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(54) **ARTICLES OF FOOTWEAR**

SCHUHWERKARTIKEL

ARTICLES DE CHAUSSURE

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Description

[0001] The present invention relates to articles of footwear and more particularly to a pair of articles of footwear in combination.

[0002] US 2008/072452 discloses a pair of articles of footwear, each article of footwear having a sole and an upper associated with the sole, the soles being resilient and flexible and being shaped such that they can join together to form a ball with the two uppers disposed on the inside of the ball.

[0003] According to the present invention each sole has a central lengthways extending spine portion with tongue-like tab portions extending laterally from both sides of the spine.

[0004] Preferably each tab portion on one side of the spine has a corresponding tab portion of the same size on the other side of the spine and web portions extend between at least some adjacent tab portions. Ideally the web portions extend between all adjacent tab portions and are spaced from the spine on both sides of the spine.

[0005] Conveniently the junction between each tab portion and the spine has a reduced section. In one embodiment the spine is continuous along the length of the sole and has a reduced section between each pair of oppositely disposed tab portions. In preferred embodiments the wear surface of each sole, when not subject to any forces, curves in lengthwise and lateral directions.

[0006] In some arrangements each sole has a heel region and in the heel region the tab portions and the spine have an upper facing internal section cut away.

[0007] Normally, there is provided connection means for retaining the two articles of footwear in the ball configuration. With one form of construction said connection means comprises a hook formed at the toe and at the heel of each sole and an elastic loop provided midway along each lateral side of the sole, the loops of one sole being selectively connected to hooks of the other sole. Usually, the elastic loops are formed integrally with the sole and sometimes additional hooks are provided on the upper to retain the loops when the shoes are being worn. In other arrangements the loops constitute eyelets in a lacing arrangement when the shoe is being worn.

[0008] Preferably the ball is substantially spherical. Ideally the footprint of each sole is generally a figure of eight with a widened waist and the soles are formed from a natural or synthetic rubber.

[0009] Embodiments of the invention will now be described in more detail, the description making reference to the attached drawings in which:

Figure 1 shows a ball constituted by a pair of articles of footwear according to the present invention,
Figure 2 shows the ball of figure 1 just prior to completion of assembly (or just at an early stage of disassembly),
Figure 3 shows the two articles of footwear separated,

Figure 4 is an underneath view of the pair of articles of footwear side by side,

Figure 5 is an underneath view of an alternative article of footwear according to the present invention,
Figure 6 is a vertical, lateral cross section on line A-A of figure 5 in an unloaded state,

Figure 7 is a cross section similar to figure 6 but in a loaded state, but not showing the upper,

Figure 8 is a cross section through a pair of articles of figure 5 assembled as a ball, the cross section being central and lengthwise through one article of footwear,

Figure 9 is a cross section through a pair of articles of figure 5 assembled as a ball, the cross section being through the heel and toe regions,

Figure 10 shows a pair of articles of figure 5 assembled as a ball,

Figure 11 shows the ball of figure 10 being assembled,

Figure 12 shows a pair of shoes according to the present invention, and

Figure 13 shows a different pair of shoes according to the present invention.

[0010] In figures 1 to 4 there is shown a pair of articles of footwear 10 which in this embodiment are in the form of a pair of simple shoes. Each shoe 10 has a sole 11 and an upper 12. The upper is made from a flexible material as is common in the footwear industry, such as canvas, leather, plastic, natural or synthetic rubber or combination of these materials. In this embodiment the upper 12 incorporates an elastic strap 13 in the midfoot region and a somewhat reinforced heel counter 14 to provide greater stability when the shoe 10 is being worn. It will be appreciated that the uppers 12 could vary greatly whilst not affecting the inventive concept.

[0011] The sole 11 of each shoe 10 has a flattened footprint shaped something like a figure of 8 but with a widened waist portion which in use is located in the mid-foot region. In the illustrated embodiment each sole 11 has a generally central, lengthwise extending spine 15 which has a number of laterally extending tread pads in the form of tongue-like portions 16 on each side to make up the figure of 8 footprint shape. These tongue-like portions 16 have optional tread patterns 17 formed on the lowermost side, opposite the upper 12. Ideally, adjacent tongue-like portions are interlinked by web portions 18 such that a continuous foot support is provided by the upward facing surface of the sole 11.

[0012] The spine 15 of each sole 11 also has on its treadside a lengthwise extending groove 19 which will be described in due course. The soles 11 are made from a flexible, resilient material such as natural or synthetic rubber and have a somewhat curled up form when unstressed, as can be seen from figures 3 and 4.

[0013] The shapes of the two soles 11 are such that they mate together when manipulated, rather like the two sections of a tennis ball. When the two soles are manip-

ulated into a ball shape with the uppers disposed inside the ball, the two shoes 10 can be secured together so as to remain as a ball which can be played with in a number of conventional ways. For example, the ball can be thrown, caught, kicked, rolled etc.

[0014] To secure the two shoes 10 as a ball there is preferably some form of connection means. The connection means shown in the drawings is by means of a pair of straps 20, each of which can be received in the groove 19 in one of the soles 11, extending around the perimeter of the ball to be secured back on itself using a hook and loop fastening 21 or some other attachment means.

[0015] Other ways of securing the two shoes would be possible. For example, interengaging projections could be provided on the two soles so that the two soles lock together in a releasable manner.

[0016] When the shoes 10 are being worn the weight of the wearer tends to flatten the sole 12 so as to render the shoe more comfortable. The resilience of the material of the sole 12 and the spacing of the tongue-like portions/web thicknesses can of course be varied in order to optimise comfort and ball formation.

[0017] Figures 5 to 11 show an alternative pair of articles of footwear 110 which are similar in many respects to the pair of articles shown in figures 1 to 4. In particular, both soles 111 have a flattened footprint shaped like a figure of 8 but with a widened waist portion such that the two articles of footwear can be formed into a ball. Each sole 111 is formed from a flexible resilient material such as natural or synthetic rubber, preferably as a single, unitary component. When unloaded or unstressed, the soles have a somewhat curled up form both in lengthwise and lateral directions so as to form a ball when connected together, with the weight of the wearer flattening the soles 111 when being worn.

