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(54) **SHOE INSERT**

SCHUHEINLAGE

GARNITURE INTERIEURE DE CHAUSSURE

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Description

Field of the invention

[0001] The present invention relates to a shoe insert, in particular to a shoe insert configured to maintain the shape of a toe portion of a shoe when not in use.

Background art

[0002] US patent publication US 6,209,161 describes an apparatus having a shoe and a shoe insert. The shoe insert is removable positioned within a toe portion of the shoe. The shoe insert is of a hollow construction and opens across a bottom of said shoe insert. The shoe insert has a shape which matches the shape of an interior of the toe portion. A handle portion having an inwardly extending ridge is formed at an end of the shoe insert. The handle has a size and shape suitable for grasping by human fingers. Document GB181,847 discloses a shoe insert for insertion into a shoe.

[0003] Known shoe inserts, such as those described above, may provide a handle portion for inspection, insertion and removal of a shoe insert. However, such known handle portions lack usability due to, for example, their poor reachability within a shoe when the shoe insert is positioned in the shoe.

Summary of the invention

[0004] The present invention aims to provide a shoe insert with improved usability by allowing for easier insertion and adjustability of the shoe insert as well as removal of the shoe insert from a shoe. Furthermore, the shoe insert provides improved versatility and incorporates a design that minimizes production costs.

[0005] According to the present invention, a shoe insert of the type defined in the preamble is provided comprising a first end having a dome-shaped part to be received in a toe portion of a shoe and an opposite second end having a curved shell-shaped part configured to act as a shoe horn, wherein the shoe insert further comprises a connecting part connecting the first end and the second end, wherein the first end, the second end and the connecting part there between are integrally formed, wherein the dome-shaped part comprises a convex dome surface and wherein the curved shell-shaped part comprises a convex shoe horn surface, wherein the convex dome surface and the convex hoe horn surface are arranged in opposite facing directions.

[0006] The dome-shaped part of the shoe insert maintains the shape of the shoe when not in use whilst the curved shell-shaped part provides not only improved reachability within the shoe for insertion, inspection and removal of the shoe insert, but it also provides an integrated shoe horn where the dome-shaped part acts as an ergonomically shaped grip portion.

[0007] The shoe insert of the present invention can be manufactured cost effectively as the first end, the second end and the connecting part of the shoe insert are integrally formed, allowing for mass production through e.g. injection moulding or cold stamping.

[0008] In this embodiment the convex dome surface allows for snug engagement with an inner surface of a toe portion of a shoe, such as the toe box or vamp. And because of the opposite facing directions of the convex surfaces, the convex shoe horn surface allows for stable engagement of the second end of the shoe insert with an insole portion of the shoe, so that he shoe insert remains properly positioned with the toe portion of the shoe whilst the second end can be reached conveniently for inspection and removal of the shoe insert.

[0009] In a further embodiment the connecting part of the shoe insert comprises a convex connecting surface and the curved shell-shaped part further comprises a concave shoe horn surface. Here, the convex connecting surface smoothly connects the convex dome surface with the concave shoe horn surface, so that an inner surface of a toe portion of a shoe is evenly supported and does not engage relatively sharp ridges, which would leave marks in the shoe when the shoe insert is inserted for longer periods of time. The concave shoe horn surface of the curved shell-shaped part improves ergonomic engagement with a heel when the shoe insert is used as a shoe horn.

Brief description of the drawings

[0010] The present invention will be discussed in more detail below, with reference to the attached drawings, in which

Figure 1 shows a three dimensional view of a shoe insert according to an embodiment of the present invention;
Figure 2 shows a side view of a shoe insert according to an embodiment of the present invention;
Figure 3 shows a rear view of a shoe insert according to an embodiment of the present invention;
Figure 4 shows a top view of stacked shoe inserts utilizing alignment members according to an embodiment of the present invention; and
Figure 5 shows a cross-section of stacked shoe inserts utilizing alignment members according to an embodiment of the present invention.

Detailed description of the embodiments

[0011] In the shoe fashion industry it is known that maintaining the shape of a shoe is of paramount importance when the shoe is stored and displayed in shops to potential buyers. This is particularly the case for the most forward part of the shoe such as the toe portion, sometimes referred to as the toe box or vamp. Furthermore, among shoe owners there is need to maintain the original shape of the shoe as long as possible so as to be able

to enjoy the design of the shoe for longer periods of time.

