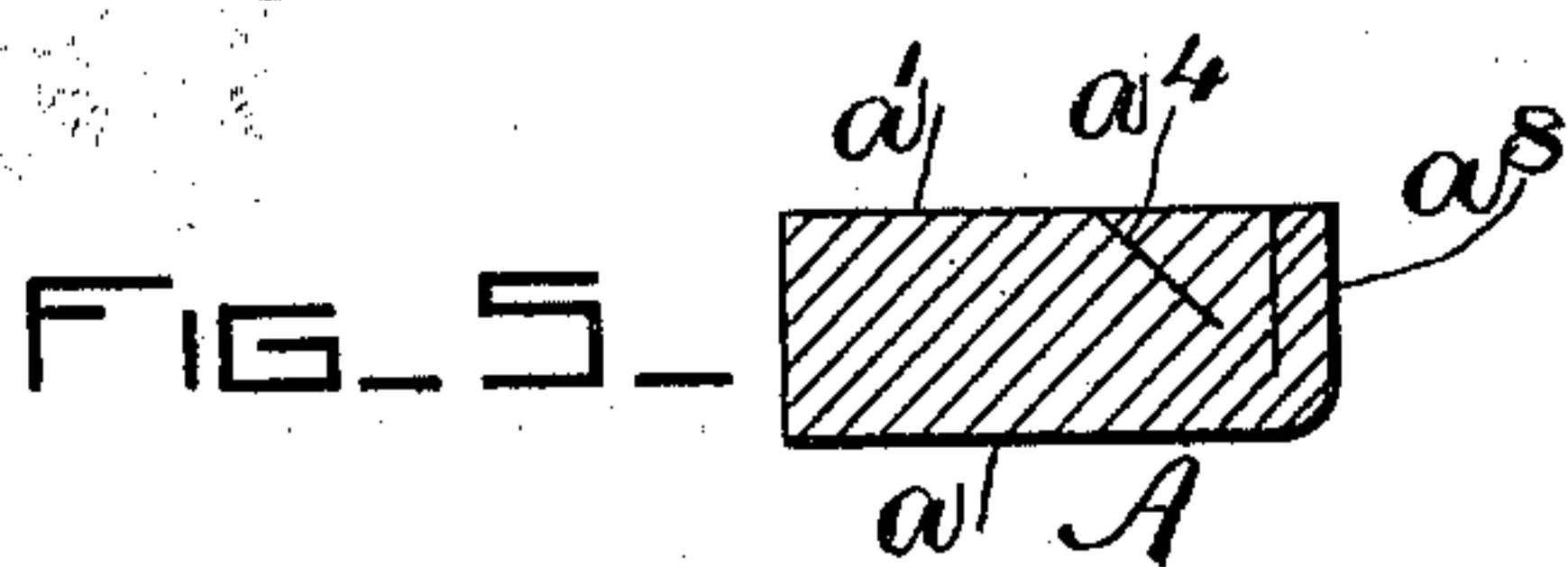
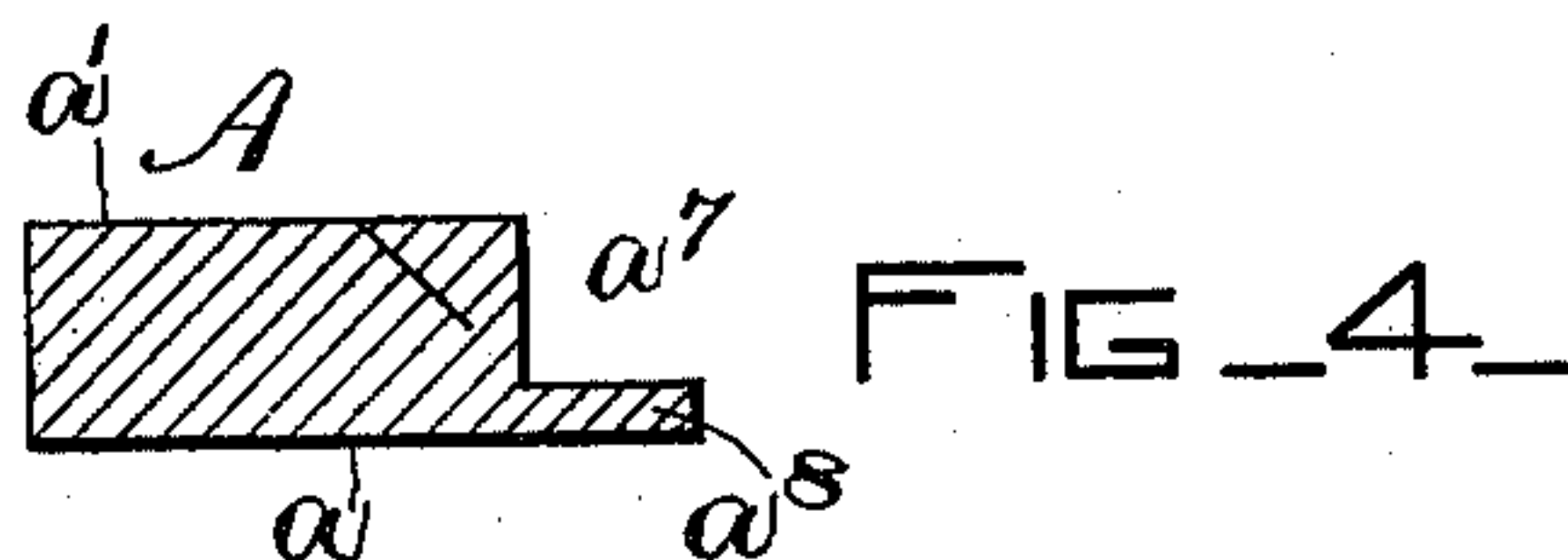