[0018] Each sole 111 has a generally central, lengthwise extending spine 115 which preferably comprises of a number of spine elements 115a connected together by reduced section, laterally extending joints 130 which assist flexibility and comfort of the sole 111. Extending laterally from each side of each spine element 115a is a tongue-like tab portion 116, the lateral edges of which define the general footprint of the sole 111. The junction 131 between each tab portion 116 and the spine 115 extends generally lengthwise and is also of reduced section to assist flexibility and comfort of the sole.

[0019] The tab portions 116 at each side of the spine 115 are interlinked by a series of web portions 118 which are spaced from the central spine 115. The web portions 118 can provide additional support for a footbed 132 provided above the sole 111 and contract to assist the curling up of the sole 111 when unstressed so as to improve the ball formation qualities of a pair of articles 110.

[0020] It will be appreciated that most of the figures do not show the upper 112 for the sake of simplicity and because the uppers could vary greatly whilst not affecting the inventive concept.

[0021] Figure 6 shows a cross section through a pair

of tab portions 116 and spine element Use from the heel area of a sole 111. The sole 111 is shown with the footbed 132 in place and with a basic upper. In figure 6 the upper central area of the sole 111 is shown with a rectangular portion 133 cutaway. This cutaway portion 133 improves the ability of the sole 111 to flatten when in a state of load caused by the weight of a wearer. This is in addition to the reduced section joints 130, 131 between the sole elements. The loaded state is shown in figure 7 and it will be seen that the lateral curve of the sole 111 has been flattened out by the weight of wearer with the web portions 118 stretching to enable the tab portions 116 to spread apart somewhat. The rectangular cutaway portion 133 has been found to be particularly useful in the heel region of the sole but could also be utilised to a greater or lesser extent in the mid- and fore-foot regions of the sole.

[0022] In figure 5, the sole 111 is formed with central, laterally projecting elastic loops 140 and hooks 141 at the toe and at the heel. When two such articles of footwear are assembled together to form a ball, the loops 140 on one sole are stretched over the toe and heel hooks 141 of the other sole and the loops 140 on said other sole are stretched over the toe and heel hooks 141 of the first sole. This maintains the two articles together as a ball which can be thrown, kicked etc. The elastic loops 140 could, however, be provided at the toe and heel and the hooks 141 at the sides or even a combination of both. The loops 140 could even be provided on a separate element which is removable from the sole when the shoe is being worn. Additional hooks/loops could be provided at other locations if desired.

[0023] Figures 6 and 8 in particular show that the upward facing lateral edges 145 of the sole are bevelled inwardly so as to be directed generally towards the central region of the ball when assembled. This results in the adjacent lateral edges of two articles 110 assembled as a ball being able to nest closer together thereby reducing gaps between the soles in the assembled ball.

[0024] An example of a pair of shoes 200 is shown in figure 12. The upper 112 incorporates an elasticated strap 150 to assist retention of the shoe on the foot and the upper 112 also incorporates additional hooks 151 to retain the elastic loops 140 when the shoe is being worn. In an alternative, the additional hooks 151 could face the other way to retain a removable separate element (not shown) which incorporates the elastic loops. The removable separate element would extend under the sole for retaining the shoes in the ball shape and would extend over the wearer's instep to retain the shoe when it is being worn.

[0025] Another example of a pair of shoes 201 is shown in figure 13. In this case the upper has a lace-up arrangement and the elastic loops 140 are incorporated in the design as a pair of eyelets for the lace.

[0026] It will be appreciated that other variations will be possible without straying from the scope of the attached claims.

Claims

1. A pair of articles of footwear (10; 110), each article of footwear having a sole (11; 111) and an upper (12; 112) associated with the sole, the soles (11; 111) being resilient and flexible and being shaped in a somewhat curved up form when unstressed such that they can join together to form a ball with the two uppers (12; 112) disposed on the inside of the ball **characterised in that** each sole (11; 111) has a central lengthways extending spine portion (19; 115) with tongue-like tab portions (16; 116) extending laterally from both sides of the spine.
2. A pair of articles of footwear as claimed in claim 1 wherein each tab portion (16; 116) on one side of the spine (19; 115) has a corresponding tab portion (16; 116) of the same size on the other side of the spine.
3. A pair of articles of footwear as claimed in claim 1 or claim 2 wherein web portions (18; 118) extend between at least some adjacent tab portions (16; 116).
4. A pair of articles of footwear as claimed in claim 3 wherein the web portions (118) extend between all adjacent tab portions (116) and are spaced from the spine on both sides of the spine.
5. A pair of articles of footwear as claimed in any one of claims 1 to 4 wherein the junction between each tab portion (116) and the spine (119) has a reduced section (131).
6. A pair of articles of footwear as claimed in any one of claims 1 to 5 wherein the spine (119) is continuous along the length of the sole (111) and has a reduced section (130) between each pair of oppositely disposed tab portions.
7. A pair of articles of footwear as claimed in any one of claims 1 to 6 wherein the wear surface of each sole (11; 111), when not subject to any forces, curves in lengthwise and lateral directions.
8. A pair of articles of footwear as claimed in any one of claims 1 to 7 wherein each sole (111) has a heel region and in the heel region the tab portions and the spine have an upper, internal section cut away (133).
9. A pair of articles of footwear as claimed in any one of claims 1 to 8 wherein there is provided connection means (20, 21; 140, 141) for retaining the two articles of footwear (10; 110) in the ball configuration.
10. A pair of articles of footwear as claimed in claim 9 wherein said connection means comprises a hook

(141) formed at the toe and at the heel of each sole and an elastic loop (140) provided midway along each lateral side of the sole (111), the loops (140) of one sole being selectively connected to hooks (141) of the other sole.