[0012] It is known that maintaining the shape of a shoe can be accomplished through a shoe insert which is continuously pushed into a toe portion of the shoe by a tensioning member that is configured to forcibly push the shoe insert into the toe portion whilst pushing against an inner surface of the heel counter of the shoe in opposite direction. Although the known method of maintaining the shape of a shoe has proven to be effective, it is effective for relatively strong shoes made of leather without causing damage thereto as a result of tensioning forces. However, for delicate shoes such as sneakers it is generally not advisable to continuously and forcibly push a shoe insert into a toe portion of the sneaker to prevent overstretching the seams of the shoe.

[0013] It is further known that maintaining the shape of a shoe can also be accomplished by a shoe insert which is not tensioned when positioned in the shoe, such as the known shoe insert as described above. However, handling, inspection and removing of known shoe inserts can be cumbersome due to poor reachability within the shoe.

[0014] Based on the above observations there is a need for a shoe insert which is suitable for delicate shoes such as sneakers, athletic footwear, ballerinas and the like, and wherein the shoe insert allows the shape of the shoe to be maintained whilst preventing any damage done to the shoe over prolonged periods of time. Furthermore, there is a need for a shoe insert that has improved versatility and is easy to insert, inspect and remove from a shoe. Also, there is need for a shoe insert that comprises a minimum of components and is cheap to manufacture, so that it may be included with a pair of shoes if so desired.

[0015] Figures 1 and 2 show a three dimensional view and side view, respectively, of a shoe insert 1 according to an embodiment of the present invention. In the embodiments shown, the shoe insert 1 comprises a first end 2 having a dome-shaped part 3 to be received in a toe portion of a shoe and an opposite second end 4 having a curved shell-shaped part 5 configured to act as a shoe horn. The shoe insert 1 further comprises a connecting part 6 connecting the first end 2 and the second end 2, 4, wherein the connecting part 6, the first end 2 and the second end 4 are integrally formed.

[0016] The dome-shaped part 3 of the shoe insert 1 is configured to maintain the shape of a shoe when not in use whilst the curved shell-shaped part 5 provides improved controllability and reachability for insertion, inspection and removal of the shoe insert 1. Furthermore, the curved shell-shaped part 5 also provides an integrated shoe horn wherein the dome-shaped part 3 acts as an ergonomically shaped handle part. That is, when using the shoe insert 1 as a shoe horn, the dome-shaped part 3 fits comfortably and securely within a user's hand to allow for controlled guidance of a heel portion of a foot into the heel counter of a shoe. Furthermore, as the first end 2, the second end 4 and the connecting part 6 of the shoe insert 1 are integrally formed, the number of separate components is minimised allowing for cost effective manufacturing of the shoe insert 1. In an exemplary embodiment, the shoe insert 1 may be injection moulded, so wherein the first end 2, the connecting part 6, and the second end 4 readily form a single piece component. Advantageous material for manufacturing the shoe insert 1 may be e.g. plastic, aluminium or wood.

[0017] According to the invention, the dome-shaped part 3 comprises a convex dome surface 7 and wherein the curved shell-shaped part 5 comprises a convex shoe horn surface 8. The convex dome surface 7 and the convex shoe horn surface 8 are arranged in opposite facing directions. In this embodiment the convex surfaces 7, 8 of the dome-shaped part 3 and curved shell-shaped part 5 face opposite directions. This is clarified by the depicted normal vectors C_1 and C_2 of the convex dome surface 7 and the convex shoe horn surface 8, respectively. As shown, the normal vectors C_1, C_2 point in opposite directions indicating that the convex dome surface 7 and convex shoe horn surface 8 are arranged in opposing fashion. An advantageous effect of this opposing arrangement of convex surfaces 7, 8 is that when the convex dome surface 7 snugly engages with an inner surface of the toe portion of a shoe, then the opposing convex shoe horn surface 8 engages an insole portion of the shoe and as such provide positional stability to the shoe insert 1. Also, because of the convexity of the curved shell-shaped part 5, the convex shoe horn surface 8 leaves no marks on the insole portion during prolonged insertion of the shoe insert 1. Moreover, the second end 4 of the short insert 1 remains conveniently accessible for adjusting or removing the shoe insert 1.

