

June 15, 1954

J. A. AMICO

2,680,902

WELT SUPPORT

Filed Feb. 6, 1948

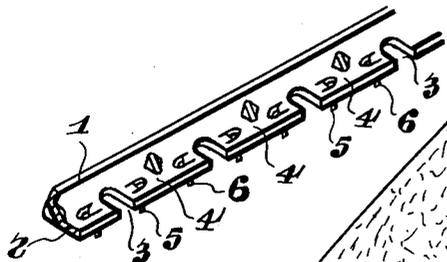


Fig. 7

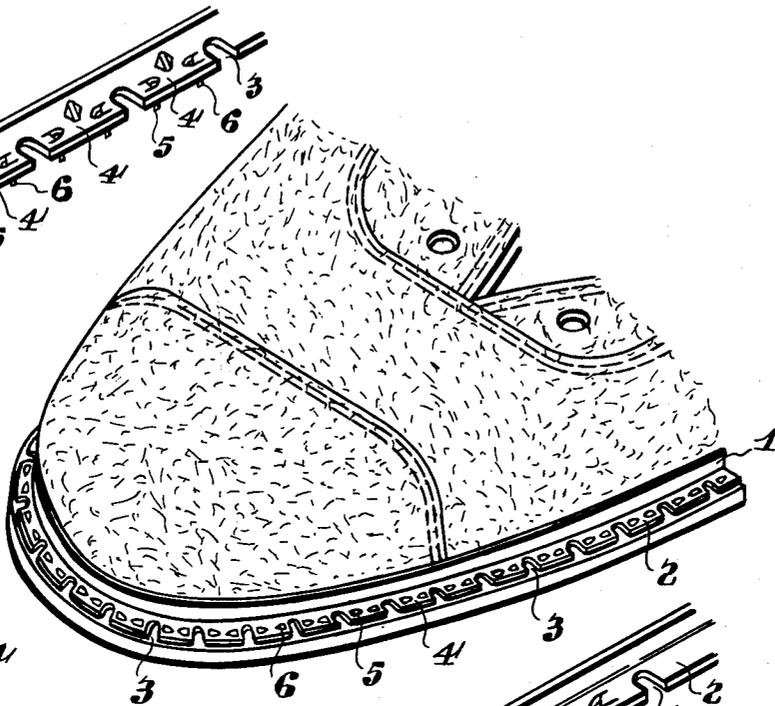


Fig. 4

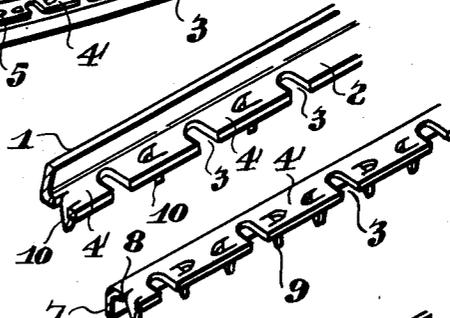


Fig. 8

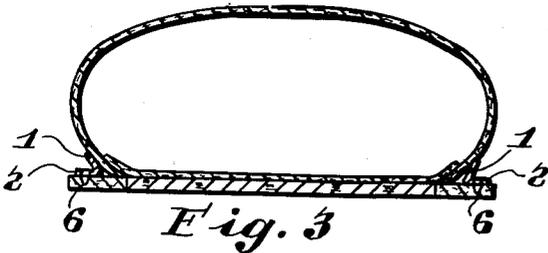


Fig. 3

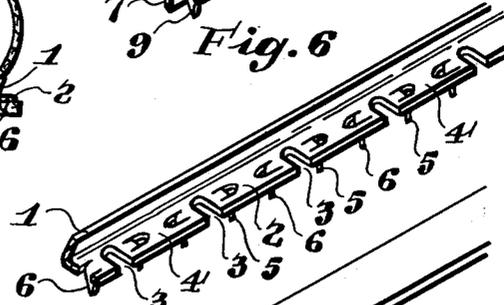


Fig. 2

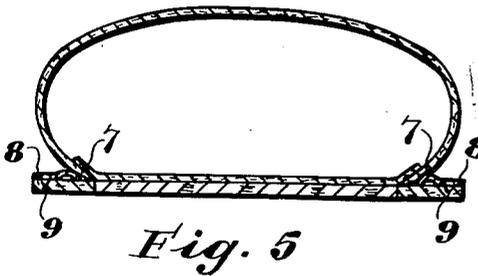


Fig. 5

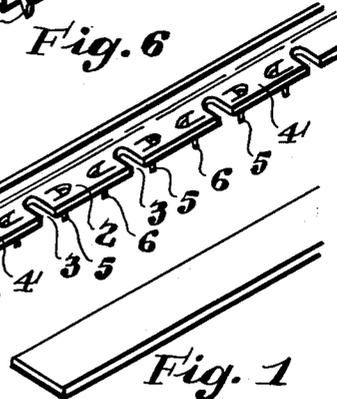


Fig. 1

INVENTOR.
Joseph A. Amico

BY

Frank Keiper
att'y

UNITED STATES PATENT OFFICE

2,680,902

WELT SUPPORT

Joseph A. Amico, Rochester, N. Y.

Application February 6, 1948, Serial No. 6,597

1 Claim. (Cl. 29—193.5)

1

Millions of shoes are made with a so-called Goodyear welt in which the so-called welt is stitched to the inturned margin of the upper of the shoe. The sole of the shoe is then stitched to the welt. That is, the stitches that hold the sole on do not go through the upper or any part of it, but only go through the welt and the sole.

More recently millions of shoes are made in which the sole is not stitched to the welt, but is cemented to the welt and to the bottom of the shoe. In order to make a perfect job of cementing the sole to the welt, the welt should have some support that will hold it against yielding when the sole is pressed against it in the cementing process.

I have invented a welt support that is placed on top of the welt and between the top of the welt and the upper of the shoe where it joins the welt and while the last is in the shoe, the combination of the last and the welt support holds the welt firmly against yielding when the sole is pressed against the welt.

Another object of the invention is to make this welt support in the form of an angle strip that can be bent to conform to the curve or the shape of the shoe so that it will be nested in the angle between the welt and the upper of the shoe.

Another object of the invention is to make this welt support of an angle strip having a horizontal and an upright member, the horizontal member being cut away at frequent intervals to form separate small plates each attached to the upright member so that the upright member can easily be bent to make it conform to the shape of the shoe as above set forth.

Another object of the invention is to punch each separate plate to form two teeth or tacks in the plate which teeth extend downward from the plate which teeth can be engaged in the welt, which teeth hold the welt support firmly in place on the welt, with the upright member of it firmly in engagement with the upper which in turn is pressed against the last.