11. A pair of articles of footwear as claimed in claim 10 wherein the elastic loops (140) are formed integrally with the sole (111).
12. A pair of articles of footwear as claimed in claim 11 wherein additional hooks (151) are provided on the upper (112) to retain the loops (140) when the shoes are being worn.
13. A pair of articles of footwear as claimed in claim 11 wherein the loops (140) constitute eyelets in a lacing arrangement when the shoe is being worn.
14. A pair of articles of footwear as claimed in any one of claims 1 to 13 wherein the ball is substantially spherical.
15. A pair of articles of footwear as claimed in claim 2 wherein the footprint of each sole (111) is generally a figure of eight with a widened waist and the soles (111) are formed from a natural or synthetic rubber.

Patentansprüche

1. Fußbekleidungsartikelpaar (10; 110), wobei jeder Fußbekleidungsartikel eine Sohle (11; 111) und ein Oberteil (12; 112) in Verbindung mit der Sohle aufweist, wobei die Sohlen (11; 111) elastisch und flexibel und im unbelasteten Zustand etwas zusammengerollt geformt sind, so dass sie zu einem Ball aneinander gefügt werden können, bei dem zwei Oberteile (12; 112) auf der Ballinnenseite angeordnet sind, **dadurch gekennzeichnet, dass** jede Sohle (11; 111) einen mittleren, in Längsrichtung verlaufenden Rückenabschnitt (19; 115) mit zungenähnlichen Laschenabschnitten (16; 116) hat, die sich lateral von beiden Seiten des Rückens erstrecken.
2. Fußbekleidungsartikelpaar nach Anspruch 1, wobei jeder Laschenabschnitt (16; 116) auf einer Seite des Rückens (19; 115) einen entsprechenden Laschenabschnitt (16; 116) derselben Größe auf der anderen Seite des Rückens hat.
3. Fußbekleidungsartikelpaar nach Anspruch 1 oder Anspruch 2, wobei Stegabschnitte (18; 118) zwischen wenigstens einigen benachbarten Laschenabschnitten (16; 116) verlaufen.
4. Fußbekleidungsartikelpaar nach Anspruch 3, wobei die Stegabschnitte (118) zwischen allen benachbar-

ten Laschenabschnitten (116) verlaufen und auf beiden Seiten des Rückens von diesem beabstandet sind.

5. Fußbekleidungsartikelpaar nach einem der Ansprüche 1 bis 4, wobei der Übergang zwischen jedem Laschenabschnitt (116) und dem Rücken (119) einen reduzierten Querschnitt (131) hat.
6. Fußbekleidungsartikelpaar nach einem der Ansprüche 1 bis 5, wobei der Rücken (119) über die Länge der Sohle (111) fortlaufend ist und zwischen jedem Paar gegenüberliegend angeordneter Laschenabschnitte einen reduzierten Querschnitt (130) hat.
7. Fußbekleidungsartikelpaar nach einem der Ansprüche 1 bis 6, wobei die Verschleißfläche jeder Sohle (11; 111), wenn sie keinen Kräften ausgesetzt ist, längsweise und in lateralen Richtungen gekrümmt ist.
8. Fußbekleidungsartikelpaar nach einem der Ansprüche 1 bis 7, wobei jede Sohle (111) eine Fersenregion hat und die Laschenabschnitte und der Rücken in der Fersenregion eine weggeschnittene obere Innensektion (133) aufweisen.
9. Fußbekleidungsartikelpaar nach einem der Ansprüche 1 bis 8, wobei Verbindungsmittel (20, 21; 140, 141) zum Halten der beiden Fußbekleidungsartikel (10; 110) in der Ballkonfiguration vorgesehen sind.
10. Fußbekleidungsartikelpaar nach Anspruch 9, wobei die genannten Verbindungsmittel einen am Zeh und an der Ferse jeder Sohle ausgebildeten Haken (141) sowie eine in der Mitte entlang jeder lateralen Seite der Sohle (111) vorgesehene elastische Schlaufe (140) umfassen, wobei die Schlaufen (140) von einer Sohle selektiv mit Haken (141) der anderen Sohle verbunden werden.
11. Fußbekleidungsartikelpaar nach Anspruch 10, wobei die elastischen Schlaufen (140) einstückig mit der Sohle (111) ausgebildet sind.
12. Fußbekleidungsartikelpaar nach Anspruch 11, wobei zusätzliche Haken (151) am Oberteil (112) vorgesehen sind, um die Schlaufen (140) beim Tragen der Schuhe festzuhalten.
13. Fußbekleidungsartikelpaar nach Anspruch 11, wobei die Schlaufen (140) Ösen in einer Verschnürrungsanordnung beim Tragen der Schuhe bilden.
14. Fußbekleidungsartikelpaar nach einem der Ansprüche 1 bis 13, wobei der Ball im Wesentlichen sphärisch ist.

15. Fußbekleidungsartikelpaar nach Anspruch 2, wobei der Fußabdruck jeder Sohle (111) allgemein die Form einer Acht bildet, mit einer verbreiteten Taille, und die Sohlen (111) aus einem natürlichen oder synthetischen Kautschuk gebildet sind.

