



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
03.11.2010 Bulletin 2010/44

(51) Int Cl.:
A43B 3/12 (2006.01)

(21) Application number: **09158802.0**

(22) Date of filing: **27.04.2009**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK TR
Designated Extension States:
AL BA RS

(72) Inventor: **Bergmans, Charles**
5161 ZB Sprang-Capelle (NL)

(74) Representative: **Marles, Alan David**
Stevens Hewlett & Perkins
1 St Augustine's Place
Bristol BS1 4UD (GB)

(71) Applicant: **C & J CLARK INTERNATIONAL LIMITED**
40 High Street
Street Somerset, BA 16 0EQ (GB)

(54) **Article of Footwear**

(57) There is provided an article of footwear (10), such as a sandal, having an upper midsole (11) and a lower wear portion (12). The article of footwear (10) has a midfoot strap (13) which is an elongate extension of an insock layer (20) which is secured to the midsole (11).

The part (23) of the insock layer adjacent to the midfoot strap (13) is not, however, secured to the midsole and can lift to support the arch of the wearer's foot when the midfoot strap is tightened around the foot. The midfoot strap (13) passes around the foot and beneath the foot in a lateral channel and is secured back on itself.

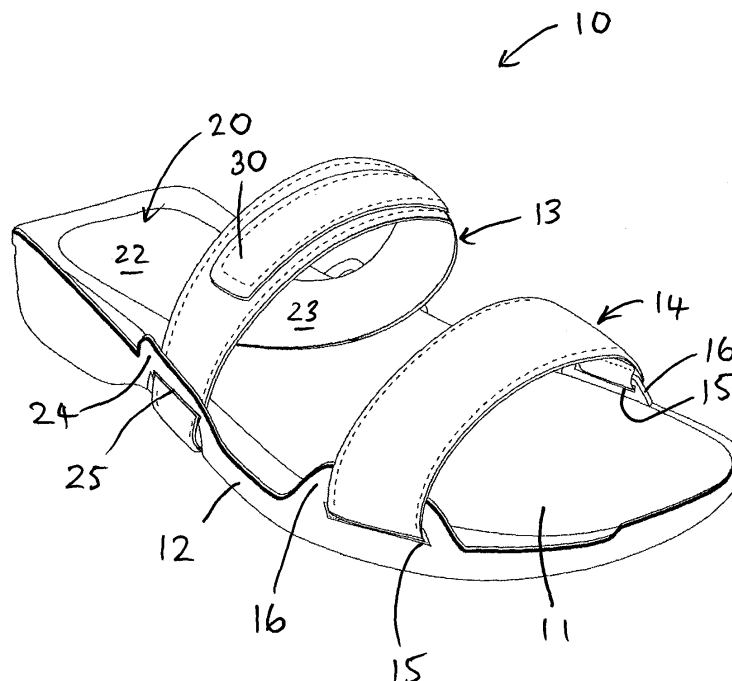


FIGURE 1

Description

[0001] The present invention relates to articles of footwear and in particular to articles of footwear having a securing strap.

[0002] According to the present invention there is provided an article of footwear comprising: a sole arrangement having an upper midsole and a lower wear portion in which there is provided a laterally extending channel in the midfoot region; and a securing strap which extends from and is connected to the medial side of an insock layer which has a part that is fixed with respect to the sole arrangement and an unfixed part in the medial midfoot region adjacent to the securing strap, the strap being adapted to pass from the medial side, over the instep of a wearer's foot to the lateral side of the sole arrangement, and through the channel, the free end of the securing strap being adapted to be secured relative to the article of footwear.

[0003] Preferably the free end of the securing strap is adapted to be secured relative to the part of the securing strap extending from the medial side to the lateral side of the sole arrangement and ideally the securing of the strap is effected by one or more of the following: hook/loop fastener, buckle, snap-fastener, laces.