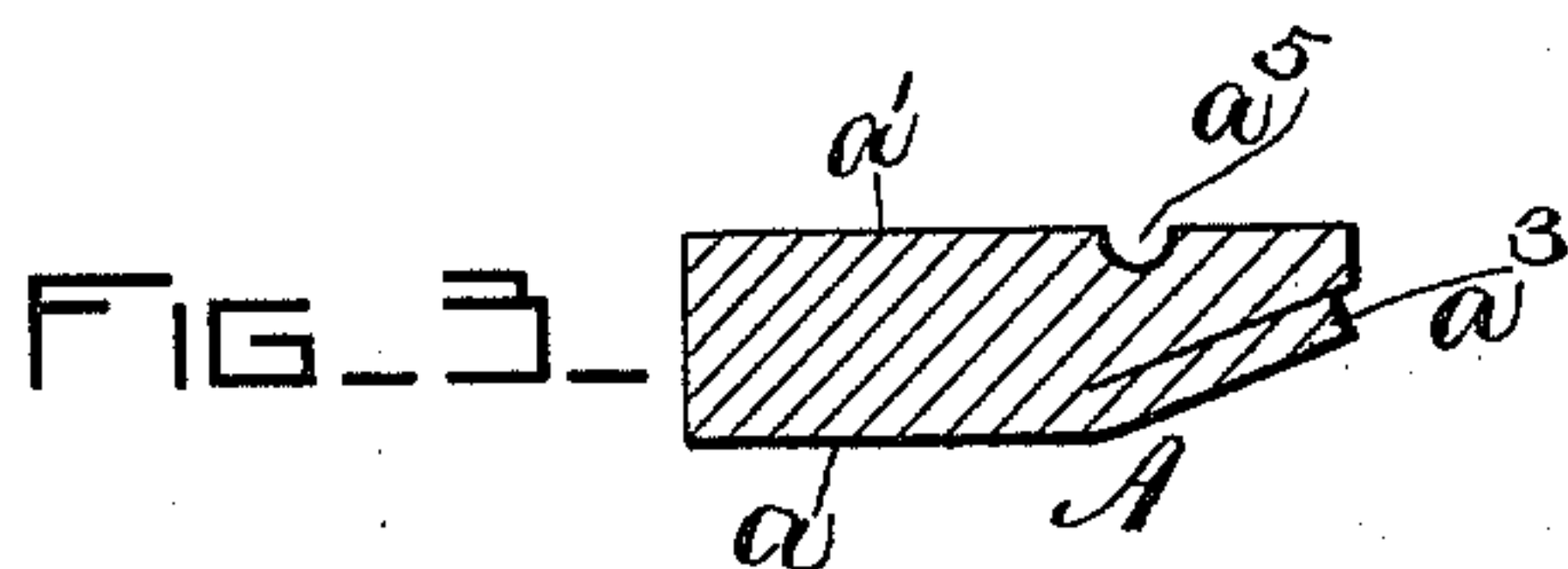