Revendications

1. Paire d'articles de chaussure (10 ; 110), chaque article de chaussure ayant une semelle (11 ; 111) et une tige (12 ; 112) associée avec la semelle, les semelles (11, 111) étant souples et flexibles et ayant une forme quelque peu enroulée lorsqu'elles ne sont soumises à aucune contrainte, de telle sorte qu'elles peuvent être reliées pour former une boule, les deux tiges (12 ; 112) étant disposées à l'intérieur de la boule, **caractérisée en ce que** chaque semelle (11 ; 111) a une partie formant une échine longitudinale centrale (19 ; 115) et des parties en languettes (16 ; 116) s'étendant latéralement des deux côtés de l'échine.
2. Paire d'articles de chaussure selon la revendication 1, dans laquelle chaque partie en languette (16 ; 116) d'un côté de l'échine (19 ; 115) a une partie en languette correspondante (16 ; 116) de la même taille de l'autre côté de l'échine.
3. Paire d'articles de chaussure selon la revendication 1 ou la revendication 2, dans laquelle des parties en sangle (18 ; 118) sont disposées entre au moins certaines parties en languettes adjacentes (16 ; 116).
4. Paire d'articles de chaussure selon la revendication 3, dans laquelle les parties en sangle (118) sont disposées entre toutes les parties en languettes (116) adjacentes et sont espacées de l'échine des deux côtés de l'échine.
5. Paire d'articles de chaussure selon l'une quelconque des revendications 1 à 4, dans laquelle la jonction entre chaque partie en languette (116) et l'échine (119) a une section réduite (131).
6. Paire d'articles de chaussure selon l'une quelconque des revendications 1 à 5, dans laquelle l'échine (119) est continue sur toute la longueur de la semelle (111) et a une section réduite (130) entre chaque paire de parties en languettes opposées l'une à l'autre.
7. Paire d'articles de chaussure selon l'une quelconque des revendications 1 à 6, dans laquelle la surface d'usure de chaque semelle (11 ; 111), lorsqu'elle n'est soumise à aucune force, se recourbe dans les directions longitudinale et latérale.
8. Paire d'articles de chaussure selon l'une quelconque

des revendications 1 à 7, dans laquelle chaque semelle (111) a une zone de talon et, dans la zone de talon, les parties en languettes et l'échine ont une partie supérieure interne découpée (133).

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9. Paire d'articles de chaussure selon l'une quelconque des revendications 1 à 8, dans laquelle est prévu un moyen de raccordement (20, 21 ; 140, 141) pour retenir les deux articles de chaussure (10, 110) dans la configuration en boule.

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10. Paire d'articles de chaussure selon la revendication 9, dans laquelle ledit moyen de raccordement comprend un crochet (141) formé à la pointe et au talon de chaque semelle et une boucle élastique (140) prévue à mi-distance le long de chaque côté latéral de la semelle (111), les boucles (140) d'une semelle étant reliées sélectivement aux crochets (141) de l'autre semelle.

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11. Paire d'articles de chaussure selon la revendication 10, dans laquelle les boucles élastiques (140) font partie intégrante de la semelle (111).

12. Paire d'articles de chaussure selon la revendication 11, dans laquelle des crochets supplémentaires (151) sont prévus sur la tige (112) pour retenir les boucles (140) lorsque les chaussures sont portées.

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13. Paire d'articles de chaussure selon la revendication 11, dans laquelle les boucles (140) constituent des billets dans un agencement de laçage lorsque la chaussure est portée.

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14. Paire d'articles de chaussure selon l'une quelconque des revendications 1 à 13, dans laquelle la boule est essentiellement sphérique.

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15. Paire d'articles de chaussure selon la revendication 2, dans laquelle l'empreinte de chaque semelle (111) a une forme générale de huit avec partie centrale élargie, et les semelles (111) sont constituées d'un caoutchouc naturel ou synthétique.

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FIGURE 1

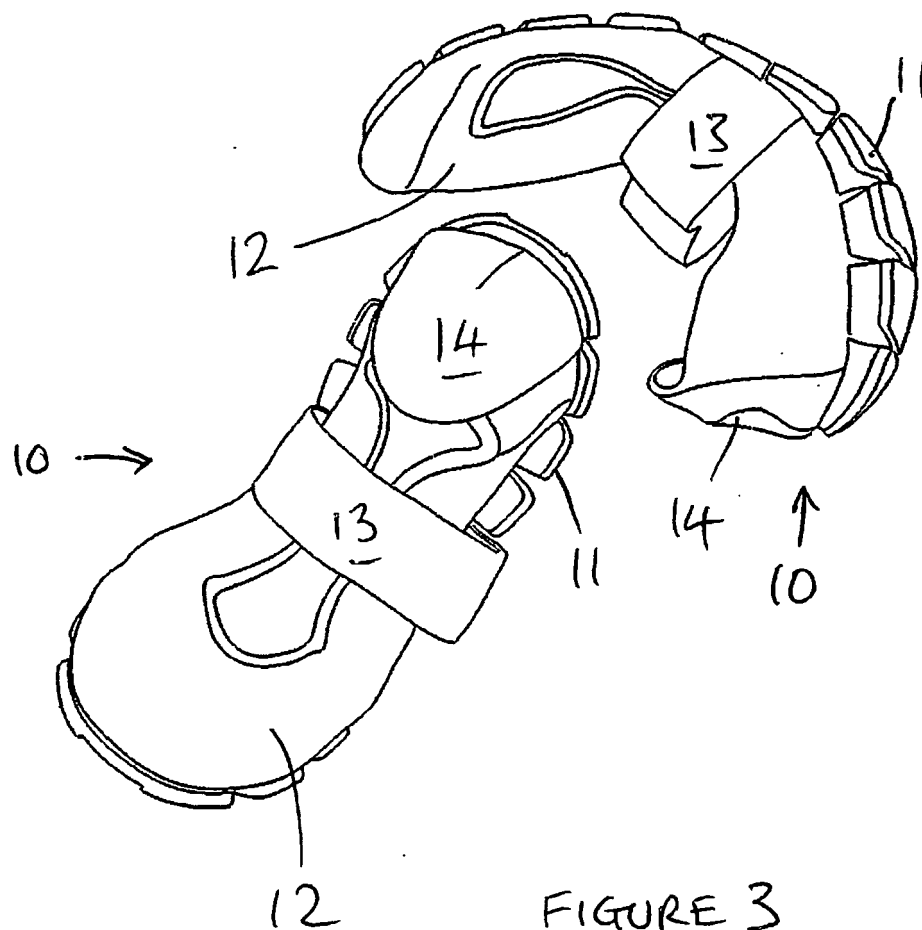
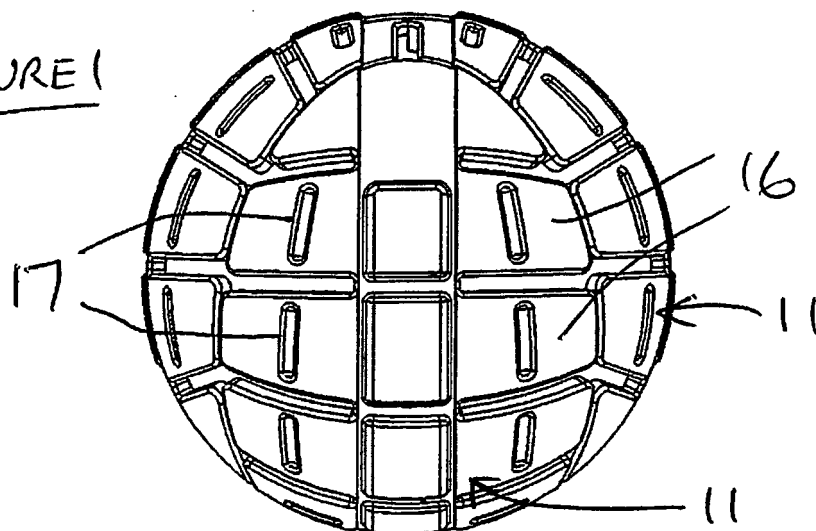


