(No Model.)

A. McDOWELL.

HEEL SEAT TRIMMER.

No. 455,884. Patented July 14, 1891.

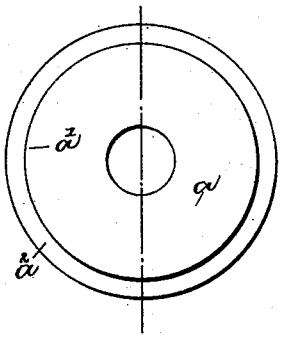

Fig. 1.

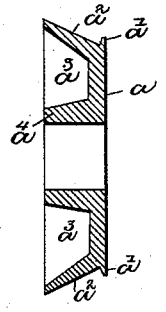

Fig. 2.

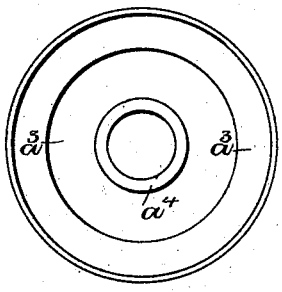

Fig. 3.

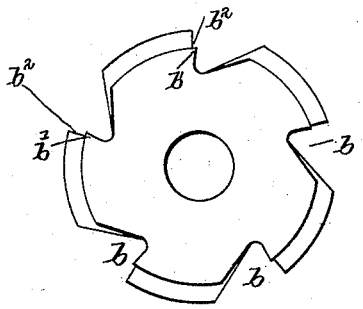

Fig. 4.

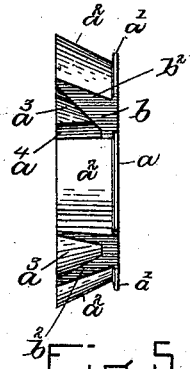

Fig. 5.

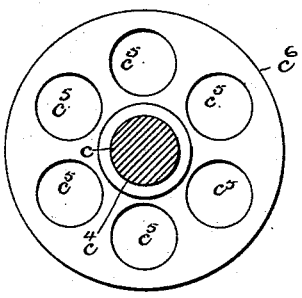

Fig. 7.

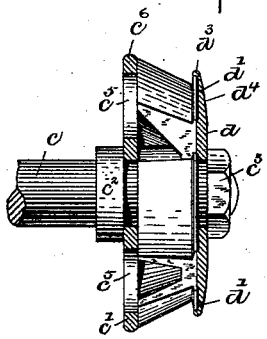

Fig. 6.

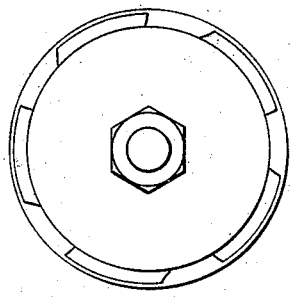

Fig. 8.

WITNESSES

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ALEXANDER McDOWELL, OF LYNN, MASSACHUSETTS.

HEEL-SEAT TRIMMER.

SPECIFICATION forming part of Letters Patent No. 455,884, dated July 14, 1891.

Application filed September 25, 1890. Serial No. 366,050. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER McDOWELL, of Lynn, in the county of Essex and State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Heel-Seat Trimmers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

The object of the invention is to provide a rotary trimmer for trimming the heel-seats of boots or shoes, which shall have, first, means whereby the shavings, chips, and dust may be removed from the cutter laterally and in an inward direction or away from the boot or shoe; and also it relates to the construction and form of the cutter whereby the cutting blades or edges are so accurately shaped and arranged that each cutting-edge does its share of the work.

It further relates to other features which will hereinafter appear.

Referring to the drawings, Figure 1 is a view in front elevation; Fig. 2, a view in section upon the dotted line of Fig. 1, and Fig. 3 a view in rear elevation of the blank from which the trimmer is formed. Fig. 4 is a view in front elevation, and Fig. 5 in side elevation, of the trimmer. Fig. 6 is a view, partly in elevation and partly in section, of the trimmer secured to the end of a rotary shaft and the rotary rand-guide and back plate used therewith. Fig. 7 is a view in rear elevation showing especially the back plate. Fig. 8 is a view in front elevation thereof, showing the front plate, sections of the trimmer, and a portion of the rib or back plate.

To form the trimmer I take a steel blank of the proper size and form it to the shape represented in Figs. 1, 2, and 3—that is, with the face a, the thin rim or flange a', the inclined periphery or edge a^2, the recess a^3, and the hub a^4. The blank thus formed is then hardened, and there is cut or ground across the edge a^2, flange a', and face a the cross-recesses b, (see Fig. 4,) which are slightly undercut at b' upon the edge to form the cutting-edges b^2 upon the section a^2 and the flange or rim a'. By hardening the trimmer before the recesses b are formed in it the uniform shape of the edge a^2 is maintained or preserved, and this the subsequent grinding or forming of the recesses b will not affect, whereas, if the recesses b are formed before the trimmer is hardened, then there is a possibility that the cutting-edges b^2 will not be regular or have a uniform shape and distance from the center of the trimmer, as is desirable. The trimmer is mounted upon a rotary shaft c against a back plate c', the back plate rotating with the trimmer and being held against a collar c^2 on the shaft by the nut c^3. This back plate has a central hole c^4 for the shaft, and the waste-escape holes c^5, (see Fig. 7,) through which the dust, shavings, &c., are thrown or escape from the cavity a^3 of the trimmer. The back plate is of the size of the largest diameter or rear end of the cutter. (See Fig. 6.) The face-plate d is circular in shape, has a central hole through which the end of the shaft projects, is a trifle larger than the face a and flange a' of the trimmer, and has a cavity d' on its inner side to receive the flange a' of the trimmer, the edge d^3 of the face plate extending beyond the flange but a short distance and being made thin by beveling the outer edge d^4 of the plate, (see Fig. 6,) and this edge d^3 acts as a rand-guard, the cutters upon the flange a' acting as rand-cutters and the remaining sections of the teeth or cutting-edges b^2 acting to trim the section of the heel-seat below the upper surface of the rand or outsole. Of course the trimmer may be used for other purposes than for trimming heel-seats, and the shape or inclination of the teeth from front to back of the trimmer may be varied.

In use the trimmer is mounted upon the shaft, as represented in Fig. 6, and the work presented to it, as indicated by the dotted line, Fig. 6, the rand-guard d^3 entering the rand-crease between the outsole and the upper and the heel extending inwardly therefrom. The shavings and chips are forced or drawn through the holes c^5, an edge c^6 of the back plate acting as a gage in determining the extent of the cut into the stock of the heel.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination of a trimmer comprising the face plate h, a flange a', and section

a^2, having cutting-teeth b', as specified, and the cavity a^3, with the separate back plate c', having the waste-escape holes c^5, substantially as and for the purposes described.

2. The combination of the trimmer a, shaped as specified, the separate back plate c', having the holes c^5 and rest edge c^6, and the independent front plate d, having the rand-guard d^3, as and for the purposes described.

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Witnesses:
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