[0004] In preferred arrangements the channel has a downwardly facing opening which opening is narrower than the width of the securing strap. In addition the medial side of the sole arrangement is provided with a slot through which the securing strap passes after passing through the channel in the sole arrangement and/or the lateral side of the sole arrangement is provided with a slot through which the securing strap passes before passing through the channel in the sole arrangement. Conveniently the or each slot is provided in an upward projection extending from the lower wear portion. In an alternative the channel is an enclosed laterally extending slot through the lower wear portion, which slot opens at the medial and lateral sides.

[0005] It is a preferred feature that the fixed part of the insock layer is adhered to the insole in the heel region and in the lateral side of the midfoot region. Often, the securing strap comprises a continuation of the insock layer and also the securing strap has one or more additional layers attached to the continuation of the insock layer at selected locations. Sometimes said one or more additional layers extend the full length of the strap.

[0006] With some embodiments the article of footwear is a sandal and one or more other securing straps are provided. In other embodiments the article of footwear comprises an upper secured to the sole arrangement, the securing strap passing around the exterior of the upper.

[0007] Normally the strap, in use, forms a generally closed loop around an instep region of the wearer's foot.

[0008] Embodiments of the present invention will now be described in more detail. The description makes reference to the accompanying drawings in which:

Figure 1 is a perspective view from a lateral side of an article of footwear according to the present invention,

Figure 2 is a perspective view from a medial side of the article of footwear of figure 1,

Figure 3a is an underplan view,

Figure 3b is a plan view,

Figures 4a to 4d are perspective views showing the securing of the article of footwear shown in figure 1, Figure 5 is a lateral section through the figure 1 article of footwear at a midfoot location, and

Figure 6 is another lateral section through the figure 1 article of footwear at a midfoot location with a different shaped foot therein.

[0009] In the figures there is shown an article of footwear 10 in the form of a sandal. The sandal 10 has an upper midsole 11 secured to a lower wear portion 12 which in this case has a tread pattern formed in its lowermost surface. (In more basic arrangements the midsole and the wear portion could be formed as a single unitary construction without detracting from the invention). The sandal 10 has a midfoot strap 13 in a midfoot region and a toe strap 14 in a toe region, the straps being made from leather or fabric or plastic or some other suitable flexible material or a combination thereof. The strap material may also have a degree of elasticity to improve comfort. The toe strap 14 extends between slots 15 provided in oppositely disposed formations 16 which are upstanding from the edges of the wear portion 12. The toe strap 14 is ideally, but not necessarily, adjustable such that it can be lengthened or shortened depending on the size of the wearer's foot and depending on the closeness of fit required. For example, a tighter fit may be required for active hiking whilst a more relaxed fit may be desired for less rigorous activities.

[0010] The midfoot strap 13 is in the form of an elongate extension of an insock layer 20 which is secured to the upper surface of the midsole 11, by adhesive, stitching or other means. The insock layer 20 is however not secured to the upper surface of the midsole 11 adjacent the inner, medial side of the article of footwear in the midfoot area and this is indicated by the broken line 21 in figure 3. In other words, part 22 of the insock layer 20 in the heel region and to some extent in the outer, lateral side of the midfoot region is secured to the upper surface of the midsole 11 whereas part 23 of the insock layer at the medial side of the midfoot region is not secured to the midsole. The part 23 has an elongate extension which constitutes the midfoot strap 13 although it is possible that the midfoot strap 13 could be a separate strap which is secured to the insock layer at its medial edge. Whilst the midfoot strap 13 is shown as a single thickness extension of the insock layer, it could be provided with other layers for cushioning or decoration at one or more locations along its length or indeed all along its length.

[0011] At opposite sides of the article of footwear, there are formations 24 which project upwardly from the lower

wear portion 12 and which each provide a strap receiving slot 25. The slots 25 extend generally in a direction lengthwise of the article of footwear.

[0012] In the underside of the lower wear portion 12 there is a lateral channel 26 situated between the two formations 24. The channel 26 in this embodiment is constituted between two mouldings 27 which provide a space through which the midfoot strap 13 can pass in the lateral direction. The midfoot strap 13 can be threaded through from one side to the other or it can be manipulated into the channel through the optional narrow gap 28 between the two mouldings 27. Once the strap 13 is in the channel it can be moved in the lateral direction but is held captive in other directions relative to the lower wear portion 12.