FIGURE 3

FIGURE 2

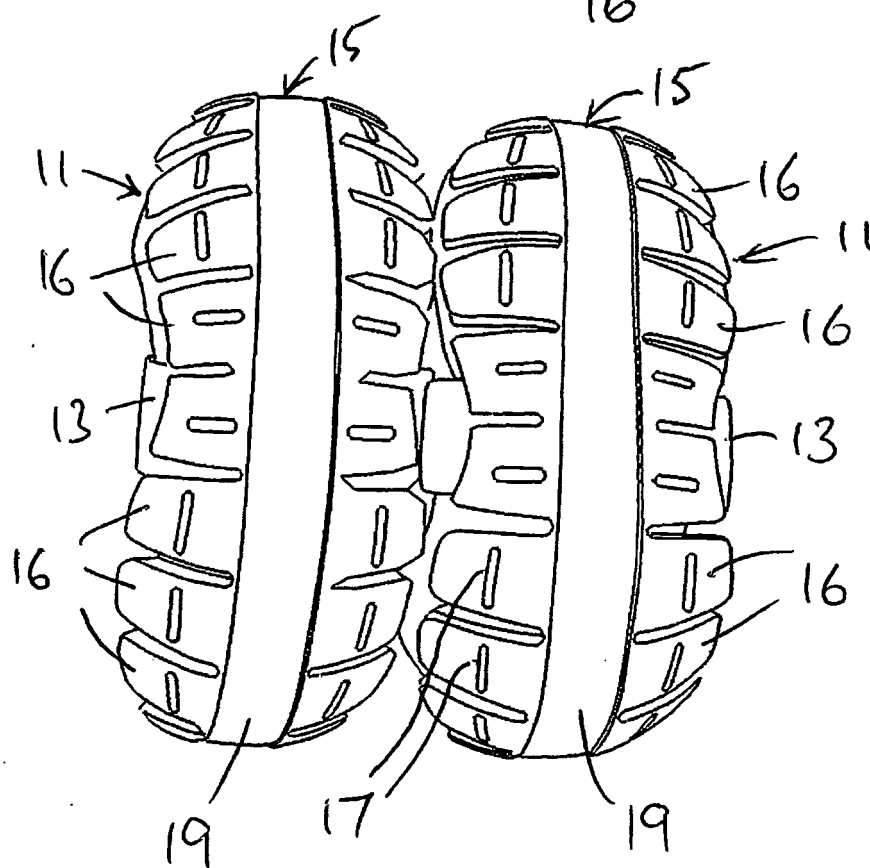
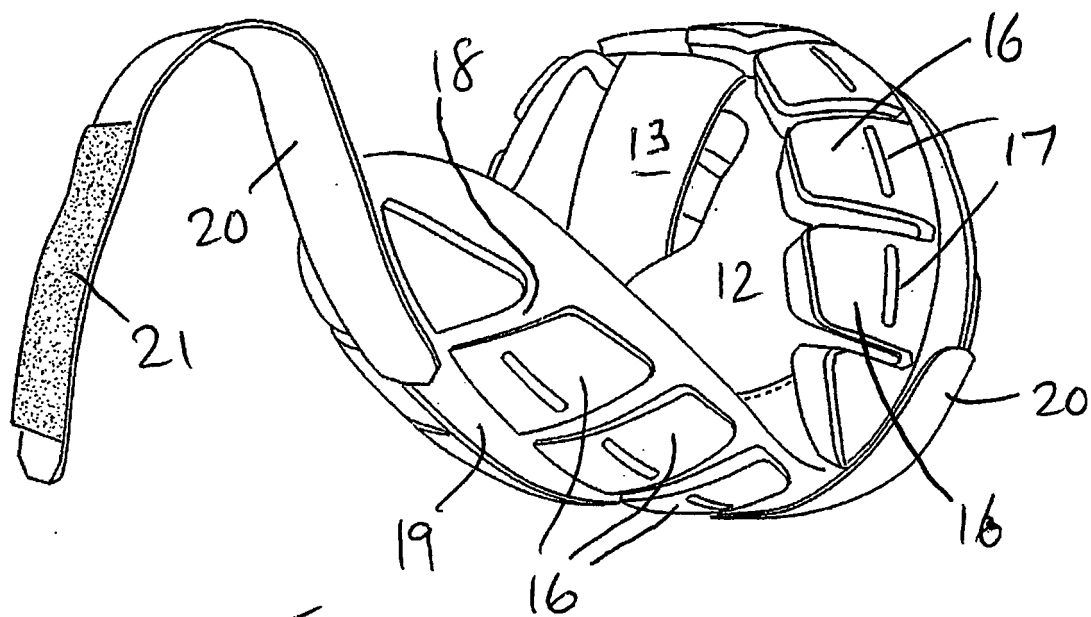


