No. 725,077. PATENTED APR. 14, 1903.

J. B. HADAWAY.

WELTING FOR WELT SHOES.

APPLICATION FILED MAY 26, 1902.

NO MODEL.

Fig: 3.

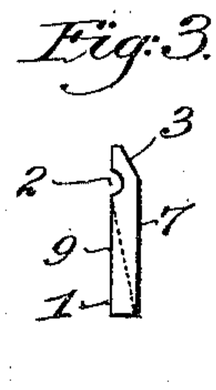


Fig: 1.

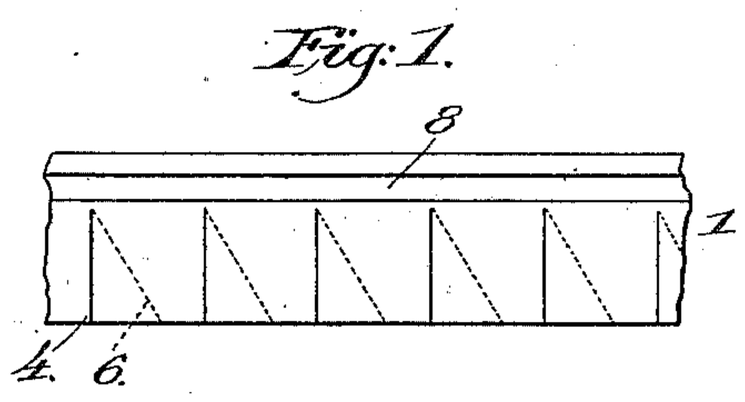


Fig: 2.

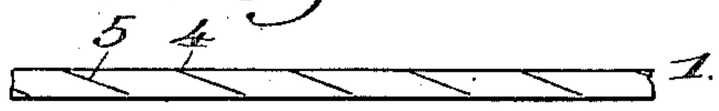


Fig: 6.

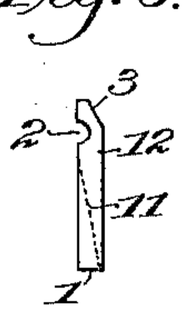


Fig: 4.

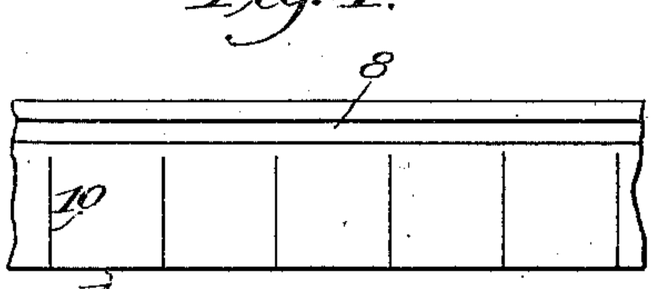
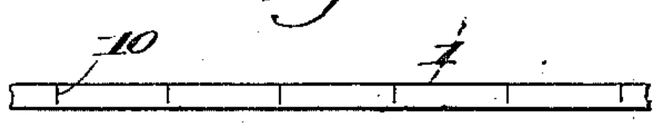


Fig: 5.



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UNITED STATES PATENT OFFICE.

JOHN B. HADAWAY, OF BROCKTON, MASSACHUSETTS.

WELTING FOR WELT-SHOES.

SPECIFICATION forming part of Letters Patent No. 725,077, dated April 14, 1903.

Application filed May 26, 1902. Serial No. 109,017. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. HADAWAY, a citizen of the United States, residing at Brockton, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Welting for Welt-Shoes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to an improvement in welting for welt-shoes.

In the manufacture of welt-shoes the welt after being united to the upper and insole by the inseam is beaten out to cause it to lie in substantially the plane of the insole. Before beating out the outer and inner edges of the welt are of the same length, and in order to cause the welt to lie in the plane of the insole the outer edge must be stretched considerably. To accomplish this successfully, it is sometimes necessary to subject certain portions of the welt, and especially the portion extending around the toe of the shoe, to the action of the welt-beater a number of times and in many instances to make a number of slits in the toe portion of the welt, such slits usually extending partially through the welt from the flesh or under side toward the grain or upper side and being generally made by the operator with a hand-knife.

The object of the present invention is to produce a strip of welting for use in the manufacture of welt-shoes provided with a series of slits opening on the under side and outer edge only of the strip, so that the outer portion of the welt may stretch during the welt-beating operation. Such slits will preferably taper in depth from the outer edge of the strip toward the inseam-stitch-receiving portion thereof, and in the preferred form of my invention such slits will be inclined to the sides of the strip, so that during the welt-beating operation the portions of the welt above and below the slit will slide over each other, and no open slits will be left in the welt, and I prefer that the slits should be cut in such direction as to pass freely through the welt-guides of the sewing-machines by which the welt is united to the insole and upper.

Referring to the accompanying drawings, illustrating two forms of my invention, Figures 1, 2, and 3 illustrate, respectively, an under side plan view, an outer edge elevation, and a cross-section of the preferred embodiment of my invention; and Figs. 4, 5, and 6 illustrate, respectively, an under side plan view, an outer edge elevation, and a cross-section of a modified form of my invention.

