

C. F. DAVIS & E. P. HOWE.

Cutters for Trimming the Soles of Boots and Shoes.

No. 152,728.

Patented July 7, 1874.

Fig. 1.

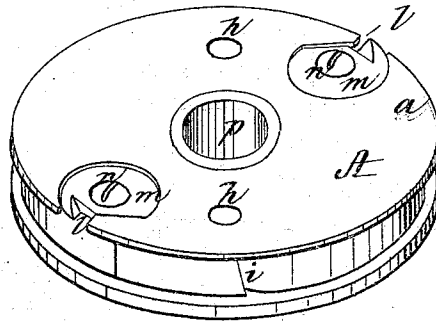


Fig. 3.

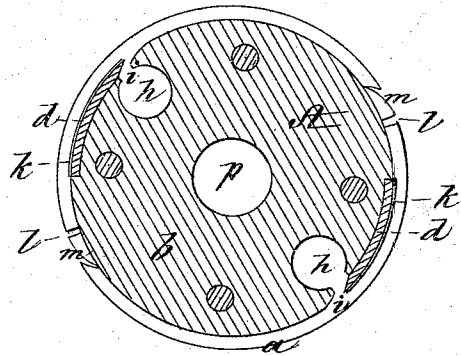


Fig. 2.

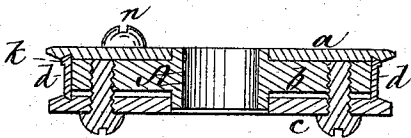


Fig. 4.

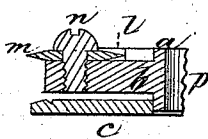
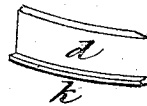


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES F. DAVIS AND EDWARD P. HOWE, OF MARLBOROUGH, MASS.

IMPROVEMENT IN CUTTERS FOR TRIMMING THE SOLES OF BOOTS AND SHOES.

Specification forming part of Letters Patent No. **152,728**, dated July 7, 1874; application filed May 16, 1874.

To all whom it may concern:

Be it known that we, CHARLES F. DAVIS and EDWARD P. HOWE, both of Marlborough, in the county of Middlesex and State of Massachusetts, have invented a Rotary Cutter for Trimming the Soles and Heels of Boots and Shoes, and for taking off the upper edges of the soles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of our rotary cutter. Fig. 2 is a vertical section through the same, taken in a plane passing through its axis. Fig. 3 is a vertical section taken in a plane at right angles to its axis. Fig. 4 is a sectional detail. Fig. 5 is a perspective view of one of the cutters we employ.

Our invention consists in a revolving cutter head or holder, provided with one or more knives for taking off the upper edge of the sole of a boot or shoe. Our invention also consists in the peculiar construction of the revolving cutter head or holder with one or more knives for trimming the outer edge of the sole or heel, and their relation to each other, as hereinafter shown and described, by which construction the two operations of taking off the upper edge of the sole and trimming its outer edge can be performed simultaneously in a convenient and expeditious manner, thus effecting a great saving in time and labor, the knife for trimming the outer edge of the sole being provided, if desired, with a raised lip or flange for forming the "bead" at the base of the upper edge, and the rotary head or holder being made in one or more portions, provided with a projecting flange, which serves as a guard for the upper and as a guide for the sole, the head or holder being so constructed as to admit of the ready adjustment of the knives, and of their removal when they require to be sharpened.

To enable others skilled in the art to understand and use our invention, we will proceed to describe the manner in which we have carried it out.

In the said drawings, A represents the holder, composed of three circular portions, *a b c*, secured together, the two outer portions *a* and *c* being of larger diameter than the in-

termediate portion *b*, thereby forming flanges, which serve as guides for the sole or heel to be trimmed after it is applied to the boot or shoe. The outer surface of the central portion *b* is recessed out at two points diametrically opposite for the reception of two curved blades or cutters, *d*, which snugly fit within their recesses, the inner surfaces of the outer portions *a c* being provided with grooves for the opposite sides of the cutters *d* to rest in, whereby they are held securely in position, as desired. *h h* are two holes cut through the three portions *a b c*, each of these holes being of greater diameter at the outer surface of the portion *c*, and tapering in toward the outer surface of the portion *a*, the centers of the holes being diametrically opposite, and communicating with openings *i*, formed under the cutting-edges of the blades or cutters *d*, the holes *h*, in connection with the openings *i*, serving as throats, through which the chips trimmed from the outer edge of the sole or heel may be allowed to escape. The outer surface of each cutter *d*, contiguous to the portion *a*, is provided with a raised lip or ridge, *k*, having its forward extremity sharpened, so as to form the bead around the sole just below the base of what is well known as the upper edge.

When the cutters *d* for trimming the outer edge of the sole and forming the bead are dull, they may be removed by unscrewing and taking off the portion *c* from the portions *a b*, and be ground off on their under sides in a ready and convenient manner. At two points diametrically opposite, through the outer portion *a* of the holder, are cut openings *l*, extending out to its periphery, and within each of these openings is placed a knife, *m*, for taking off the upper edge of the sole, a screw, *n*, passing through the knife, (into the central portion *b* of the holder,) being employed for clamping the knife in such position as to cause its cutting-edge to project slightly inside the plane of the inner surface of the portion *a*, in which it rests. One side of the knife *m* is square, and abuts against the corresponding square side of its opening *l*, whereby the knife is prevented, while revolving, from moving out of place when adjusted. The center of the holder is provided with a circular hole, *p*, to allow of

its being slipped on the shaft on which it is to revolve, and the holder may be composed of one or more portions, and the knives for taking off the upper edge of the sole may be of a different form than that shown in Fig. 1; for instance, each knife may be straight, and be placed within a rectangular slot formed in the portion *a*, or right angular, and have its base or stock secured in a recess cut in the surface of the periphery of the middle portion *b* of the holder.

The number of each of the two kinds of knives may be varied at pleasure, and instead of a curved knife for trimming the outer edge of the sole, a straight or other-shaped knife may be employed without departing from the spirit of our invention.

What we claim as our invention, and desire to secure by Letters Patent, is—

A cutter for trimming shoe-soles, consisting of the knives *i i*, secured between the plates *a* and *c*, which serve as guides for the sole, in combination with the intermediate welt-cutters *m m* in the periphery of the plate *a*, as set forth.

Witness our hands this 13th day of May, 1874.

CHARLES F. DAVIS.
EDWARD P. HOWE.

In presence of—

N. W. STEARNS,
W. J. CAMBRIDGE.