FIGURE 4

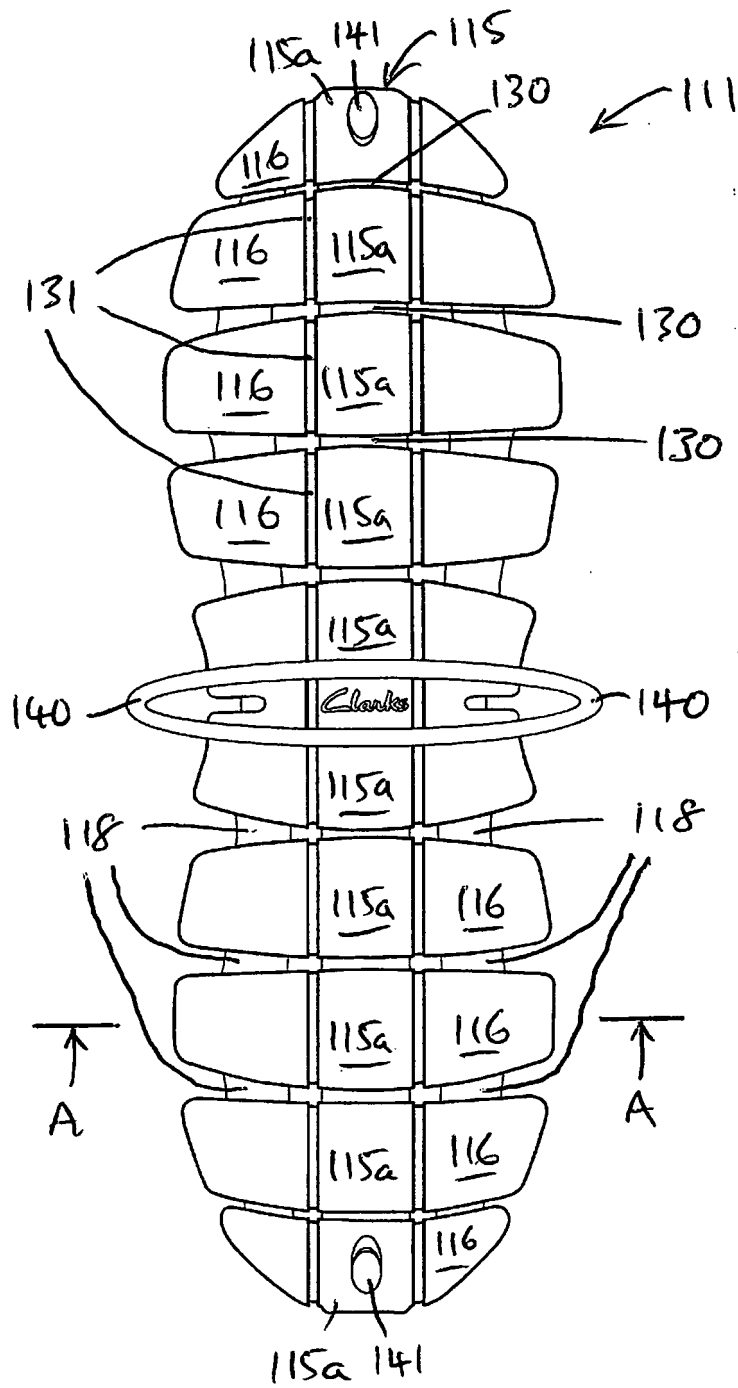
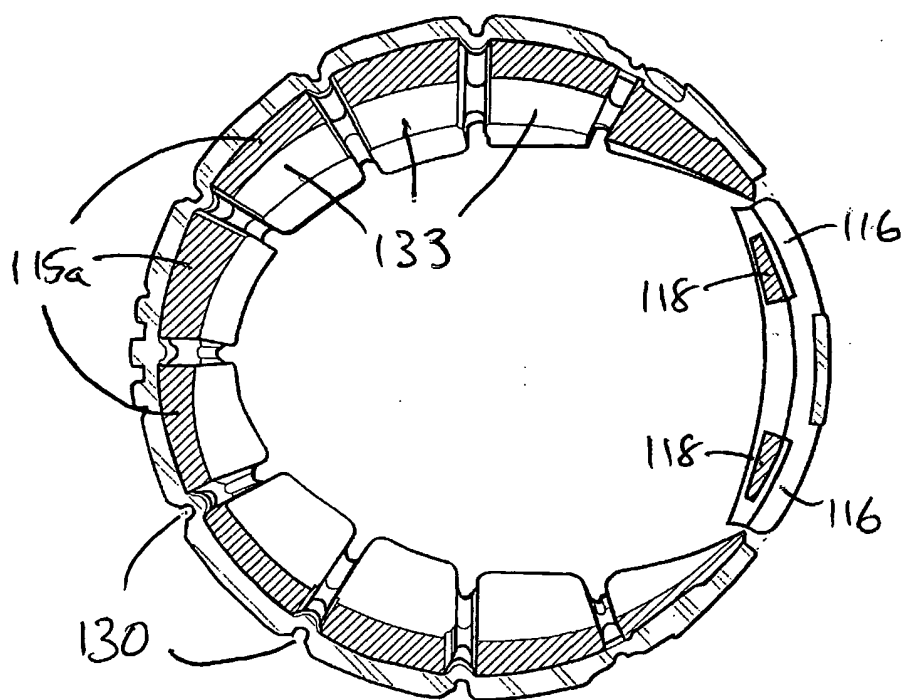
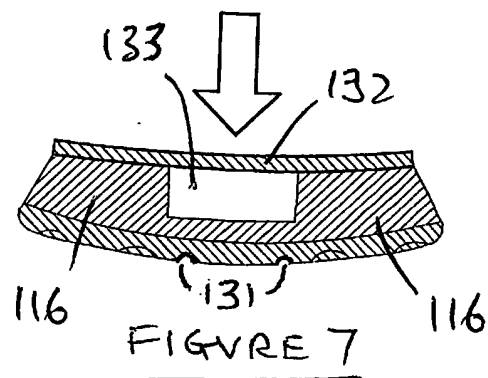
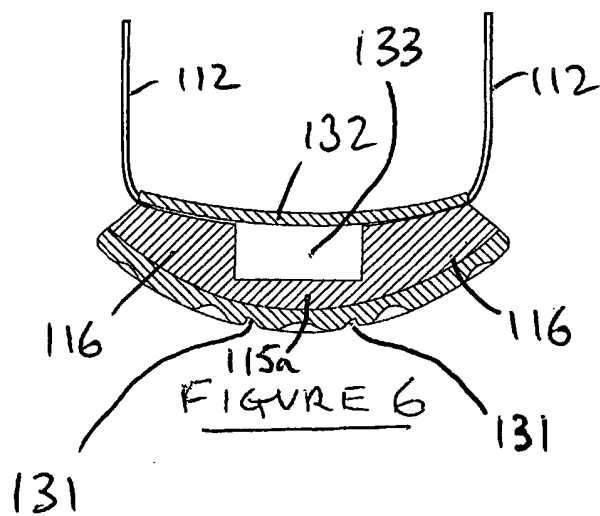


