(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 628 262 A2**

(12) EUROPEAN PATENT APPLICATION

(21) Application number: **94302902.5**

(51) Int. Cl.[5]: **A43B 9/02**, A43B 10/00

(22) Date of filing: **22.04.94**

(30) Priority: **14.06.93 JP 168491/93**

(43) Date of publication of application:
14.12.94 Bulletin 94/50

(84) Designated Contracting States:
DE ES FR GB IT

(71) Applicant: **Motoki, Tomiharu**
3-2-15-207, Chitose-cho,
Suma-ku
Kobe (JP)

(72) Inventor: **Motoki, Tomiharu**
3-2-15-207, Chitose-cho,
Suma-ku
Kobe (JP)

(74) Representative: **Allden, Thomas Stanley et al**
A.A. THORNTON & CO.
Northumberland House
303-306 High Holborn
London WC1V 7LE (GB)

(54) Shoes and method of making same.

(57) A shoe comprising preformed upper and sole members joined by stitching and a method of making the same, in which a narrow periphery member is disposed between the upper and sole members and along the outer periphery of the sole member, and the periphery member is adhered to the sole member with adhesive agent after the upper member is first stitched to the periphery member. The periphery member has an L-shaped cross-section and includes a flat and narrow horizontal adhesive margin portion conforming to the periphery of the sole member and a side wall portion extending vertically therefrom, and it is stitched to the upper member in the side wall portion and adhered to the sole member in the adhesive margin portion. It is very easy to use a sewing machine for stitching the periphery member to the upper member since the periphery member surrounds a large opening therein.

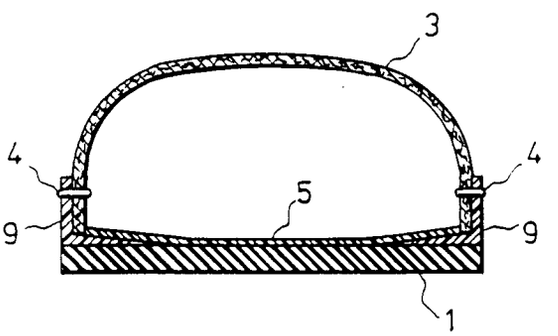

FIG. 6

EP 0 628 262 A2

This invention relates to a shoe, especially, of such a kind as to be made by joining preformed upper and sole members and a method of making the same.

Such a shoe is generally made by bending the lower edge of an upper member, made of natural or artificial leather or synthetic resin and formed through such steps as sewing, adhering and heat-pressing, and joining it to a preformed sole member, made of natural or artificial leather or synthetic resin or rubber, by stitching or adhering, or by stitching a similar upper member to a separately prepared insole member and, thereafter, adhering the insole member to the sole member. In a simplified method as disclosed in U.S. patent No. 4,505,055 as shown in Figure 1, a sole member 1 is provided with a peripheral wall 2 and the lower edge of an upper member 3 is stitched thereto with a thread 4. Thereafter, an insole 5 is laid therein to complete a shoe.

In order to stitch the upper member in a shoe according to the prior art mentioned above, it is necessary to insert the upper or lower jaw of a sewing machine into the shoe through an opening 6 formed in its upper member 3. However, it is difficult for a usual shoe sewing machine to gain access to every working position, so that the stitching work may be disabled or the working efficiency may be remarkably reduced, unless the opening 6 extends to the vicinity of the toe as in the case of basket ball shoes. In the prior art shoes, therefore, their design is restricted by the sewing machine to be used and, for free design, it is necessary to use a sewing machine designed especially and exclusively for each design. This has been a bar to cost reduction of shoes.

Accordingly, an object of this invention is to provide an improved structure of shoes and a method of realizing it, which enables stitching work of the upper member to be effected more easily and efficiently with a usual shoe sewing machine regardless of the design of shoes, especially, of their upper members.

The shoe according to this invention, which can achieve the above-mentioned objective, comprises preformed upper and sole members and a periphery member disposed between the upper and sole members. The periphery member has an L-shaped cross-section composed of a flat and narrow horizontal adhesive margin portion conforming to the periphery of the sole member and a side wall portion standing erect therefrom and is stitched to the upper member with a thread in the side wall portion and adhered to the sole member with adhesive agent in the adhesive margin portion.

In order that the invention may be well understood, there will now be described a preferred embodiment thereof, given by way of example, reference being made to the accompanying drawings in which:

Figure 1 is a sectional view showing an example of the prior art shoes;

Figure 2 is a plan view showing an example of the periphery member used in a shoe according to this invention;

Figure 3 is a side view showing the periphery member as shown in Figure 2; and

Figures 4, 5 and 6 are sectional views showing a method of making a shoe in accordance with this invention.

Throughout the drawings, the same reference numerals are given to corresponding structural components.