A strip of welt material 1, having, if desired, the usual groove 2 and beveled edge 3, is provided with a series of slits opening on the under side and outer edge only of the strip, which preferably taper in depth from the outer edge of the strip toward the inseam-stitch-receiving portion thereof. The opening 4 of the slit on the under side of the strip is preferably at right angles to the length of the strip, and the opening 5 is preferably inclined to the sides of the strip in the direction illustrated in Fig. 2, which is shown to be the direction in which it should be inclined in order to have the welting pass freely through the welt-guide of the usual inseam-sewing machines employed for uniting the insole, upper, and welt. The bottom 6 of the slit extends from a point near the upper surface 7 of the strip downward toward the inseam-stitch-receiving portion 8 of the strip—that is to say, toward that portion of the strip through which the inseam-stitches are designed to pass—coming to the surface at the inner end of the opening 4, thereby gradually approaching the under side 9 of the strip. The slits may be curved or straight, as the form of the slits is not essential to my invention. It is to be observed that in the illustrated embodiment of my invention the slits do not penetrate the inseam-stitch-receiving portion of the strip, but extend only through the outer portion of the strip, and that they do not penetrate or cut the upper surface 7 of the strip. It would not, however, involve a departure from my invention, viewed in its broader aspects, if the slits penetrated entirely through the strip at the outer edge thereof, as such portion of the welt is removed after the outsole is stitched thereto.

In the modified form of my invention (illustrated in Figs. 4, 5, and 6) the slits 10 are formed at right angles to the length of the

strip, and the bottom 11 of the slit extends from a point near the upper surface 12 on the outer edge of the strip downward in a diagonal direction toward the under side of the strip and toward the inseam-stitch-receiving portion thereof. The plane of the slits in this form of my invention is at right angles to the length of the strip.

In the hand operation of slitting the welt, as hereinbefore referred to, the slits were irregular in form, depth, and spacing, while in my improved welting the slits are regular in form, depth, and spacing, and the slitting of the welt is not dependent upon the judgment and skill of the operator, but is uniform throughout. It is to be noted that because the slits do not penetrate or cut the grain or upper surface of the welt the appearance of the welt is not impaired and that the elastic and flexible grain-surface will stretch during the welt-beating operation in order to conform to the contour of the shoe, stretching most around the toe, less around the sides of the shoe, where the curvature is less, and being compressed at the shank, where the curvature is reversed. It is also to be observed that when in the preferred form of my invention the outer portion of the welt is stretched during the beating-out operation the slitted portions of the welt slide over each other without gaping, thereby conserving the strength of the welt to securely hold the outseam. It is also to be noted that with welting of the ordinary form that is not slitted before it is sewed to the insole and upper the width must be great enough to allow for the reduction in width incident to the beating-out operation, which results in narrowing the welt owing to to the stretching of the outer portion thereof and the compression and thickening of the portions thereof nearer the inseam, while my improved form of welting will be only slightly narrowed, if at all, during the beating-out operation, so that I am enabled to use a narrower strip than it has heretofore been possible to employ, and thereby to effect a very material saving in the amount of material used, owing to the fact that it is not materially narrowed by the beating-out operation.

I have found it to be useful to have the slits extended completely around the shoe, as the welt is of such construction that it adapts itself without hand manipulation to the curvature of the shoe, stretching most where it is most needed, not at all where it is not needed, and being compressed where the outer edge of the welt would necessarily be compressed, as around the shank, in order to make the welt flat.

The welting will be used in the same manner as welting is ordinarily used, and by virtue of the fact that the slits when inclined to the surfaces of the strip are so inclined as to pass freely through the welt-guides of inseam-sewing machines used for uniting the insole, upper, and welt renders the existence of the slits in the welt entirely unobjectionable during the operation of sewing the inseam.

Another important advantage resulting from the use of my improved form of welting resides in the fact that in sewing the inseam the welt bends easily to adapt itself to the welt-guide and the contour of the shoe, and thereby relieves the sewing-machine of the strains to which it would otherwise be subjected.

The welting herein described and claimed may be manufactured by any suitable machine or by hand, but it is especially adapted to be manufactured by the machine for operating on welts described in my copending application executed of even date herewith.

I am aware that it has been proposed to make welting for use in the manufacture of McKay shoes which consists of a strip of material provided with inclined slits extending through and through the strip and having portions of the welt removed between the alternate pairs of slits; but my invention is clearly differentiated therefrom in a number of important respects, and among others, obvious to those skilled in the art, by the fact that the slits in my improved welting open only on the under side and outer edge of the strip, while in the above-mentioned welt-strip the slits extend through and through the strip and open on the inner edge of the welt.

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

1. As an article of manufacture, a strip of welting for use in the manufacture of welt-shoes, consisting of a strip of welt material having slits therein, said slits opening on the under side and outer edge only of the strip, substantially as described.

2. As an article of manufacture, a strip of welting for use in the manufacture of welt-shoes, consisting of a strip of welt material having slits therein, said slits opening on the under side and outer edge only of the strip, and tapering in depth from the outer edge of the strip toward the inseam-stitch-receiving portion, substantially as described.

3. As an article of manufacture, a strip of welting for use in the manufacture of welt-shoes, consisting of a strip of welt material having slits therein, said slits opening on the under side and outer edge only of the strip and being inclined to the sides of the strip in such direction as to pass freely through the welt-guides of inseam-sewing machines, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN B. HADAWAY.

Witnesses:
FRED O. FISH,
ALFRED H. HILDRETH.