[0018] In an embodiment, the connecting part 6 comprises a convex connecting surface 9 and wherein the curved shell-shaped part 5 further comprises a concave shoe horn surface 10. The convex connecting surface 9 connects the convex dome surface 7 with the concave shoe horn surface 10. In this embodiment the convex connecting surface 9 smoothly connects the convex dome surface 7 with the concave shoe horn surface 10 so that an inner surface of a toe portion of a shoe is evenly and smoothly supported to avoid leaving marks on/in the shoe as the dome-shaped part 3 transitions into the connecting part 6. The concave shoe horn surface 10 on the other hand improves ergonomic engagement with the heel of a foot when the second end 4 of the shoe insert is used as a shoe horn.

[0019] In a further embodiment, the connecting part 6 comprises a concave connecting surface 11 and wherein the dome-shaped part 3 comprises a concave dome surface 12, wherein the concave connecting surface 11 connects the concave dome surface 12 with the convex shoe horn surface 8. In this embodiment, the dome-shaped part 3 may be viewed as being thin and curved, i.e. having a thin curved body with an "inner" concave dome surface 11 as indicated in Figure 1. The connecting part 6 may then be envisaged as a thin curved body as well, having

a concave connecting surface 11 that allows a smoothed transition between the concave dome surface 12 and the convex shoe horn surface 8. The shoe insert 1 according to this embodiment is a relative thin curved article that is readily obtained through injection moulding.

[0020] Note that in an alternative embodiment, the dome-shaped part 3 may be a solid body, which may exhibit increased weight and reduced deformability of the dome-shaped 3 and may be advantageous for stronger and stiffer shoes compared to sneakers for example. In an embodiment, the dome-shaped part 3 may be a solid body having a substantially flat or slight curved bottom surface for snug engagement with an insole portion of a shoe. This allows friction engagement between the dome-shaped part 3 and the shoe to increase when the shoe insert 1 is snugly positioned within a toe portion. The increased friction engagement between the dome-shaped part 3, i.e. the lower surface thereof, further improves positional stability of the shoe insert 1 within the shoe.

[0021] In light of the embodiments described above, the dome-shaped part 3 is not to be construed as necessarily being a thin curved body or a solid body, However, in many advantageous embodiments the dome-shaped part 3 does comprise a convex dome surface 7 as well as a concave dome surface 12, thereby providing a dome-shaped part 3 formed as a relatively thin shell-shaped body as depicted in Figure 1 and 2.

[0022] The curved shell-shaped part 5 of the second end 4 on the other hand may be construed as being a relative thin, curved shell body in all embodiment, thereby allowing the second end 4 of the shoe insert 1 to be conveniently utilized as a shoe horn. Note that the word "shell" is used here to refer to a relatively thin curved object.

[0023] Figure 3 shows a rear view of a shoe insert 1 according to an embodiment of the present invention. In this embodiment the dome-shaped part 3 comprises a convex dome surface 7 as well as a concave dome surface 12, thereby providing the dome-shaped part 3 as a relatively thin shell shaped body which is light weight yet allows for snug engagement with a toe portion of a shoe for support thereof.

[0024] In an advantageous embodiment, the dome-shaped part 3 may further comprise a lower edge portion 13 configured to engage with a most forward insole portion of a shoe, wherein the lower edge portion 13 comprises a curved recess 14, e.g. a curved recess in upward direction as depicted. In this embodiment the curved recess 14 may be positioned at a midpoint of the most lower edge portion 13 as it extends from one side of the dome-shaped part 3 to the other side thereof. The curved recess 14 allows the dome-shaped part 3 to snugly engage a variety of round and pointed toe box geometries and a such ensure that sufficient wedged engagement of the dome-shaped part 3 with a toe portion is achieved. Also, the curved recess 14 ensures that the dome-shaped part 3 can be inserted sufficiently deep into a toe portion as far as possible.

[0025] In a further embodiment, the connecting part 6 may comprises a recessed lengthwise side edge 15, which allows improved handling of the shoe insert 1 such as improved gripping engagement with, for example, a user's thumb with the connecting part 6.