[0013] The securing process for the sandal is shown in figures 4a to 4d although the foot of the wearer has not been shown in order to aid clarity. Starting at figure 4a, the midfoot strap 13 is shown in a completely free state. The strap 13 is extended over the instep of the wearer's foot and the free end 30 of the strap remote from the insock layer 20 is passed downwardly through the slot 25 of the formation 24 on the lateral side of the lower wear portion 12, as is shown in figure 4b. The strap 13 is then passed under the lower wear portion 12 and is manipulated into the channel 26 through the gap 28 between the mouldings 27 in the underside of the lower wear portion 12 or is threaded through the channel. Figure 4c shows the free end 30 of the strap emerging at the medial side of the sole. The free end 30 is then threaded upwardly through the slot 25 of the formation 24 on the medial side of the lower wear portion 12 and this is shown in figure 4d.

[0014] In practise the securing process up to figure 4d would probably be conducted prior to the wearer's foot being present but this is a matter of choice. From the figure 4d position with the wearer's foot in place the midfoot strap 13 can be pulled and tightened around the wearer's foot. The strap 13 is then folded on to itself such that the free end 30 overlies and is secured to a part of the midfoot strap 13 which extends over the instep from the insock layer 20 to the lateral slot 25. The method of securing the parts of the strap 13 could be by any known means such as strips of hook/loop fastener, a series of snap fasteners, buckles, laces. Hook/loop fastener is probably the simplest and most convenient method of securing and is of course well known in the industry.

[0015] The midfoot strap 13 can be pulled as tightly as desired prior to securing and it will be appreciated that this tightening action can be effected because the strap 13 is free to move laterally through the channel 26 and through the slots 25. Pulling on the midfoot strap 13 means that the part of the strap where it extends from the insock layer 20 and the unsecured part 23 of the insock layer 20 are able to lift relative to the general upper surface of the midsole and towards the arch of the foot of the wearer.

[0016] This feature is shown more clearly with respect to figures 5 and 6. It is well known that feet vary in size

and in cross-sectional shape, with some feet having a higher arch than other feet. The present construction provides a variable arch support by virtue of the unsecured part 23 of the insock layer 20 adjacent the strap 13 being able to lift into contact with the arch of the foot. Figure 5 shows a foot 30 having a low arch 31 and it can be seen that the unsecured part 23 has not really lifted from the general surface of the midsole. In figure 6, there is shown a foot 32 having a higher arch 33 and it can be seen that the unsecured part 23 of the insock layer has been lifted into contact with the arch. This is effected simply by tightening the midfoot strap 13.

[0017] It will be readily appreciated that modifications can be made to the construction without departing from the scope of the attached claims. For example the form of the channel 26 in the underside could be modified in a number of ways as long as the strap remains held in a position which allows lateral movement of the strap. For example, instead of the mouldings 27 the channel could have the form of an enclosed slot through the thickness of the lower wear portion and this is already illustrated in figures 5 and 6. Such a construction could avoid the use of the slot formations 24 but this is really a matter of design choice.

[0018] Further straps, such as a heel strap arrangement, could also be provided. In addition, the midfoot strap system could be adapted for use in a shoe/boot with the midfoot strap 13 passing externally around an upper.

Claims

1. An article of footwear comprising: a sole arrangement having an upper midsole and a lower wear portion in which there is provided a laterally extending channel in the midfoot region; and a securing strap which extends from and is connected to the medial side of an insock layer which has a part that is fixed with respect to the sole arrangement and an unfixed part in the medial midfoot region adjacent to the securing strap, the strap being adapted to pass from the medial side, over the instep of a wearer's foot to the lateral side of the sole arrangement, and through the channel, the free end of the securing strap being adapted to be secured relative to the article of footwear.
2. An article of footwear as claimed in claim 1 wherein the free end of the securing strap is adapted to be secured relative to the part of the securing strap extending from the medial side to the lateral side of the sole arrangement.
3. An article of footwear as claimed in claim 2 wherein the securing of the strap is effected by one or more of the following: hook/loop fastener, buckle, snap-fastener, laces.