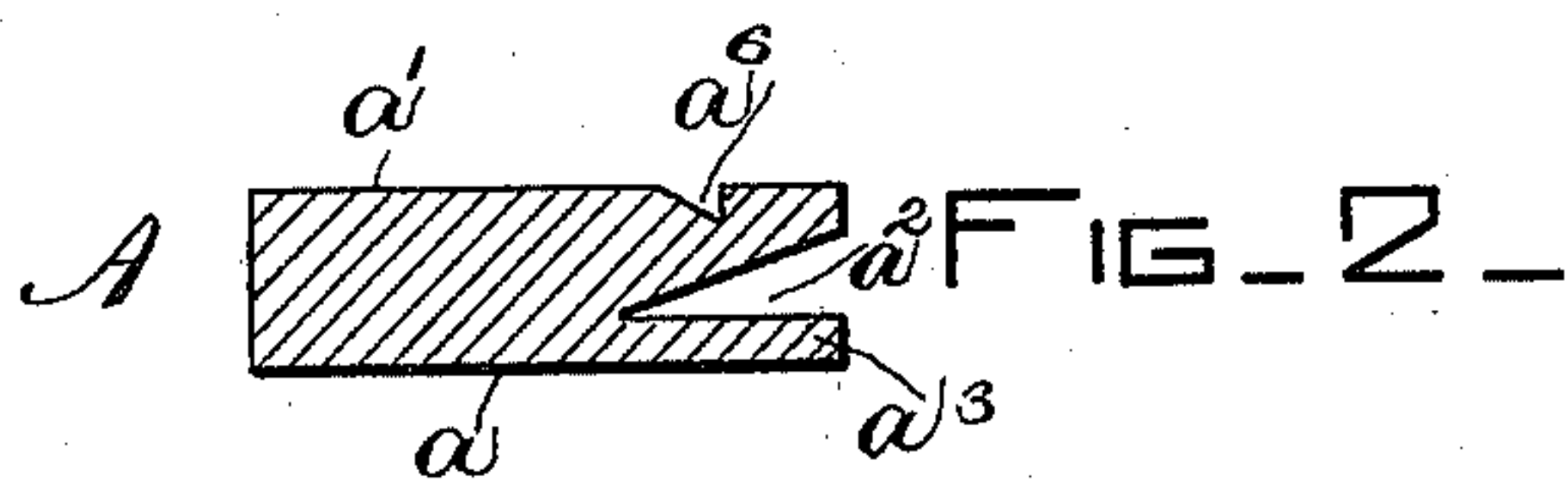
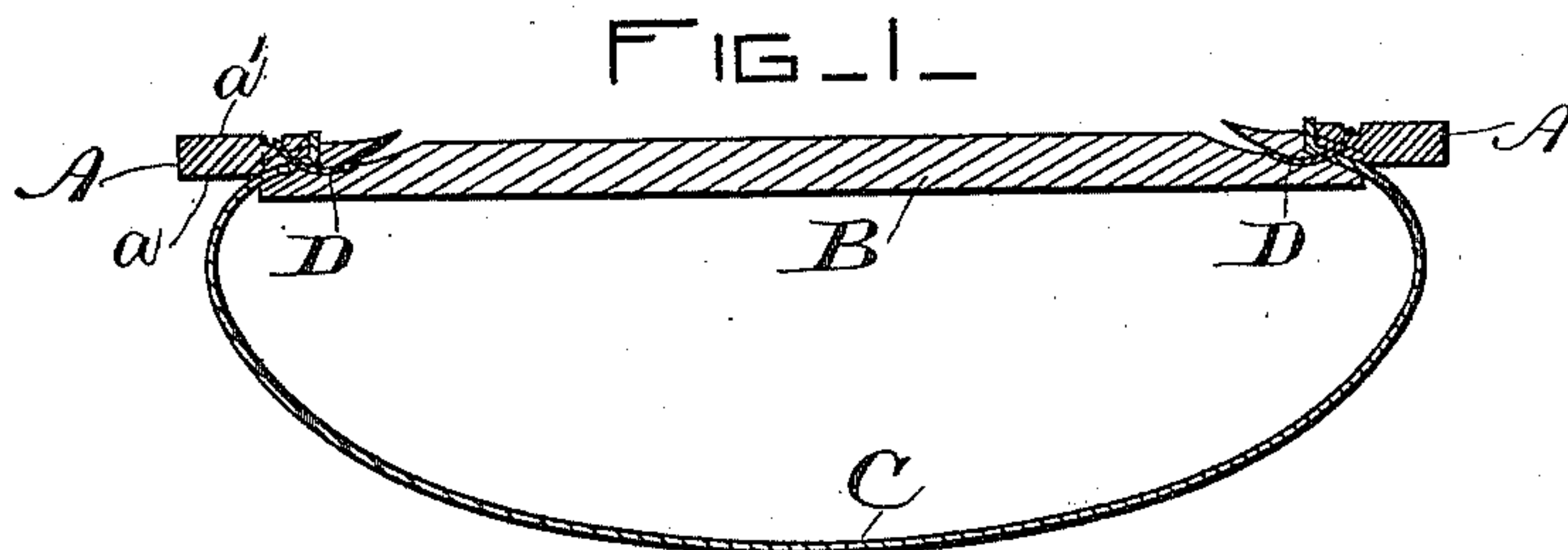


