Dec. 13, 1938. J. B. HADAWAY 2,139,746

METHOD OF MAKING WELTING

Filed Dec. 30, 1935

Fig. 1.

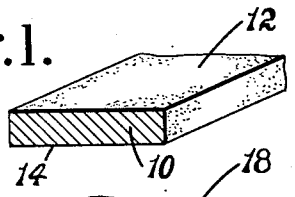
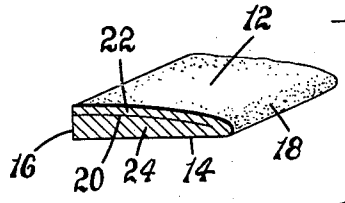


Fig. 2.



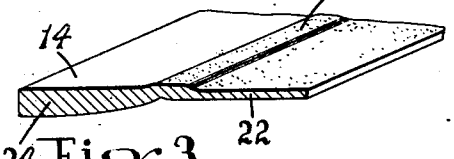


Fig. 3.

Fig. 4.

Fig. 5.

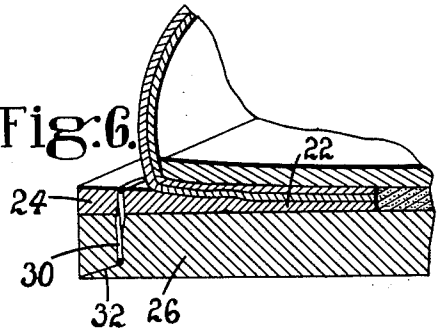


Fig. 6.

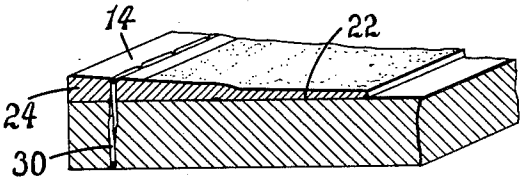


Fig. 8.

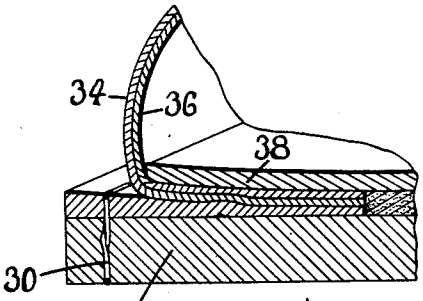


Fig. 7.

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2,139,746

METHOD OF MAKING WELTING

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Application December 30, 1935, Serial No. 56,693

3 Claims. (Cl. 12—146)

This invention relates to methods of making welting.

Objects of this invention are to economize welting in the manufacture of that type of shoe in which one marginal portion of a piece of welting is attached in a substantially flat condition to the overlasted portion of a shoe upper and the other marginal portion is attached to an outsole.

In one aspect the invention comprises a novel method of preparing welting in which the welting is split from its outer edge inwardly at a distance less than half the thickness of the welting from its flesh face. The cut is preferably made at a uniform distance from the flesh face to a point adjacent to but spaced from its inner edge. The flesh flap thus formed is adapted to be unfolded about its connection with the grain portion through 180 degrees to form welting of substantially twice the width of the original welting. If desired, prior to the splitting of the welting it may be reduced or beveled on its flesh face so as to taper inwardly, considering its position in the shoe. After being unfolded, the welting will have a substantially continuous split surface on one side and on the other side about half of the welting will have a grain surface and the remainder a flesh or a split surface.

The novel shoe and method of making the same disclosed herein are being claimed in an application Serial No. 166,235, filed September 28, 1937, which is a division of this application.

In the drawing,

Fig. 1 is a view in section and perspective of a piece of welting rectangular in cross-section upon which my novel method of preparing welting may be practiced;

Fig. 2 is a view in section and perspective showing the steps of beveling the welting and splitting it from its outer edge inwardly nearly to its inner edge;

Fig. 3 is a view in section and perspective of the welting after it has been unfolded and turned to bring its grain face uppermost;

Fig. 4 is a perspective view showing the welting attached to a shoe outsole;

Fig. 5 is a sectional detail view showing the welted outsole cement-attached to the overlasted portion of a shoe upper;

Fig. 6 is a view similar to Fig. 4 showing the welt and outsole secured together by stitches located in a channel in the outsole;

Fig. 7 is a view similar to Fig. 6, the stitches which hold the welt and outsole together being exposed on the bottom of the sole; and

Fig. 8 is a detail in section and perspective of the sole shown in Fig. 4 indicating that the stitches through the welt and outsole may be put in before the sole is attached to the shoe.

