(No Model.)

M. L. KEITH.

METHOD OF OUTER SOLING WELTED BOOTS OR SHOES.

No. 449,882. Patented Apr. 7, 1891.

Fig. 1.

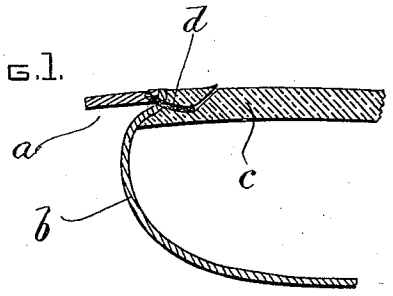


Fig. 2.

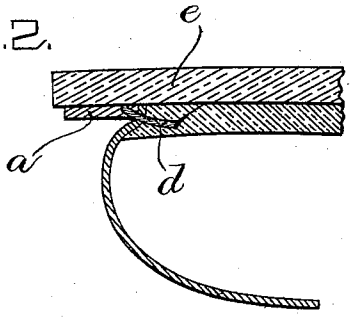


Fig. 3.

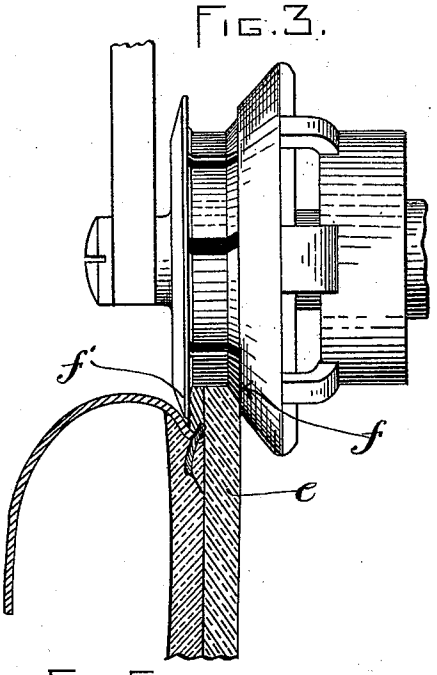


Fig. 4.

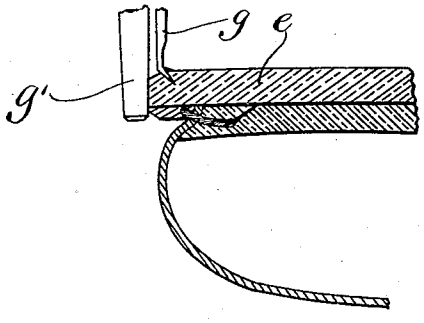
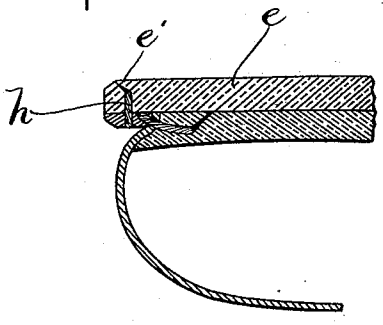


Fig. 5.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

MYRON L. KEITH, OF CAMPELLO, MASSACHUSETTS.

METHOD OF OUTER-SOLING WELTED BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 449,882, dated April 7, 1891.

Application filed February 27, 1891. Serial No. 383,060. (No model.)

To all whom it may concern:

Be it known that I, MYRON L. KEITH, of Campello, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Methods of Outer-Soling Welted Boots or Shoes, of which the following is a specification.

This invention has for its object to improve that part of the operation of making welted boots or shoes which relates to the attachment of the outer sole; and it consists in the improved method which I will now proceed to describe and claim.

In the accompanying drawings, forming a part of this specification, Figure 1 represents a transverse section of a welted boot or shoe which is complete with the exception of the outer sole. Fig. 2 represents a similar view showing the outer sole in place, but not permanently attached to the welt. Fig. 3 represents a section similar to Fig. 2, showing the operation of fitting the outer sole. Fig. 4 represents a sectional view showing the operation of channeling the outer sole to prepare it for attachment to the welt. Fig. 5 represents a sectional view of the completed boot or shoe.