(No Model.)

J. B. HADAWAY & T. H. ANDERSON.  
WELT.

No. 600,867.

Patented Mar. 22, 1898.



WITNESSES

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*By their attorneys,*  
*Phillips & Anderson*

# UNITED STATES PATENT OFFICE.

JOHN B. HADAWAY, OF BROCKTON, AND THOMAS H. ANDERSON, OF LYNN,  
MASSACHUSETTS; SAID ANDERSON ASSIGNOR TO SAID HADAWAY.

## WELT.

SPECIFICATION forming part of Letters Patent No. 600,867, dated March 22, 1898.

Application filed March 20, 1897. Serial No. 628,501. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN B. HADAWAY, residing at Brockton, in the county of Plymouth, and THOMAS H. ANDERSON, residing at Lynn, in the county of Essex, State of Massachusetts, citizens of the United States, have invented certain new and useful Improvements in Welts; and we 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 boots and shoes, and more particularly to an improved welt to be used in the manufacture of welted boots and shoes.

In the manufacture of welted boots and shoes prior to the present invention great difficulty has been experienced in securing a permanent union between the welt, upper, and inner sole and at the same time have the welt lie flat at its juncture with the edge of the upper and the inner sole. As welts are now commonly made they are cut into strips of a width sufficient to permit a bending or doubling up of the edge which is secured to the upper and inner sole, in order that the stitches which form the seam may pass through the grain surface of the welt, which contains the strongest fiber, and thus insure a strong union of the welt to the upper and inner sole. This doubling up of the welt is objectionable for the reason that it causes the welt to curl up around the toe of the shoe, and, moreover, forms a projecting rib which has to be trimmed off before the outer sole can be secured thereto. If the welt be secured to the upper and insole without turning up the edge, as is sometimes done with a channeled welt in order to get the flat seam so much desired, it is found in practice that the needle will at times come out of the edge below the grain surface, and thus will place the stitches only in the soft fiber of the welt below the grain fiber on the flesh side thereof, which is not strong enough to withstand the strain put upon it when the outer sole is attached, and in use the welt will pull off, effectually spoiling the shoe and rendering it useless.