4. An article of footwear as claimed in any one of claims 1 to 3 wherein the channel has a downwardly facing opening which opening is narrower than the width of the securing strap. 5
5. An article of footwear as claimed in any one of claims 1 to 4 wherein the medial side of the sole arrangement is provided with a slot through which the securing strap passes after passing through the channel in the sole arrangement. 10
6. An article of footwear as claimed in any one of claims 1 to 5 wherein the lateral side of the sole arrangement is provided with a slot through which the securing strap passes before passing through the channel in the sole arrangement. 15
7. An article of footwear as claimed in claim 5 or claim 6 wherein the or each slot is provided in an upward projection extending from the lower wear portion. 20
8. An article of footwear as claimed in any one of claims 1 to 3 wherein the channel is an enclosed laterally extending slot through the lower wear portion, which slot opens at the medial and lateral sides. 25
9. An article of footwear as claimed in any one of claims 1 to 8 wherein the fixed part of the insock layer is adhered to the midsole in the heel region and in the lateral side of the midfoot region. 30
10. An article of footwear as claimed in any one of claims 1 to 9 wherein the securing strap comprises a continuation of the insock layer. 35
11. An article of footwear as claimed in claim 10 wherein the securing strap has one or more additional layers attached to the continuation of the insock layer at selected locations. 40
12. An article of footwear as claimed in claim 11 wherein said one or more additional layers extend the full length of the strap.
13. An article of footwear as claimed in any one of claims 1 to 12 wherein the article of footwear is a sandal and one or more other securing straps are provided. 45
14. An article of footwear as claimed in any one of claims 1 to 12 wherein the article of footwear comprises an upper secured to the sole arrangement, the securing strap passing around the exterior of the upper. 50
15. An article of footwear as claimed in any one of claims 1 to 14 wherein the strap, in use, forms a generally closed loop around an instep region of the wearer's foot. 55

