G. E. ROLLINS.

WELT.

APPLICATION FILED OCT. 15, 1904.

927,078. Patented July 6, 1909.

Fig. 1.

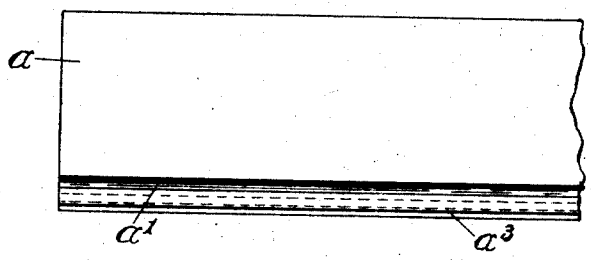


Fig. 2.

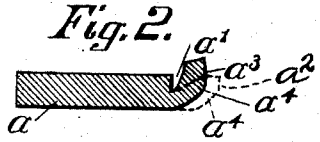
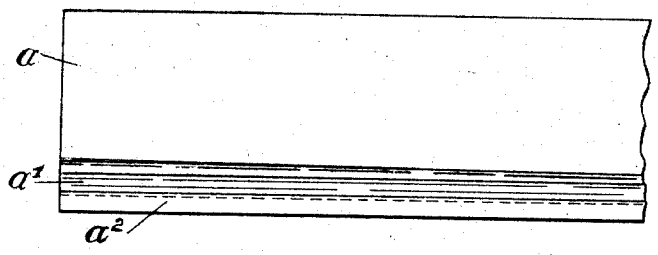


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

GEORGE E. ROLLINS, OF EAST BRIDGEWATER, MASSACHUSETTS, ASSIGNOR TO BROCKTON FOLDING MACHINE COMPANY, A CORPORATION OF MASSACHUSETTS.

WELT.

No. 927,078. Specification of Letters Patent. Patented July 6, 1909.

Application filed October 15, 1904. Serial No. 228,572.

To all whom it may concern:

Be it known that I, GEORGE E. ROLLINS, a citizen of the United States, residing at East Bridgewater, in the county of Plymouth and State of Massachusetts, have invented an Improvement in Welts, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention is an improved welt and has for its object the provision of means for facilitating the sewing of the welt in the manufacture of a Goodyear sewed shoe.

In the manufacture of what is known in the trade as a Goodyear sewed shoe considerable difficulty is experienced in properly rounding curves, as for instance at the shank and around the toe. I have discovered that I can produce superior results and secure greater certainty of sewing and precision and rapidity of work by rendering the stitch receiving edge specially flexible and preferably normally upturned or bent upward transversely to the plane of the body of the welt.

Further details of construction and advantages of my invention will be pointed out in the course of the following description, reference being had to the accompanying drawing.

In the drawing: Figure 1 is a top plan view of a fragmentary portion of welt embodying my invention. Fig. 2 is a transverse sectional view thereof, illustrating also the manner of manufacture. Fig. 3 is a view similar to Fig. 1, showing the old form of welt.

Referring to Fig. 3, it will be seen that the old or usual welt comprises a body portion a having a stitch-receiving groove a^1, adjacent to the edge a^2. The latter edge, which constitutes the stitch-receiving edge of the welt, is stiff and flat, the same as the body of the welt. My invention resides in rendering the portion a^2 of the welt specially flexible for conforming to the work readily, feeding in the welt-guide easily, taking up the moistening water more copiously and readily, and admitting the needle readily. To this end I mangle or break the fibers more or less so as to render this edge somewhat softened and permanently pliable. Also, instead of forming a rounded groove (*i. e.* having a curved or rounded bottom) I make a V-shaped groove having its outer wall inclined and its inner wall vertical, see the dotted construction, Fig. 2. In my co-pending application Ser. No. 201,586 I have shown the vertical wall at the front, both these constructions having advantages of their own in certain situations. In the process of forming the flexible stitch-receiving edge or lip I bend the same upwardly, as shown in Figs. 1 and 2, breaking and mangling or partially tearing and crushing the fibers, so that they have not the strength or resistance to cause the edge to resume its flat shape, but it remains in its mangled and crushed shape, and tends to maintain said upright position as its normal or permanent position. This changes the shape of the groove somewhat, so that, taken in connection with the flexibility and upright position of the edge, as indicated at a^3, it greatly facilitates the entrance of the needle and the uniform stitching of the same to the upper of the shoe. This kind of welt is usually cut obliquely at a^4, as shown in dotted lines. And when upturned according to my invention, this oblique cut assumes a substantially vertical position, as shown in full lines in Fig. 2, in position to rest flat against the upper to which the welt is being sewed, the V-shaped groove also facilitating this result.

One main function of my invention is to provide the welt with a stitch-receiving edge, which is softened and has its rigidity broken down, which facilitates the laying of the thread, as the latter more readily embeds itself therein and makes a closer seam, and also the needle can enter more easily therein.

A further important advantage due to the special shape and character of the welt, is that it permits the rapid and uniform wetting solely of the stitch-receiving edge. Heretofore the custom has been to wet the entire welt, for sewing, thereby producing uneven thickness under the beaters, rough and uneven edges, etc., due to the fact that the hard places in the welt body remain hard, while the soft places swell and become very soft. My invention avoids this by permitting the welt-roll to be dipped edgewise, the broken and crushed edge being spongy and absorbent and holding the successive layers or turns apart just enough to permit the water to enter as far as the groove, whereas, as previously formed and wound, the roll was so compact as to exclude water from the groove. Also the softened character of the

edge facilitates the wetting thereof as it takes water more readily; and likewise it puckers or shortens more readily (of advantage in rounding curves).

It will be understood that my invention is applicable to various shapes of welt and also that I do not limit myself to the precise construction herein contained, as other embodiments thereof come within the scope of my invention.

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

1. A welt for boots and shoes, consisting of a straight leather strip of indeterminate length having the leather of its body-portion in the normally natural condition, sufficiently stiff and rigid to tend to remain flat, said welt having adjacent one edge of said body-portion a longitudinal stitch-receiving groove, and, beyond said groove a stitch-receiving edge whose fibers are crushed and upturned and rendered permanently softer and more pliable than the body-portion of the welt.

2. A welt for boots and shoes, having the fibers of its stitch-receiving edge mangled and broken and in a permanently softened condition, capable of readily absorbing moisture, receiving stitches, and shortening in rounding curves.

3. A welt for boots and shoes, having a longitudinal groove for receiving stitches, and an upturned stitch-receiving edge beyond said groove, said edge having its fibers crushed and broken and rendered permanently softer and more pliable than the body of the welt.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

GEORGE E. ROLLINS.

Witnesses:
GEO. H. MAXWELL,
M. A. JONES.