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

In carrying out my invention I take a welted boot or shoe in the condition in which it is left after the attachment of the welt *a* to the upper *b* and inner sole *c* by the usual stitches *d*, as shown in Fig. 1, the operation of connecting said parts by the stitches *d* having been performed in any suitable way—as, for example, by a curved-needle welt-sewing machine. I then take an outer sole *e* the edges of which have not been fitted to the boot or shoe and temporarily attach it by cement to the exposed surfaces of the inner sole and welt, as shown in Fig. 2. I then cut away the edge of the outer sole along a line which is parallel with the bottom of the crease between the welt *a* and upper *b* by the use of a suitable trimming-tool, which is guided in its trimming action by a guide entering the said crease and bearing on the bottom or apex thereof, as shown in Fig. 3, where *f'* represents the guide, and *f* the trimming-tool, which may be a rotary cutter similar to that in general use in sole-edge trimming. This operation is called "fitting" the sole, and its novelty resides in forming the edge of the sole by the bottom of the crease between the welt and upper, using the latter as a guide, so that the edge of the fitted sole is exactly or substantially parallel with the bottom of said crease, or, in other words, with the line of the inner seam composed of the stitches *d*, that unite the welt to the inner sole, said inner seam determining the contour of the bottom of the crease.

Heretofore in fitting the sole the only guide has been the operator's eye, no one having, to my knowledge, utilized the line of the inner seam in guiding or determining the contour imparted by the fitting operation to the outer sole.

After the fitting operation, which is preferably conducted so as to leave a slight excess of stock in the outer sole, I form in the outer surface of the outer sole a channel for the reception of the stitches *h*, Fig. 5, comprising the outer seam that unites the outer sole to the welt. In forming said channel I utilize the fitted edge as a guide, the channel being formed by a channeling-knife *g*, that has connected with it in any suitable way a gage *g'*, formed to bear on the fitted edge of the outer sole, as shown in Fig. 4. The channel is thus made exactly parallel with the edge of the outer sole and with the inner seam, so that the outer edge of the lip or flap *e'* which is formed by the channel-cutting operation and covers the channel, is exactly parallel with the edge of the outer sole, and the stitches *h*, which are formed at the bottom of the channel and secure the outer sole to the welt, are located in a line exactly parallel with the outer edge of the sole.

Two important advantages result from the described method of forming the channel in the outer sole, viz: First, the outer edge of the lip *e'* being exactly parallel with the edge of the sole, can be readily caused to exactly coincide with the edge of the sole, so that it is not visible on the face of the sole inside of the edge thereof, but lies just at the angle formed by the face and edge of the sole, thus giving the sole a much neater appearance than it would have if the outer edge of

the lip were irregular or wavy; secondly, the exact parallelism of the line of stitches comprising the outer seam with the edge of the outer sole enables said stitches to be made at the minimum distance from the edge of the sole without that liability of cutting into the said stitches during the final trimming operation which would exist if the line of stitches were irregular or not exactly parallel with the edge of the outer sole.

It will be seen that by the described improved method I am enabled to attach the outer sole to a welted boot or shoe with absolute accuracy and insure the formation of a perfectly regular edge upon the outer sole without causing said edge to project farther at one point than at another.

I consider it preferable to additionally trim the edge of the outer sole after the operations above described, this final trimming operation removing but a very small part of the material of the sole and being resorted to simply for the purpose of imparting a smooth edge adapted to be readily set or burnished.

I claim—

1. In the manufacture of welted boots or shoes, the improved method hereinbefore described of outer-soling said boots or shoes, the same consisting, first, in temporarily securing the outer sole to the inner sole and welt; secondly, fitting said sole on a line parallel with the inner seam which unites the welt to the inner sole; thirdly, channeling the outer surface of the outer sole on a line which is parallel with the fitted edge of said outer sole, and then stitching the outer sole to the welt, as set forth.

2. In the manufacture of welted boots or shoes, the improved method hereinbefore described of outer-soling said boots or shoes, the same consisting, first, in temporarily securing the outer sole to the inner sole and welt; secondly, fitting said sole on a line parallel with the inner seam which unites the welt to the inner sole; thirdly, channeling the outer surface of the outer sole on a line which is parallel with the fitted edge of said outer sole; fourthly, stitching the outer sole to the welt, and, lastly, trimming the fitted edge of the sole, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 18th day of February, A. D. 1891.

MYRON L. KEITH.

Witnesses:
C. F. BROWN,
A. D. HARRISON.