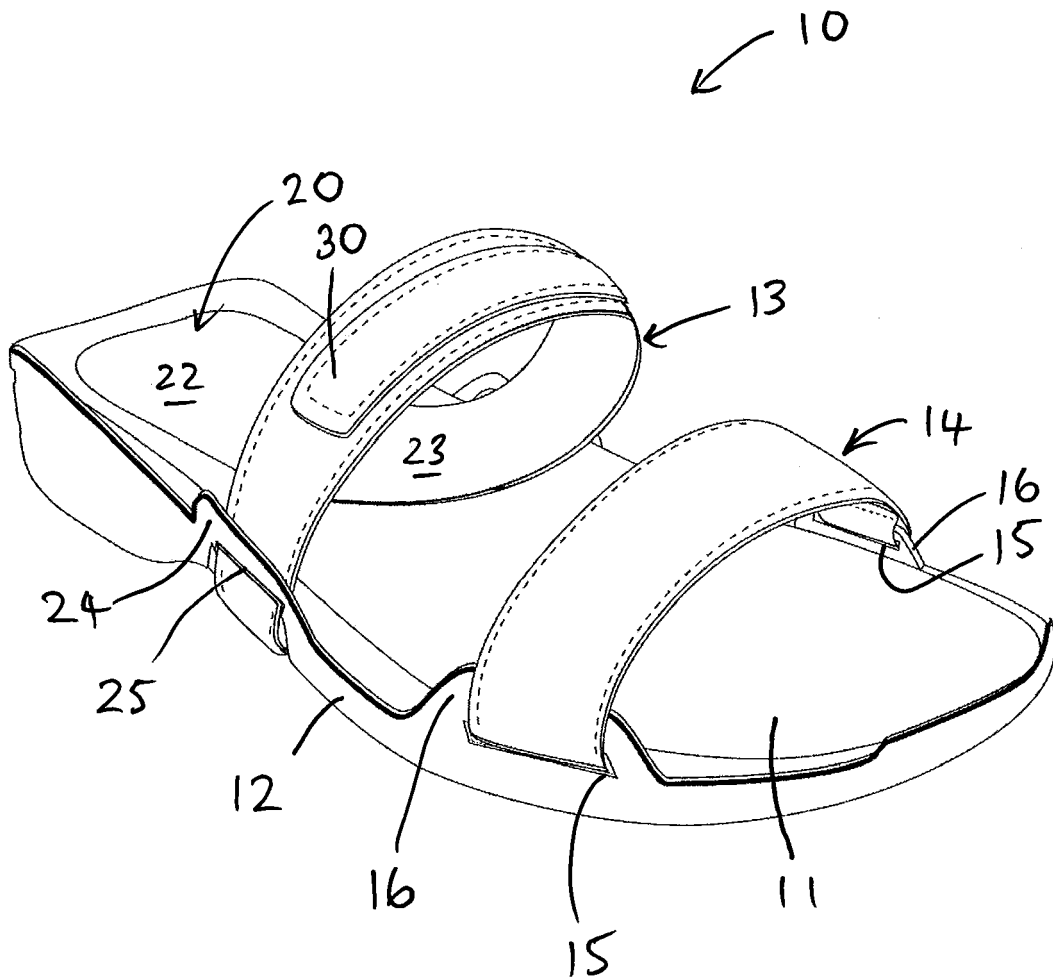


FIGURE 1

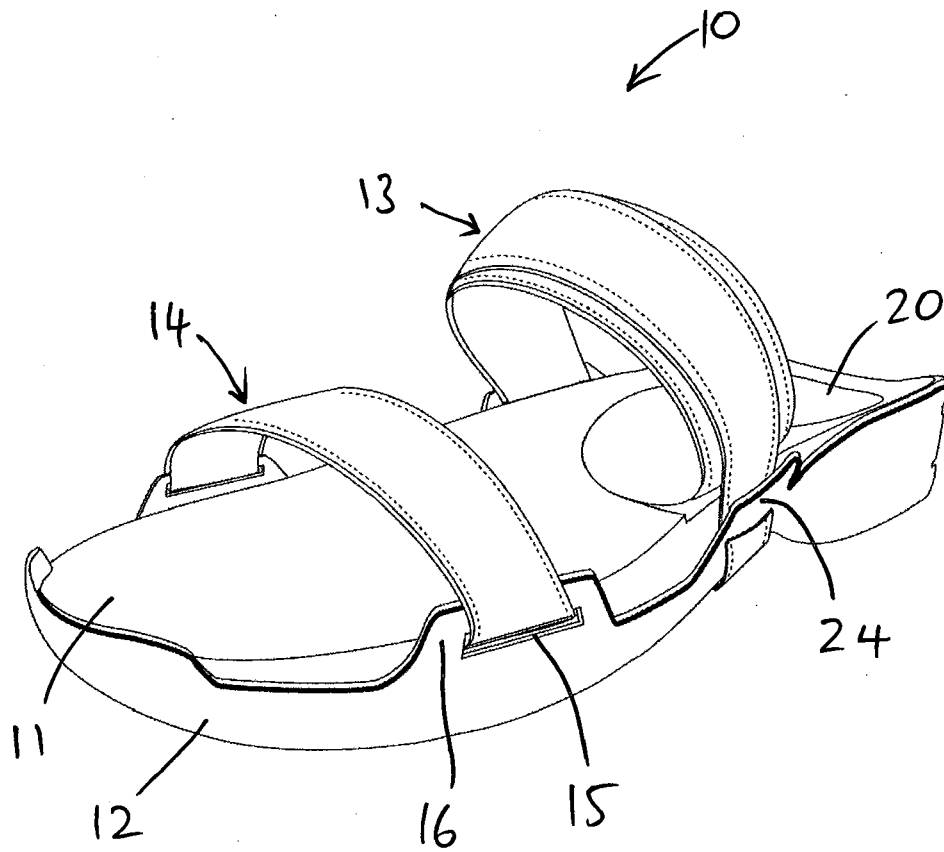


FIGURE 2

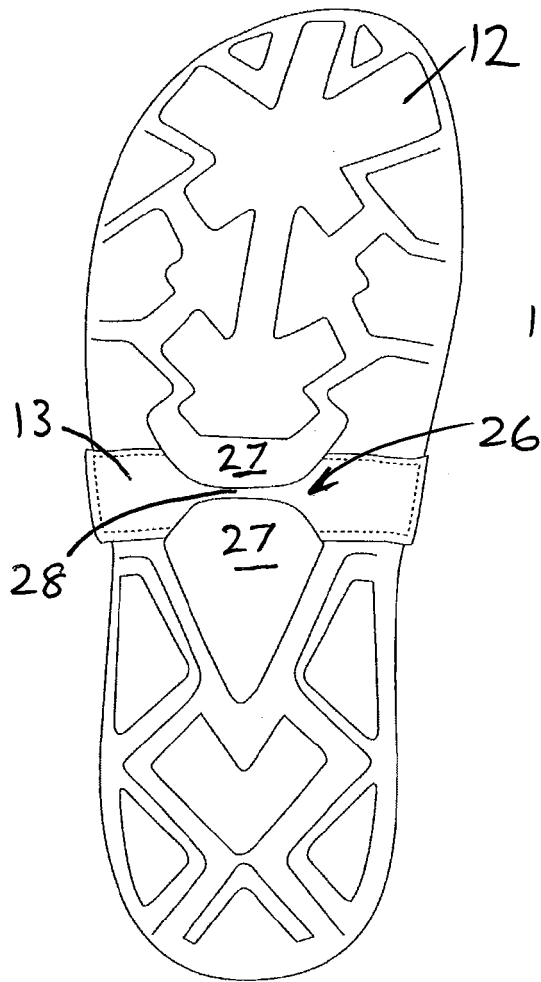


FIGURE 3a

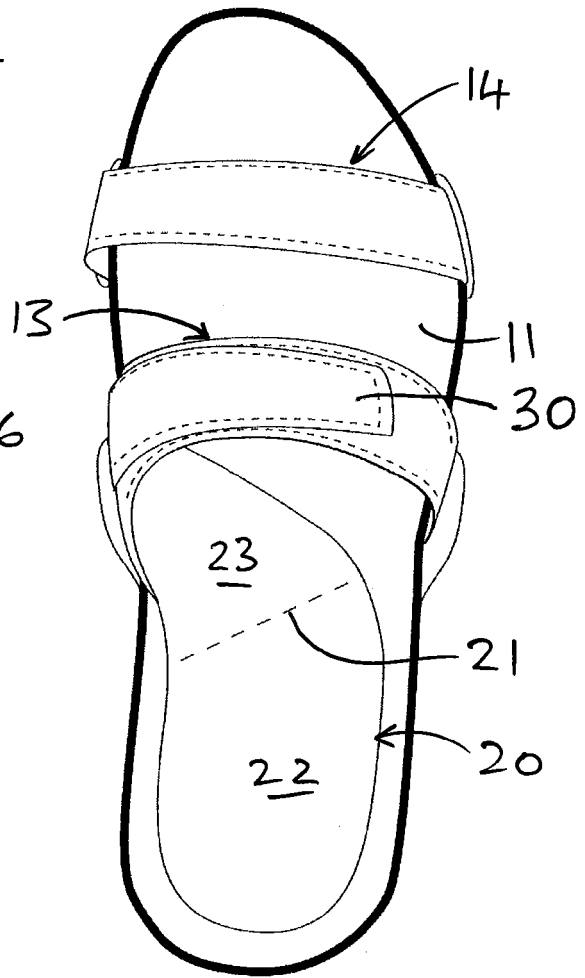


FIGURE 3b

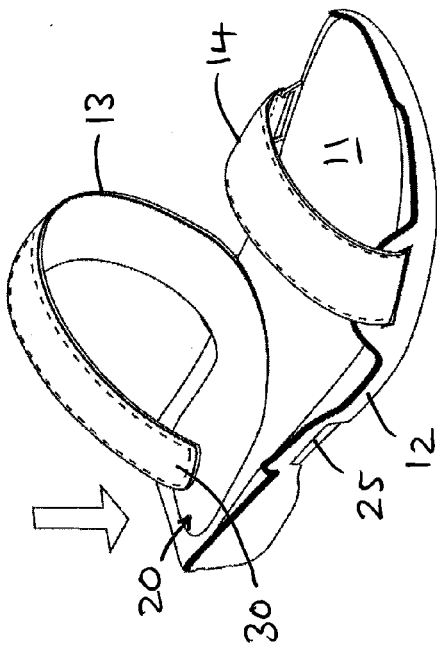


FIGURE 4a

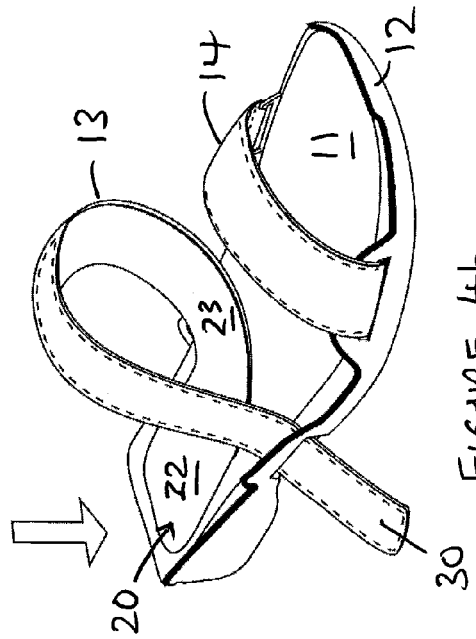


FIGURE 4b

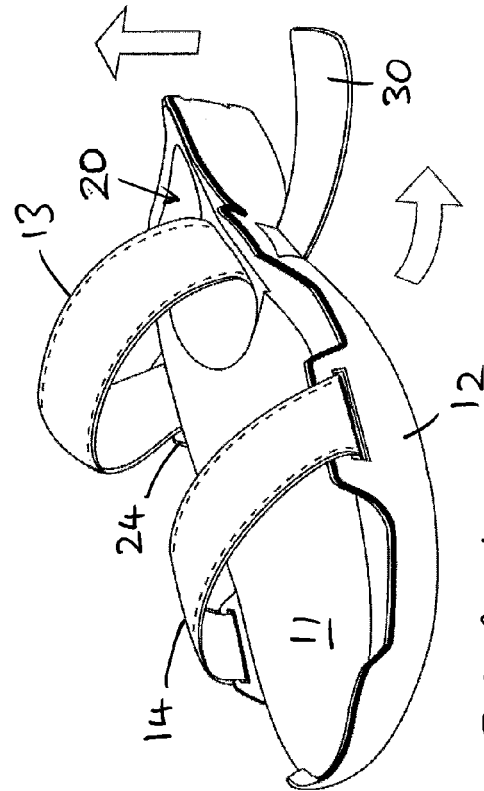