These and other objects of the invention will be illustrated in the drawings, described in the specification and pointed out in the claim in the end thereof.

In the drawings:

Figure 1 is a perspective view of a blank piece of sheet metal from which a welt support is formed.

Figure 2 is a perspective view of a piece of finished welt support.

Figure 3 is a sectional view of the shoe and the welt support in place on the shoe.

2

Figure 4 is a perspective view of the toe of the shoe with the welt support in place thereon.

Figure 5 is a cross section of the shoe and welt showing the same welt support of Figure 2 bent in a different way.

Figure 6 is a perspective view of the welt support as shown in Figure 5.

Figure 7 shows an improvement on the preferred form shown in Figure 6 in which an inclined brace is formed between the two sides of the angle, in each section of the support.

Figure 8 shows a modification of the welt support shown in Figure 2, in which one tooth is formed in each section instead of two.

In the drawings, like reference numerals indicate like parts.

The welt support is formed from a strip of thin sheet steel having parallel edges as is shown in Figure 1. This strip is first bent on a line that is parallel to the edges of the strip to form an angle, having an upright member 1 and a horizontal member 2. The upright member is bent over to the extent of about 105° so that it makes an angle of about 75° with the horizontal member 2. The horizontal member is cut to form recesses 3, 3 as indicated in Figure 2. Between the recesses are left the plates 4, 4. The recesses 3, 3 makes it possible to bend the upright member 1 of the angle so that it can conform to the outline of the shoe as shown in Figure 4.

Thereafter the teeth or tacks 5 and 6 are formed in each of the plates 4, 4.

After the welt support has been formed in this way one end of it is placed on the welt and the upright member 1 is pressed against the upper of the shoe which upper is supported by the last inside of the shoe. The teeth 5 and 6 are pressed down into the welt by grasping the plate 2 and the welt between the jaws of a pair of pliers.

After one end of the welt support is fastened in place on the welt in this way, the support is laid around on the welt close against the upper and each consecutive plate is fastened to the welt by pressing the plate and the welt together with the jaws of a pair of pliers. This presses the teeth of the welt support into the welt. This is preferably done after the last has been put in place.