[0026] As mentioned earlier, the connecting part 6 may comprises a convex connecting surface 9 connecting the convex dome surface 7 with the concave shoe horn surface 10. In Figure 2 and 3 it is clearly shown how the convex dome surface 7 smoothly transitions to the concave shoe horn surface 10 along the convex connecting surface 9. In particular, in an embodiment, the connecting part 6 is an arcuate connecting part 6 in lengthwise direction of the shoe insert 1, wherein the arcuate connecting part 6 forms an apex as measured in an upward direction as depicted in Figure 2. The apex of the arcuate connecting part 6 provides a smooth bend in the shoe insert 1 between the dome-shaped part 3 and the curved shell-shaped part 5 to avoid concentrated, localised pressure point that could leave marks on the shoe.

[0027] Figure 4 and Figure 5 show a top view and a cross-section, respectively, of a stacked arrangement of two shoe inserts 1, 1a according to an embodiment of the present invention. In the embodiments shown, the dome-shaped part 3 of the shoe insert 1 comprises a first alignment member 16 configured to cooperatively engage with first alignment member 16a of a dome-shaped part 3a of another shoe insert 1a. Such a first alignment member 16 allows a shoe insert 1 to be stacked on top of another shoe insert 1a more securely and with greater accuracy, and to avoid sliding movement between stacked shoe inserts 1, 1a. In an exemplary embodiment, such as depicted in Figure 5, the first alignment member 16 of the dome-shaped part 3 may comprise a recessed portion configured to cooperatively engage a protruding portion of a dome-shaped part 3a of another shoe insert 1a. Here, the recessed portion is seen as a recessed portion of the convex dome surface 7 of the dome-shaped part 3.

[0028] In an exemplary embodiment, wherein the dome-shaped part 3 may be seen as a thin shell-shaped body, the first alignment member 16 may be a tapered, e.g. cone shaped, inwardly protruding member simultaneously providing a recessed portion to the convex dome surface 7 as well as a protruding portion to the concave dome surface 12 of the dome-shaped part 3. This allows the protruding portion of the dome-shaped part 3 to be received by a recessed portion of a dome-shaped part 3a of another shoe insert 1a. Then as shown in Figure 5, a plurality of shoe inserts 1, 1a can be stacked accurately in male-female fashion such that mutual sliding movement of the stacked shoe inserts 1, 1a is avoided.

[0029] In a further embodiment, the connecting part 6 of the shoe insert 1 may comprise a second alignment member 17 configured to cooperatively engage a second alignment member 17a of a connecting part 6a of another shoe insert 1a. Such a second alignment member 17

allows a shoe insert 1 to be stacked on top of another shoe insert 1a more securely and with further accuracy. Note that the shoe insert 1 may comprises both the first alignment member 16 of the dome-shaped part 3 as well as the second alignment member 17 of the connecting part 6. In this way a plurality of shoe inserts 1 can be stacked conveniently and securely, further eliminating sliding as well as rotating movement between stacked shoe inserts 1, 1a.

[0030] In an embodiment, the second alignment member 16 may be a inwardly protruding member simultaneously providing a recessed portion to the convex connecting surface 9 as well as a protruding portion to the concave connecting surface 11 of the connecting part 6. The inwardly protruding member may be a tapered (e.g. cone-shaped) inwardly protruding member. In this way the protruding portion of the concave connecting surface 11 may cooperatively engage a recessed portion of a convex connecting surface 9a of another shoe insert 1a.

[0031] In an alternative embodiment, the second alignment member 17 of the connecting part 6 may comprise a magnetic connector configured to magnetically engage a magnetic connector of a connecting part 6a of another shoe insert 1a. In this embodiment, alignment between stacked shoe inserts 1, 1a is accomplished through magnetic engagement between the connecting parts 6, 6a, and wherein the stacked shoe inserts 1, 1a are releasable attached to one another for facilitating storage of a plurality of shoe inserts 1, 1a.

[0032] The present invention has been described above with reference to a number of exemplary embodiments as shown in the drawings. Modifications and alternative implementations of some parts or elements are possible, and are included in the scope of protection as defined in the appended claims.

Claims

1. A shoe insert (1) for insertion into a shoe, comprising a first end (2) having a dome-shaped part (3) to be received in a toe portion of a shoe and an opposite second end (4) having a curved shell-shaped part (5) configured to act as a shoe horn, wherein the shoe insert (1) further comprises a connecting part (6) connecting the first end and the second end (2, 4), wherein the first end (2), the second end (4) and the connecting part (6) arranged there between are integrally formed,
   wherein the dome-shaped part (3) comprises a convex dome surface (7) and wherein the curved shell-shaped part (5) comprises a convex shoe horn surface (8), wherein the convex dome surface (7) and the convex shoe horn surface (8) are arranged in opposite facing directions.