FIGURE 4c

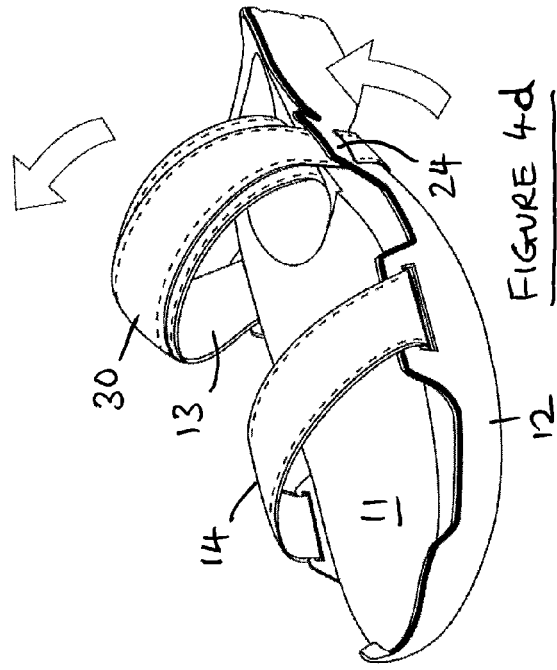


FIGURE 4d

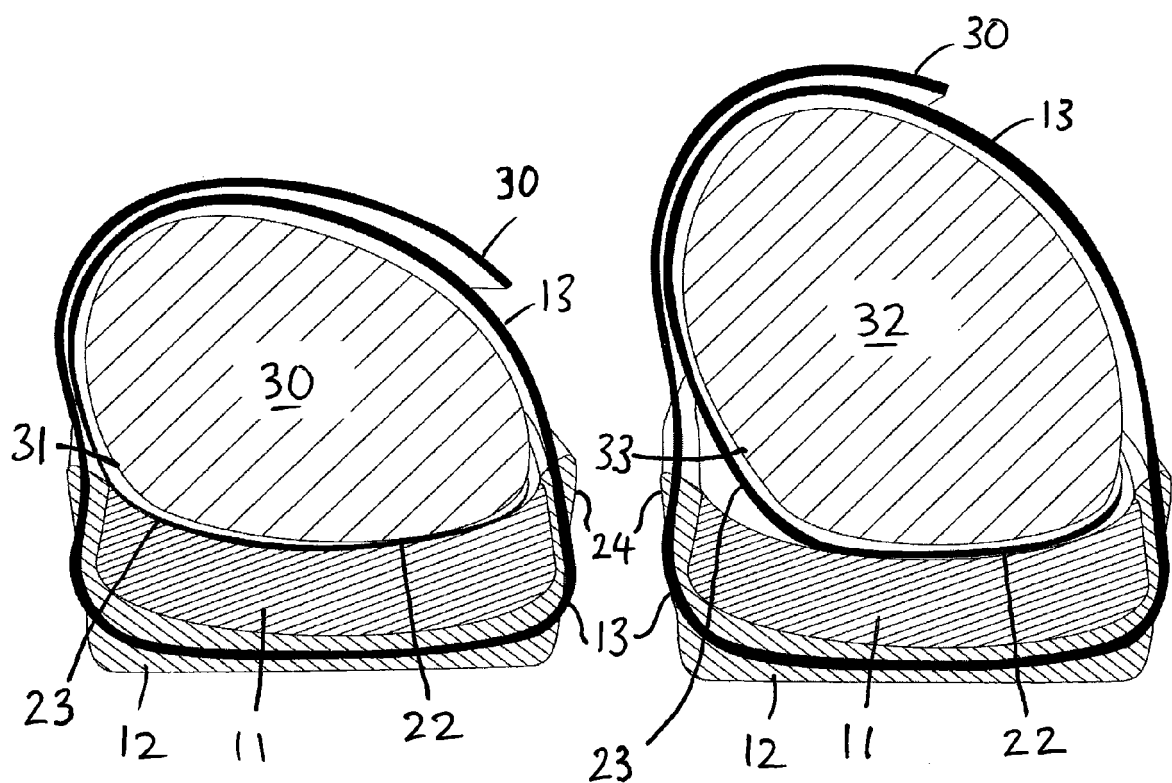


FIGURE 5

FIGURE 6



EUROPEAN SEARCH REPORT

Application Number
EP 09 15 8802

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	DE 19 47 245 A1 (CORSER SCOTT) 25 March 1971 (1971-03-25) * figures 2-4, 5f * * page 2, lines 9-13 * * page 3, paragraph 2 * -----	1-15	INV. A43B3/12
A	DE 203 10 805 U1 (VOLKENRATH NADINE [DE]) 20 November 2003 (2003-11-20) * page 1; figure 1 * -----	1	
A	US 2 126 094 A (DANIELS CLAUDE H) 9 August 1938 (1938-08-09) * page 1, column 2, lines 52-55; figure 3 * -----	1	
			TECHNICAL FIELDS SEARCHED (IPC)
			A43B
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 7 September 2009	Examiner Herry, Manuel
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

 2
EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 09 15 8802

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

07-09-2009

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 1947245	A1	25-03-1971	NONE
DE 20310805	U1	20-11-2003	NONE
US 2126094	A	09-08-1938	NONE