hold the cutting-block in place; and

The operation of the device is as follows: Laying my pattern (of metal plate or of paper) upon my piece of sole-leather, I place them both in the ordinary treadle-clamp used by boot and shoe manufacturers and (by pressure of the foot upon the treadle) hold them tight. Then, taking my hand sole-cutter by both hands, I adjust the same, so that the upper edge of the pattern enters into the guide-groove $C^{\times}$. Then, drawing my device toward me while pressing it down upon the edge of the pattern, I follow the curves of the edge of the same, when the cutting-blade cuts through the leather with a drawing cut, separating that portion of the leather which is to be rejected from that which is to be left as the sole. By canting or inclining the tool to the right or the left, (the peculiar shape in vertical section of the guide-groove, as being wider at its open part than at its bottom, admitting this,) I give any bevel to the edge of the sole desired, so that the shank por-

tion may be beveled and the rest of the sole square at the edge. The blade, being placed (see Fig. 2) diagonally, tends to draw the leather toward instead of from the pattern. The action of the guide-spring assists to this effect, but this portion of my device is more particularly necessary when, as I sometimes do, I use a straight instead of a diagonal blade. When I desire, as is sometimes the case, to cut my sole larger than my pattern, I screw down my graduating-screw D till its lower end enters into the guide-groove the necessary distance, and, running as I make my cut upon the edge of the pattern, raises the cutting-blade to the requisite distance therefrom, when the cutting of the leather is effected at a horizontal plane higher than that of the edge of the pattern, making the sole larger than the pattern. The cutting of one side of the sole being effected, I withdraw the unfinished sole and the pattern from the treadle-clamp, and, turning the other edges of the two upward, cut that side, and then, in the same manner finishing the heel and toe ends, the process of cutting is completed.

The use of the guide-groove enables me to use a cheap paper pattern, as the cutting-blade, or the cutting part of the blade, does not impinge upon the pattern-edge; and I sometimes use but one handle instead of two, and I arrange my blade either straight or diagonally. Sometimes I dispense with my graduating-screw, and sometimes I dispense with the guide-spring; and sometimes I dispense with my guide-block, and make a guide-groove by curving and bending one end of my cutting-blade, so as to furnish a guide-groove; and I can also dispense with the spring-block.

Claims.

I claim—

1. The hand sole-cutter described, consisting of the handle, double or single, the cutting-blade, and the guide-groove, when constructed and arranged substantially as shown.

2. I claim, in hand sole-cutters, the guide-spring, in combination with the cutting-blade and the guide-groove, all substantially as shown and described.

3. I claim, in hand sole-cutters, the graduating-screw, in combination with the guide-groove and the cutting-blade, all substantially as shown and described.

EDWIN WASHBURN FRENCH.

Witnesses:

LEMUEL P. JENKS,

WM. S. ARNAUD.