2. The shoe insert (1) according to claim 1, wherein the connecting part (6) comprises a convex connecting surface (9) and wherein the curved shell-shaped part (5) further comprises a concave shoe horn surface (10), wherein the convex connecting surface (9) connects the convex dome surface (7) with the concave shoe horn surface (10).

3. The shoe insert (1) according to claim 1 or 2, wherein the connecting part (6) further comprises a concave connecting surface (11) and wherein the dome-shaped part (3) comprises a concave dome surface (12), wherein the concave connecting surface (11) connects the concave dome surface (12) with the convex shoe horn surface (8).

4. The shoe insert (1) according to claim 1 or 2, wherein the dome-shaped part (3) is a solid body.

5. The shoe insert (1) according to any of claims 1-4, wherein the dome-shaped part (3) further comprises a lower edge portion (13) configured to engage with a most forward insole portion of a shoe, wherein the lower edge portion (13) comprises a curved recess (14).

6. The shoe insert (1) according to any of claims 1-5, wherein the connecting part (6) comprises a recessed lengthwise side edge (15).

7. The shoe insert (1) according to any of claims 1-6, wherein the dome-shaped part (3) of the shoe insert (1) comprises a first alignment member (16) configured to cooperatively engage a first alignment member (16a) of a dome-shaped part (3a) of another shoe insert (1a).

8. The shoe insert (1) according to claim 7,
   wherein the connecting part (6) of the shoe insert (1) comprises a second alignment member (17) configured to cooperatively engage a second alignment member (17a) of a connecting part (6a) of another shoe insert (1a).

9. The shoe insert (1) according to claim 8, wherein the second alignment member (17) comprises a magnetic connector configured to magnetically engage a magnetic connector of a connecting part (6a) of another shoe insert (1a).

Patentansprüche

1. Schuheinlage (1) zum Einsetzen in einen Schuh, umfassend ein erstes Ende (2) mit einem kuppelförmigen Teil (3) zur Aufnahme in einem Zehenabschnitt eines Schuhs und ein gegenüberliegendes zweites Ende (4) mit einem gekrümmten schalenförmigen Teil (5), der so gestaltet ist, dass er als Schuhlöffel wirkt, wobei die Schuheinlage (1) ferner ein

Verbindungsteil (6) umfasst, das das erste Ende und das zweite Ende (2, 4) verbindet, wobei das erste Ende (2), das zweite Ende (4) und der dazwischen angeordnete Verbindungsteil (6) einstückig ausgebildet sind, wobei der kuppelförmige Teil (3) eine konvexe Kuppelfläche (7) aufweist und wobei der gekrümmte schalenförmige Teil (5) eine konvexe Schuhlöffelfläche (8) aufweist, wobei die konvexe Kuppelfläche (7) und die konvexe Schuhlöffelfläche (8) in entgegengesetzten Richtungen angeordnet sind.

2. Schuheinlage (1) nach Anspruch 1, wobei der Verbindungsteil (6) eine konvexe Verbindungsfläche (9) aufweist und wobei der gebogene schalenförmige Teil (5) des Weiteren eine konkave Schuhlöffelfläche (10) aufweist, wobei die konvexe Verbindungsfläche (9) die konvexe Kuppelfläche (7) mit der konkaven Schuhlöffelfläche (10) verbindet.

3. Schuheinlage (1) nach Anspruch 1 oder 2, wobei der Verbindungsteil (6) des Weiteren eine konkave Verbindungsfläche (11) aufweist und wobei der kuppelförmige Teil (3) eine konkave Kuppelfläche (12) aufweist, wobei die konkave Verbindungsfläche (11) die konkave Kuppelfläche (12) mit der konvexen Schuhlöffelfläche (8) verbindet.

4. Schuheinlage (1) nach Anspruch 1 oder 2, wobei der kuppelförmige Teil (3) ein massiver Körper ist.

5. Schuheinlage (1) nach einem der Ansprüche 1 bis 4, wobei der kuppelförmige Teil (3) des Weiteren einen unteren Randabschnitt (13) aufweist, der so gestaltet ist, dass er mit einem vordersten Einlagenabschnitt eines Schuhs in Eingriff kommt, wobei der untere Randabschnitt (13) eine gekrümmte Aussparung (14) aufweist.