FIGURE 5



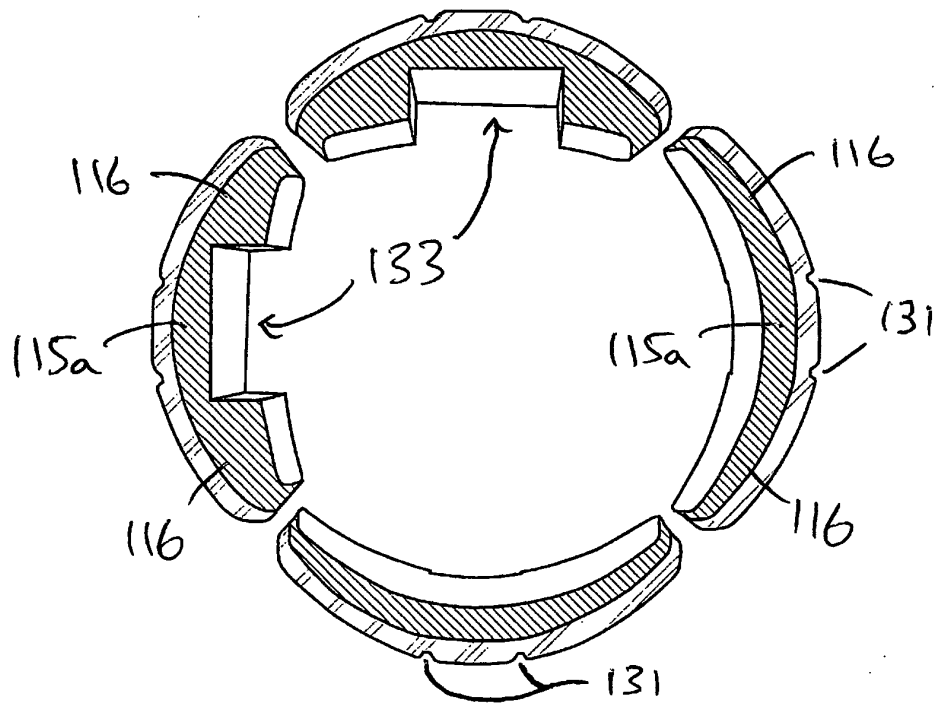


FIGURE 9

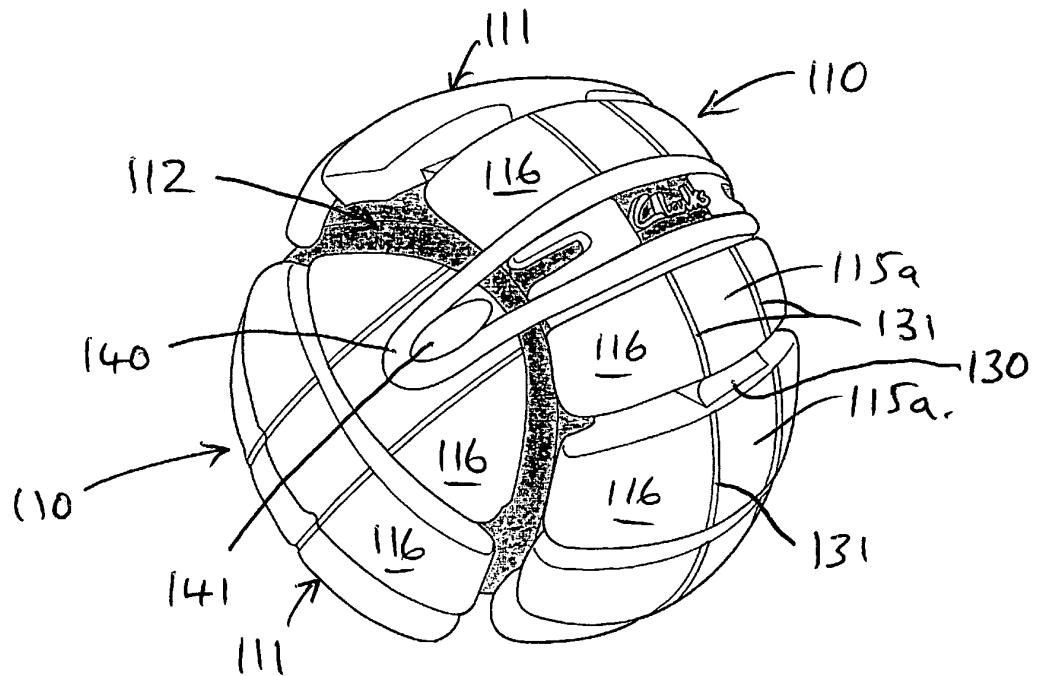


FIGURE 10

FIGURE 11

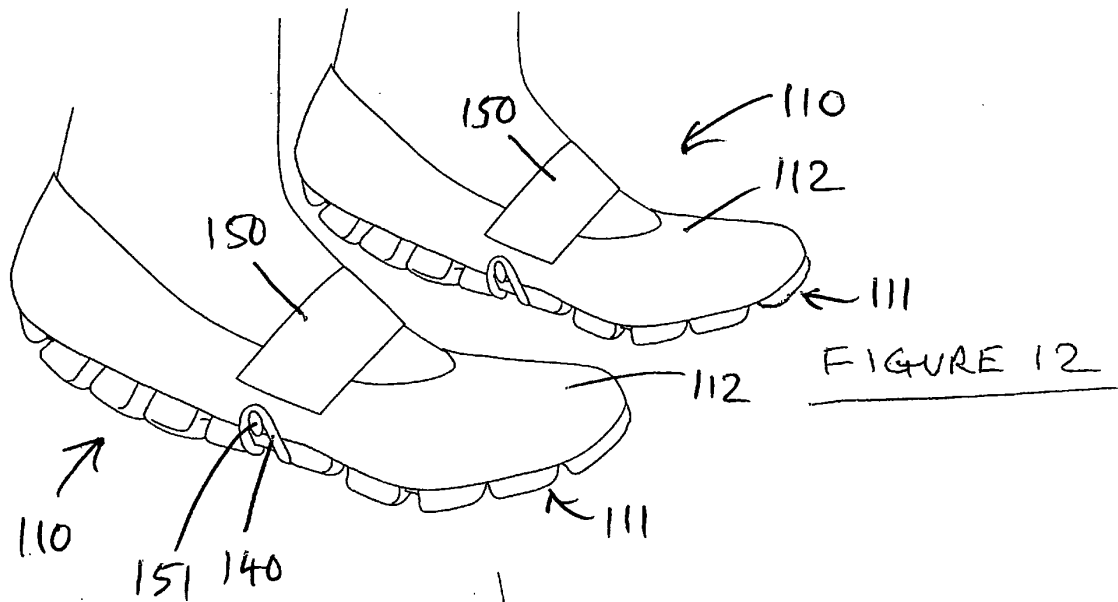