The shoe according to this invention comprises an upper member made of such an arbitrary material as cloth, natural or artificial leather or synthetic resin and formed by sewing, adhering, heat-pressing or the like, and a sole member formed from such an arbitrary material as natural or artificial leather or synthetic resin or rubber. The upper and sole members are substantially similar to those of the prior art shoes, while the upper member has no bent portion to be secured to the sole member along the lower edge thereof. This shoe has a periphery member 7 as shown in Figures 2 and 3 as a feature of this invention.

As shown, the periphery member 7 is a complete annulus which is formed of synthetic resin so as to conform to the outer periphery of the sole member of the shoe, and it surrounds a large opening or window 8 therein. As shown better in Figure 5, this member 7 has an L-shaped cross-section composed of a flat and narrow horizontal adhesive margin portion 9 and a side wall portion 10 standing erect from the periphery thereof. The adhesive margin portion 9 includes a plurality of cuts 11 in its toe and heel areas and the side wall portion 10 includes a stitching groove 12 along its upper edge. The height of the side wall portion 10 varies with its position and depends upon use and design of the shoe.

In order to make the shoe, an upper member 3 having its toe and heel portions joined together is first put in a rubber female die 13 and press-formed by a metallic male die 14, as shown in Figure 4, which is heated up to a suitable temperature by suitable heating means (not shown). This initial step is substantially the same as that of the prior art. In the next step, as shown in Figure 5, the side wall portion 10 of the periphery member 7 according to this invention is stitched with a thread 4 to the lower edge of the formed upper member 3. At this stage, the thread 4 is laid down in the groove 12. During this stitching work, the upper or lower jaw of a sewing machine can be inserted through the large opening or window 8 surrounded

by the periphery member 7 and, therefore, it is possible to have easy access to any working position even with a usual shoe sewing machine and to effect working efficiently.

The periphery member 7 is adhered to the sole member 1 with adhesive agent as shown in Figure 6, after it is stitched to the upper member 3. The adhering work is effected very easily since the periphery member 7 is made so as to conform to the outer periphery of the sole member 1. Finally, a suitable insole member 5 is secured to the inner face of the sole member 1 to complete the shoe.

As described above, the subject of this invention is directed to the periphery member which is adhered to the sole member after being stitched to the upper member and has no direct connection to the use and design of the shoe. Accordingly, this invention can be applied to any kind of shoe or boot to enjoy its advantages.

It should be understood that the above description of the embodiment is given for illustrative purpose only and is not meant to limit the invention, or any modifications or changes which can be made thereon without leaving the spirit and scope of the invention as defined in the appended claims.

Claims

1. A shoe comprising an upper member and a sole member, characterised in that a periphery member is disposed between said upper and sole members and has a horizontal adhesive margin portion conforming to the outer periphery of said sole member, and a side wall portion extending upwardly from said adhesive margin portion, said side wall portion of said periphery member being stitched to the lower edge of said upper member and said adhesive margin portion of said periphery member being adhered to said sole member.

2. A shoe as claimed in claim 1, characterised in that said periphery member is made of synthetic resin.

3. A shoe as claimed in claim 1 or claim 2, characterised in that said periphery member has an L-shaped cross-section.

4. A method making a shoe by joining preformed upper and sole members, characterised by the steps of preparing a periphery member having a horizontal adhesive margin portion and a side wall portion extending upwardly from said adhesive margin portion, stitching said side wall portion of said periphery member to the lower edge of said upper member, and adhering said adhesive margin portion of said periphery member to said sole member.

5. A method as claimed in claim 4, characterised in that said periphery member is made of synthetic resin.

6. A method as claimed in claim 4 or claim 5, characterised in that said periphery member has an L-shaped cross-section.

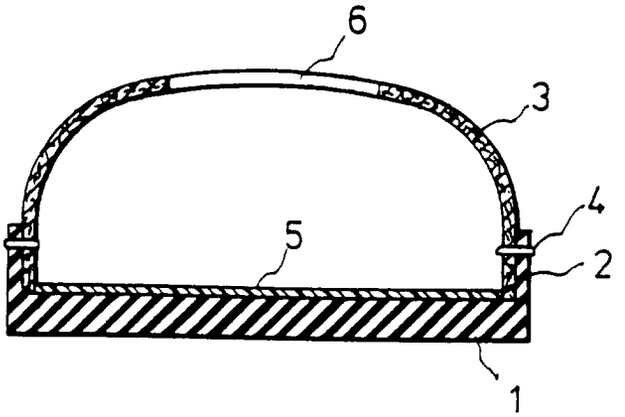

FIG. 1 (PRIOR ART)