6. Schuheinlage (1) nach einem der Ansprüche 1 bis 5, wobei der Verbindungsteil (6) eine vertiefte Längsseitenkante (15) aufweist.

7. Schuheinlage (1) nach einem der Ansprüche 1 bis 6, wobei der kuppelförmige Teil (3) der Schuheinlage (1) ein erstes Ausrichtungselement (16) umfasst, das so konfiguriert ist, dass es mit einem ersten Ausrichtungselement (16a) eines kuppelförmigen Teils (3a) einer anderen Schuheinlage (1a) zusammenwirkend in Eingriff kommt.

8. Schuheinlage (1) nach Anspruch 7, wobei der Verbindungsteil (6) der Schuheinlage (1) ein zweites Ausrichtungselement (17) umfasst, das so konfiguriert ist, dass es mit einem zweiten Ausrichtungselement (17a) eines Verbindungsteils (6a) einer anderen Schuheinlage (1a) zusammenwirkend in Eingriff kommt.

9. Schuheinlage (1) nach Anspruch 8, wobei das zweite Ausrichtungselement (17) einen magnetischen Verbinder umfasst, der so konfiguriert ist, dass er magnetisch in einen magnetischen Verbinder eines Verbindungsteils (6a) einer anderen Schuheinlage (1a) eingreift.

Revendications

1. Un insert de chaussure (1) destiné à être inséré dans une chaussure, comprenant une première extrémité (2) ayant une partie (3) en forme de dôme destinée à être reçue dans une partie de pointe d'une chaussure et une deuxième extrémité opposée (4) ayant une partie incurvée (5) en forme de coque configurée pour agir en tant que chausse-pied, l'insert de chaussure (1) comprenant en outre une partie de raccordement (6) raccordant la première extrémité et la deuxième extrémité (2, 4), la première extrémité (2), la deuxième extrémité (4) et la partie de raccordement (6) agencée entre elles étant formées d'un seul tenant,
la partie (3) en forme de dôme comprenant une surface en dôme convexe (7) et la partie incurvée (5) en forme de coque comprenant une surface convexe en chausse-pied (8), la surface en dôme convexe (7) et la surface convexe en chausse-pied (8) étant agencées selon des directions opposées.

2. L'insert de chaussure (1) selon la revendication 1, dans lequel la partie de raccordement (6) comprend une surface de raccordement convexe (9) et dans lequel la partie incurvée (5) en forme de coque comprend en outre une surface concave en chausse-pied (10), la surface de raccordement convexe (9) raccordant la surface en dôme convexe (7) à la surface concave en chausse-pied (10).

3. L'insert de chaussure (1) selon la revendication 1 ou la revendication 2, dans lequel la partie de raccordement (6) comprend en outre une surface de raccordement concave (11) et dans lequel la partie (3) en forme de dôme comprend une surface en dôme concave (12), la surface de raccordement concave (11) raccordant la surface en dôme concave (12) à la surface convexe en chausse-pied (8).

4. L'insert de chaussure (1) selon la revendication 1 ou la revendication 2, dans lequel la partie (3) en forme de dôme est un corps plein.

5. L'insert de chaussure (1) selon l'une quelconque des revendications 1 à 4, dans lequel la partie (3) en forme de dôme comprend en outre une partie (13) de bord inférieur configurée pour venir en engagement avec une partie de semelle intérieure la plus en avant d'une chaussure, la partie (13) de bord in-

férieur comprenant un évidement incurvé (14).

6. L'insert de chaussure (1) selon l'une quelconque des revendications 1 à 5, dans lequel la partie de raccordement (6) comprend un bord latéral longitudinal en retrait (15).

7. L'insert de chaussure (1) selon l'une quelconque des revendications 1 à 6, dans lequel la partie (3) en forme de dôme de l'insert de chaussure (1) comprend un premier élément d'alignement (16) configuré pour venir en engagement de manière coopérative avec un premier élément d'alignement (16a) d'une partie en forme de dôme (3a) d'un autre insert de chaussure (1a).

8. L'insert de chaussure (1) selon la revendication 7, dans lequel la partie de raccordement (6) de l'insert de chaussure (1) comprend un deuxième élément d'alignement (17) configuré pour venir en engagement de manière coopérative avec un deuxième élément d'alignement (17a) d'une partie de raccordement (6a) d'un autre insert de chaussure (1a).