While the welt support is being put in place on the shoe the shoe can be held in one hand and the welt support can be placed with the other hand. As soon as the welt support is fastened at one end, it can be pressed into place on the welt by the thumb of the hand that holds the shoe and the pliers can be manipulated by the other hand.

3 The operator presses each plate separately against the welt support with the pliers so that in a short time the welt support is applied to the welt for the purpose of cementing a half sole to the shoe or will be applied in a longer time if a full sole is to be cemented to the shoe.

After the welt support is in place, then the shoe is placed in the press and the cement is applied to the bottom of the shoe, and cement is also applied to the sole and the sole is then laid on the shoe, the shoe being preferably in an inverted position. Pressure is then applied to the sole by a press such as is shown in Amico's Patent No. 2,385,398 of June 9, 1942, pressing it firmly on the bottom of the shoe and on the welt, so that the sole firmly adheres to the shoe and the welt, a total pressure of about 700 lbs. is used on the sole and the welt is held against some of this pressure by this welt support. The sole and welt are then trimmed. Because of the welt support, the welt makes a smooth close joint with the sole all the way around after the sole and welt are trimmed.

As shown in Figure 6, I have shown the welt support with the plates and teeth, formed in the same way as is shown in Figure 2, but the strip is bent to conform to the shape that is shown in Figure 5, in which 7 indicates the margin of the welt support that is inserted between the upper and the welt and 8 indicates the margin of the welt support that is placed on top of the outside of the welt, with the teeth 9 engaged in the welt.

In either case, the welt support is removed from the shoe by inserting an awl under the end of the welt support so that it is lifted away from the welt and then it can be easily ripped off the welt.

The preferred form of this invention is shown in Figure 2. The upright member 1 is somewhat narrower than the width of the plates 2. These welt supports are made in separate strips of from nine inch to fifteen inch lengths, according to the size of the shoe that they are to be used on and the width of the upright and horizontal members varies according to the dimensions or width of the welt on lady's and men's shoes.

These welt supports can be made so cheaply that each support is used on one shoe and can then be thrown away.

An improvement on the preferred form is shown in Figure 7. In this form the teeth or tacks 5 and 6 are formed as above described in connection with Figure 2 and are placed possibly a little further apart than is shown in Figure 2. Between the teeth in each section a brace is formed between the horizontal member 2 and the upright

member 1. This is done by pressing the metal at the angle from the back transversely to the angle. The metal is stretched in so doing without necessarily breaking or cutting the metal, and the brace so formed gives a rigid set to the upright and horizontal members of the angles with reference to each other. When this form of self support is in place on the shoe as shown in Figure 4, the welt is all the more firmly held in place to resist pressure when the sole is pressed on the welt.

It will also be understood that these supports are preferably formed from sheet steel of about .021" in thickness, more or less. It will also be understood that this welt support can be put in place on any type of shoe regardless of the curves that are given to the sole when it conforms to the last contained in the shoe, which curve is already in the welt.

I claim:

20 An angle iron stock for a welt support comprising an integral angle iron having two sides disposed at an angle of 90° to one another, one side of which is of continuous and of uniform width, the other side being divided into sections, 25 a brace between the middle of each section and the opposite side and across the 90° angle of the angle iron, said brace being formed by deforming the metal transversely of the bend and into the angle, two teeth formed in each section and struck from the metal thereof, said teeth extending away from the aforesaid continuous side.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
Re. 16,115	Schafley	July 14, 1925
453,985	Seaver	June 9, 1891
504,520	Davis	Sept. 5, 1893
646,777	Wilson	Apr. 3, 1900
1,060,452	Harrington et al.	Apr. 29, 1913
1,073,570	Keighley	Sept. 16, 1913
1,536,575	Emery	May 5, 1925
1,925,363	Apple	Sept. 5, 1933
1,937,997	Townsend	Dec. 5, 1933
2,003,448	Kruse	June 4, 1935
2,429,255	Ashley	Oct. 21, 1947
2,440,412	Melchionna	Apr. 27, 1948
2,448,165	Wright	Aug. 31, 1948
2,567,790	Schaffan	Sept. 11, 1951

FOREIGN PATENTS

Number	Country	Date
242,765	Great Britain	Nov. 19, 1925
602,013	Great Britain	May 18, 1948