In practicing my novel method of preparing welting, I employ welting 10 rectangular in cross-section, as shown in Fig. 1, such welting having a flesh face 12 and a grain face 14. Preferably, though not necessarily, the inner portion of the welting may be reduced on its flesh face, as shown in Fig. 2, so that the welting has a relatively thick outer edge face 16 and a relatively thin inner edge 18. The welting is next split by a cut 20 which extends from the outer edge face 16 of the welting toward the inner edge 18 at a uniform distance from the flesh face 12. Preferably the cut 20 is made substantially nearer the flesh face 12 than the grain face 14 so that the welting is divided into two portions, one portion 22 of uniform thickness and the other 24 gradually diminishing in thickness from its outer edge inwardly, these portions being of course connected adjacent to the inner edge 18. The two portions 22, 24 are then unfolded and flattened to form welting nearly twice as wide as the original welting. In the manufacture of shoes the welting is preferably used with its grain face 14 uppermost, that is in contact with the shoe upper, and its split surface in contact with the outsole.

In utilizing welting thus prepared in the manufacture of shoes, an outsole 26 is rounded to the proper shape and size for attachment to a shoe which is to have an extension edge. A strip of welting prepared as described and as shown in Fig. 4 is attached, preferably with cement, to the flesh face of the outsole 26 from the breast line around the forepart and back to the breast line. The grain face 14 of the welting thus attached will generally be wider than it is desirable to expose beyond the upper in the finished shoe. Accordingly, a portion of the grain surface may be roughened off as indicated at 28 in Fig. 4, this roughening of course being done throughout the extent of the welt. Preferably the outer margins of the part 24 of the welting and of the outsole 26 are secured together by lockstitches 30 which may either be hidden in a usual channel 32 in the outsole 26, as shown in Fig. 6, or the shoe may be stitched "aloft", the stitches being exposed on the bottom of the sole, as shown in Fig. 7. If desired, the stitching 30 may be omitted until after the sole is attached to the shoe, as indicated in Fig. 5, and may then be inserted, in which case at least the outer portion of the welting will be secured to the peripheral portion of the outsole by a suitable cement.

After the sole has been prepared as illustrated in Fig. 4, the roughened surfaces of the welt, which will include the surface 12 and the portion of the surface 14 which has been roughened, are cemented and the cement allowed to dry. A shoe upper 34 and a lining 36 will be lasted in any usual manner over an insole 38, and the surface of the overlasted portion 40 of the upper will be roughened, cement applied thereto and the cement allowed to dry. The cement employed may be either the usual pyroxylin cement employed in cement sole attaching or the polymerized chloroprene cement disclosed in the application for Letters Patent of the United States Serial No. 51,114, filed November 22, 1935, in the name of Alexander D. Macdonald. In case pyroxylin cement is employed, the cement on either the upper or the welt or both will be activated and the shoe and sole subjected to pressure in a suitable press to cause the welt to be bonded to the overlasted upper. In the case of polymerized chloroprene cement which is pressure-responsive no special activation would be necessary before the sole-attaching pressure is applied.

If the stitching together of the welt and outsole has been deferred until after the cement attachment of the welt to the upper, as indicated by Fig. 5, the stitches 30 may then be inserted by the usual outsole stitching machine, the location of the stitches being guided from the surface of the shoe upper 34. Of course, if either of the cements suggested above is employed for cement-attaching the welt 22, 24 to the sole 26, no stitching of the welt to the outsole will be necessary.

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

1. That improvement in methods of making welting which consists in providing welting thicker at one edge than the other, splitting the welting into two layers, one thicker than the other, connected at one edge, said split being substantially parallel to one of the two larger faces of the welting, and turning one layer upside down relatively to the other nearly to double the width of the welting.

2. That improvement in methods of making welting which consists in preparing welting thicker at one edge than the other, splitting the welting into two layers, one layer tapering inwardly and the other being of substantially uniform thickness, said layers being connected at the thinner edge of the tapering layer, and turning one layer upside down relatively to the other to increase the width of the welting, thus providing welting having nearly twice its original width with an inner portion of uniform thickness.

3. That improvement in methods of making welting which consists in beveling the flesh side of a piece of leather welting, splitting the welting in a plane at a predetermined distance from the beveled side to a point substantially half the thickness of the welting from its thinner edge, and unfolding the welting by turning one flap of the welting 180 degrees relatively to the other about its thinner edge as an axis to form welting nearly twice as wide as the original welting.

JOHN B. HADAWAY.