9. L'insert de chaussure (1) selon la revendication 8, dans lequel le deuxième élément d'alignement (17) comprend un connecteur magnétique configuré pour venir en engagement de façon magnétique avec un connecteur magnétique d'une partie de raccordement (6a) d'un autre insert de chaussure (1a).

Fig. 1

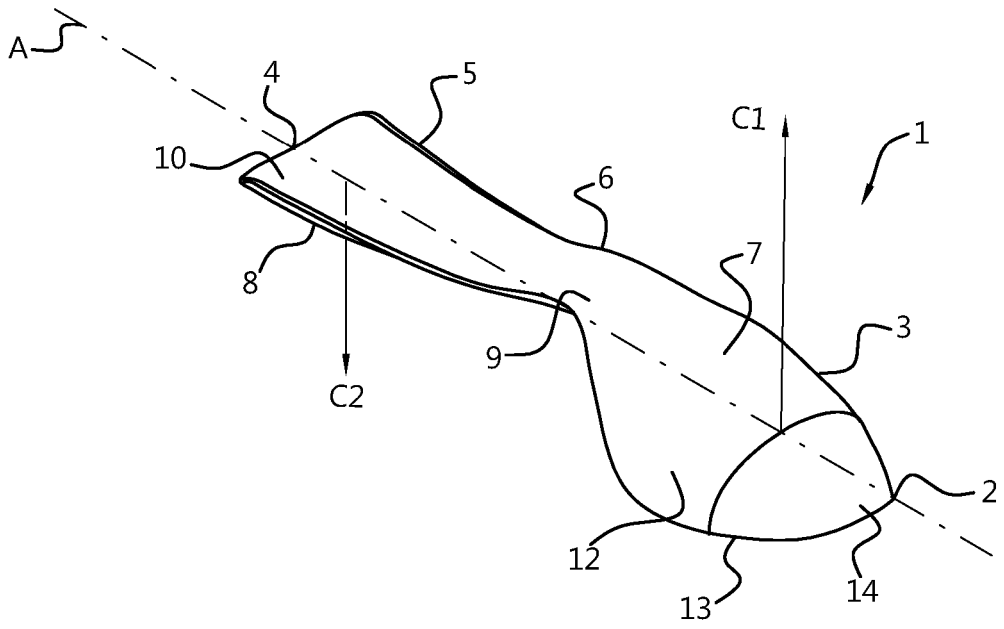