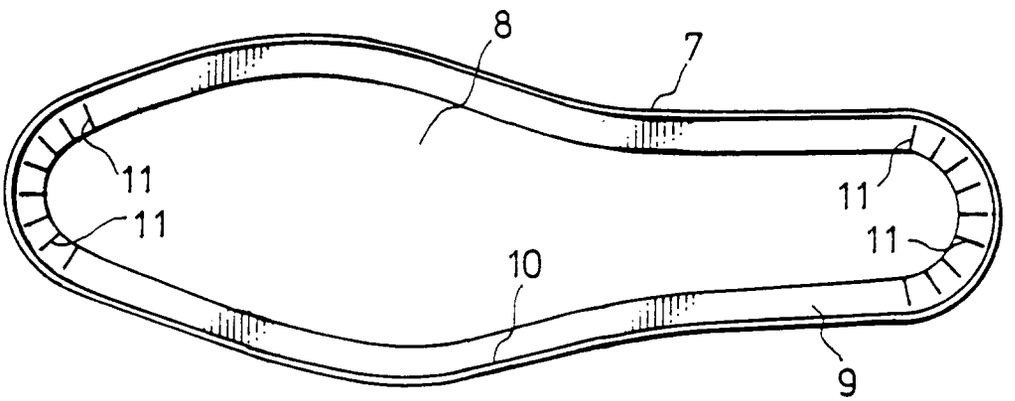

FIG. 2

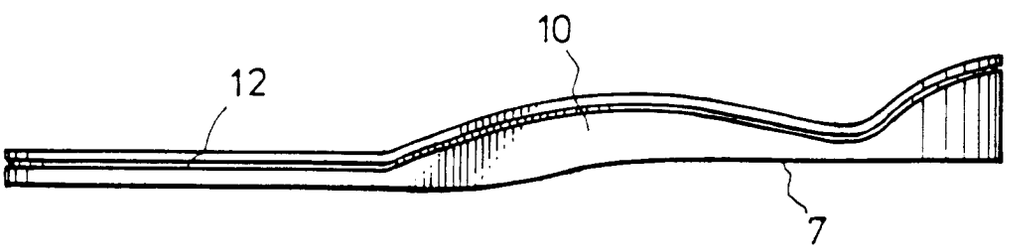

FIG. 3

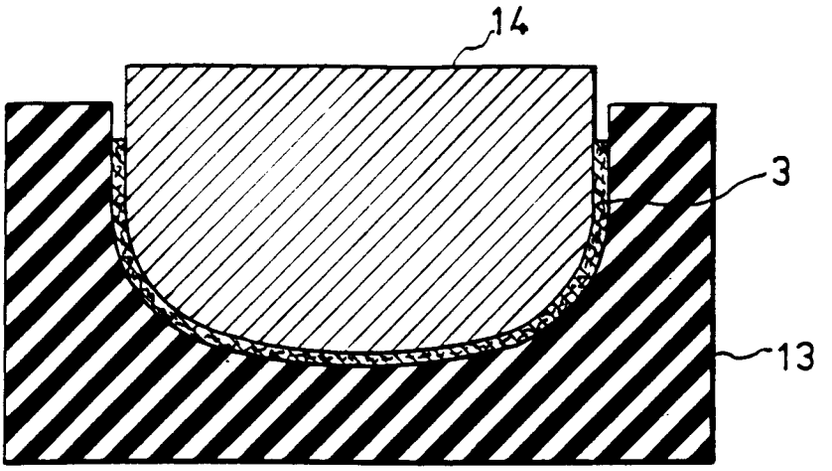

FIG. 4

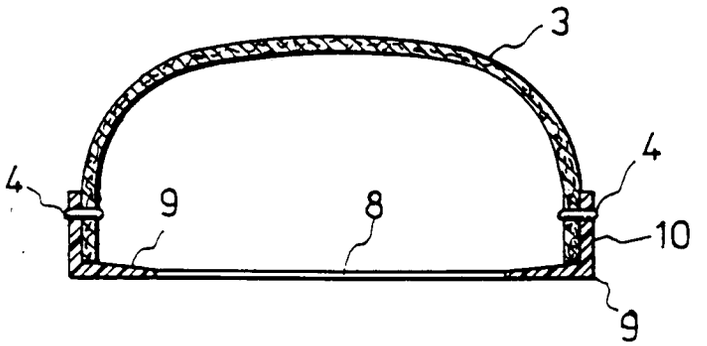

FIG. 5

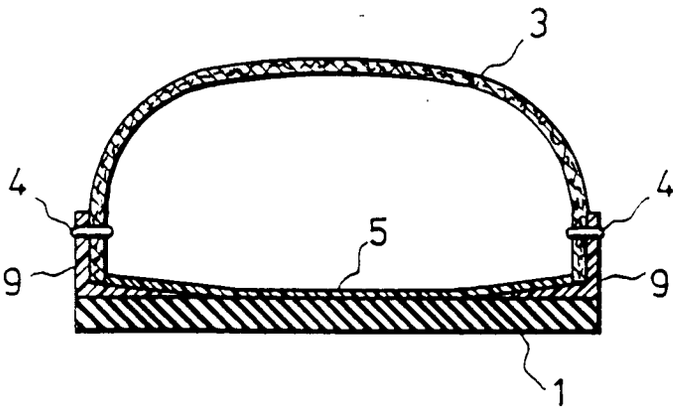

FIG. 6