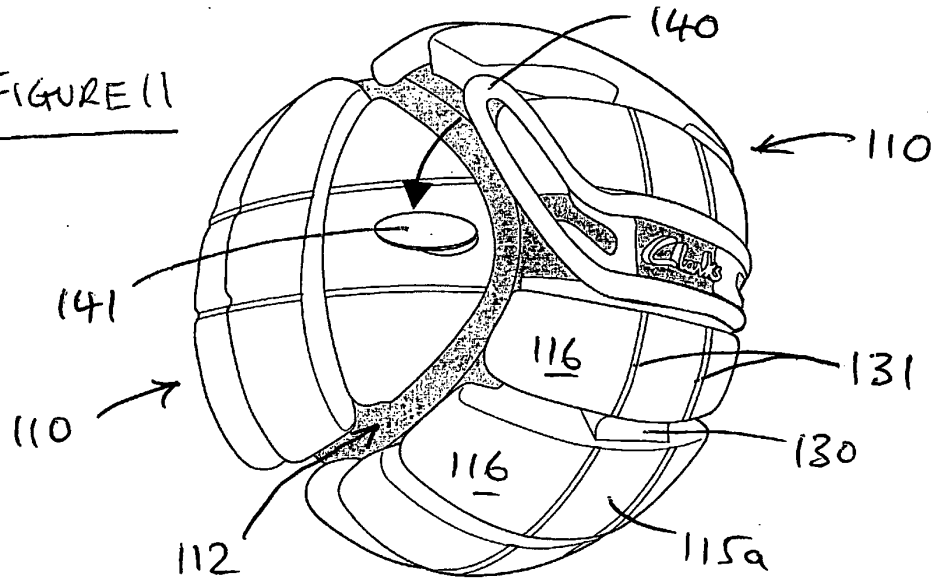


FIGURE 12

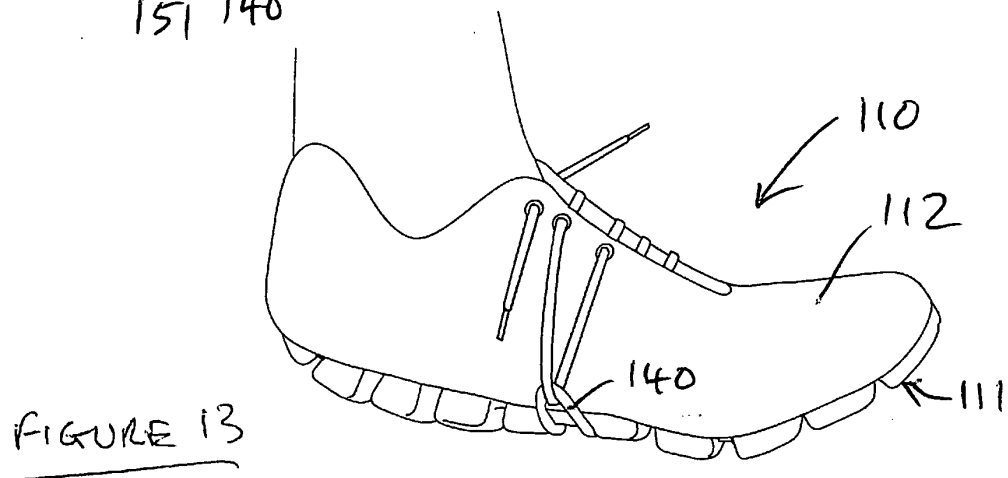


FIGURE 13

REFERENCES CITED IN THE DESCRIPTION

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