Fig. 2

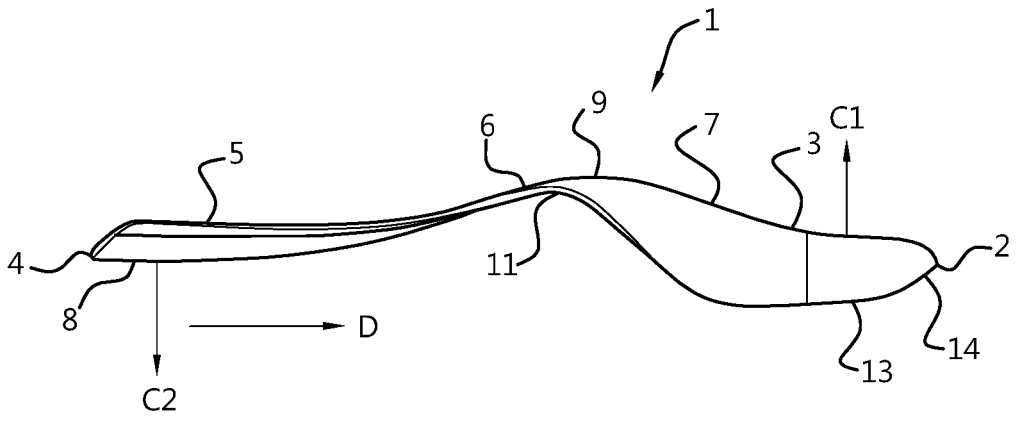


Fig. 3

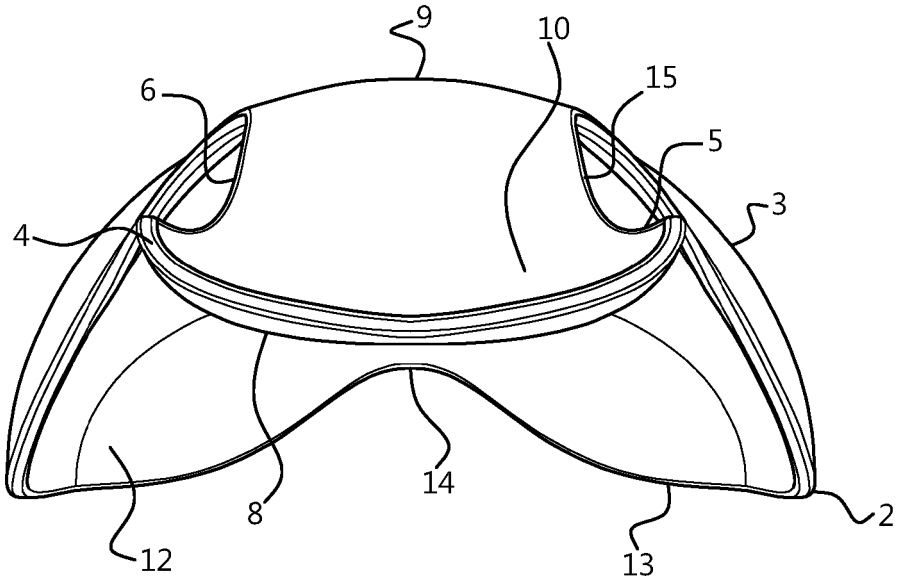


Fig. 4

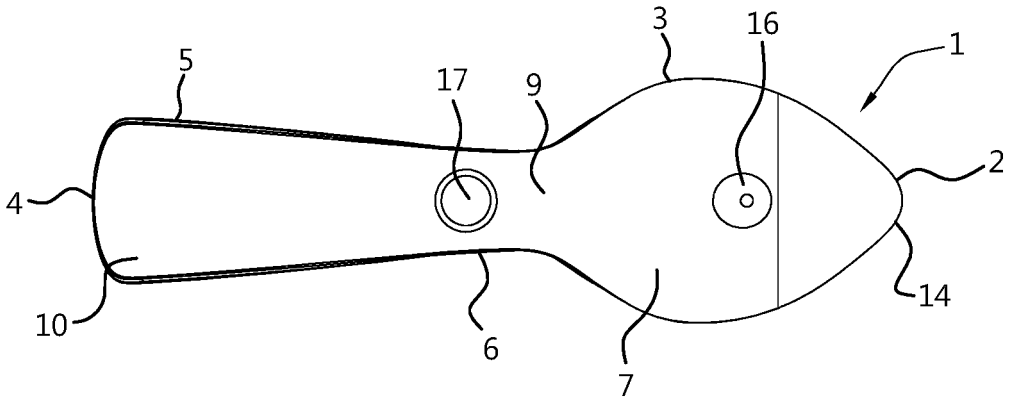
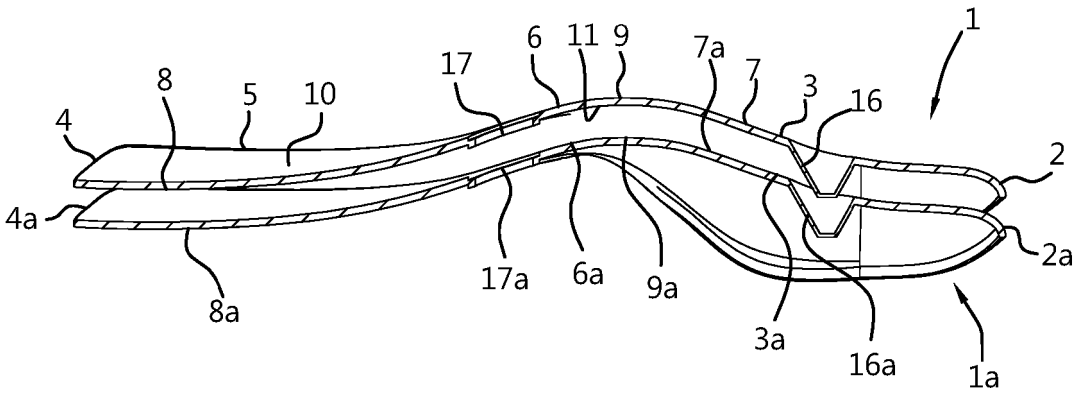


Fig. 5



REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- US 6209161 B **[0002]**
- GB 181847 A **[0002]**