The object of the present invention is to

produce a welt in which the stitches will always be supported by the grain fiber of the leather forming the welt, and one which can be attached to the upper and insole without the necessity of doubling it up at its edge, and thereby form a flat seam, and also one which will not curl up around the toe, as is common in the previous forms of welt.

To the above end the present invention consists of a welt for shoes having a reinforcing-lip of grain fiber along its inner edge.

The present invention is illustrated in the accompanying drawings, in which—

Figure 1 is a transverse section of a boot or shoe, showing our improved welt applied thereto. Figs. 2 and 3 represent a transverse section of our improved welt considerably enlarged, and Figs. 4 and 5 are sectional views illustrating a modified form of our invention.

In the drawings, A represents the improved welt, which is formed, as usual, in a long narrow strip, of which *a* is the grain surface and *a'* the flesh surface. As is well known, the grain surface *a* of the welt is the stronger, and it is desired that stitches which form the seam which unites the welt, upper, and insole should pass through the grain surface, in order to form a strong union between the welt, upper, and inner sole; but in practice it is found that the needle of the sewing-machine will oftentimes fail to pass through the grain surface of the welt, but will fall below the same, causing the stitches to pass from the flesh surface through the edge of the welt, placing the stitches in the weaker or flesh fiber of the welt or at that portion of the welt below the grain, and that when thus secured in place the welt is not adapted to stand the strain put upon it by the outer sole and will frequently pull away from the sole, thus damaging the shoe.

In the invention of the drawings the welt is provided with a grain-fiber reinforcing-lip which extends along the edge, forming a grain-fiber support for the stitches of the seam whether said stitches should emerge from the upper grain surface or the welt or should emerge from the edge in the flesh fiber below said surface. The grain-fiber reinforcing-lip for the edge of the welt A is preferably formed



by cutting a groove  $a^2$  in the edge of the welt, leaving an extension or lip  $a^3$  projecting from the grain surface  $a$ , as shown in Figs. 2 and 3, which extension or lip  $a^3$  is turned down along the edge of the welt, as shown in Figs. 1 and 3. This reinforcing-lip  $a^3$  may be turned down prior to the sewing of the welt A to the shoe or during the sewing operation by means of a suitable welt-guide on the sewing-machine which will turn down said lip or extension  $a^3$  as the welt is fed. The welt may be provided with a channel  $a^4$ , as shown in Fig. 5, or with a concave groove  $a^5$  or an angular groove  $a^6$ , as shown in Figs. 2 and 3.

In Fig. 1 is shown a transverse section of a shoe provided with our improved welt, in which A is the welt, B the insole, C the upper, and D the stitches which unite them.

In the modified form of the invention shown in Figs. 4 and 5 the edge of the welt is grooved or rabbeted, as shown at  $a^7$ , leaving an extension or lip  $a^8$  projecting from the grain surface of the welt, which when the welt is applied to the shoe is turned down across the edge of the welt, as shown in Fig. 4. The construction may be otherwise modified without any departure from the present invention.

It will be noted that our improved welt will

lie perfectly flat and that it is unnecessary to bend or turn over the edge thereof as heretofore, which resulted in forming a ridge or rib which had to be trimmed off before the outer sole was attached, as in the prior constructions, and that the stitches, whether directed to pass through the upper surface or through the edge of the welt, will have a grain-fiber foundation to withstand the strain of the stitches therein.

Having fully described our invention and its mode of application, we claim as new and desire to protect by Letters Patent of the United States—

A welt for boots or shoes having a portion of its inner edge below the grain surface removed to leave a lip or extension projecting from the grain side thereof, arranged to be turned down to reinforce the inner edge of the welt, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN B. HADAWAY.  
THOMAS H. ANDERSON.

Witnesses:

JOHN J. COLLINS,  
A. E. WHYTE.