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(54) Footwear item with interchangeable outsole

(57) The present invention refers to a footwear item provided with an interchangeable outsole, comprising an upper adapted to receive and accommodate a wearer's foot, a midsole (3) that is permanently associated to said upper, an interchangeable outsole (4), and coupling means (16, 17) provided to removably secure said interchangeable outsole (4) to said midsole (3). The interchangeable outsole (4) comprises a front portion (5) and a rear portion (6) that are associated to each other via at least a flexure strip (7, 8) adapted to allow the interchangeable outsole (4) to both flexibly bend and spring back into an outstretched position thereof; at the end portions thereof, the midsole (3) comprises a front peripheral undercut (9) and a rear peripheral undercut (10), which are adapted to receive a toe extremity (11) of the front portion (5) and a heel extremity (12) of the rear portion (6), respectively, wherein the front portion (5) and the rear portion (6) are adapted to bend at the flexure strip (7, 8) so as to cause the interchangeable outsole (4) to bend into a curved form to thereby enable said extremities (11, 12) of the interchangeable outsole (4) to be fitted into the respective peripheral undercuts (9, 10) of the midsole (3), said extremities (11, 12) being then caused to firmly engage said undercuts (9, 10) when said interchangeable outsole (4) is allowed to spring back.

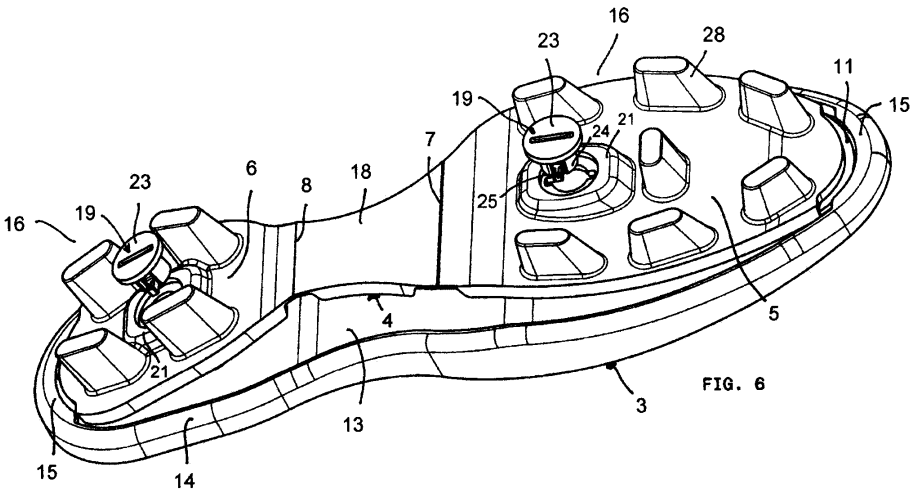

FIG. 6

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Description

[0001] The present invention refers to a footwear item provided with an interchangeable outsole.

[0002] A variety of sports footwear items, in particular football and similar boots and shoes are known nowadays to be provided with an interchangeable outsole provided with a number of spikes. These interchangeable outsoles may be featuring a variety of spike types and patterns differing from each other as far as both the number and the size and the actual arrangement of the spikes themselves over the interchangeable outsole are concerned. In this way, the possibility is given for a same shoe to be used with the most appropriate outsole to suit the actual conditions and characteristics of the playground.

[0003] Disclosed in WO 2005/072547 is a footwear item having a midsole for the interchangeable outsole to be applied thereto. Such midsole comprises a raised flange extending along a longitudinal edge between the extremities of the same midsole, whereas the interchangeable outsole comprises a longitudinal raised flange that extends between the extremities of the same interchangeable outsole along a side which - under operating or use conditions - lies opposite to the side along which there extends the flange of the midsole. The longitudinal raised flange of the midsole and the longitudinal raised flange of the outsole are able to interact, i.e. cooperate - thanks to them being shaped complementarily to fit with each other by the coupling of shapes - with respective edges of the interchangeable outsole and the midsole, so as to allow the interchangeable outsole to be fastened to the midsole by means of screws. At each extremity thereof, the interchangeable outsole is in fact provided with a through-bore for a screw to be fitted thereinto, whereas the midsole is provided - again at each extremity thereof - with corresponding receptacles, into which the attachment screws are able to be tightened so as to firmly hold the interchangeable outsole in position onto the shoe.

[0004] Such prior-art footwear item, however, has a drawback in that attaching the interchangeable outsole to the midsole is quite long and toilsome a job, actually.

[0005] A user is in fact required to provide for the interchangeable outsole to be first of all positioned in a very accurate manner onto the midsole, so that the position of the through-bores in the interchangeable outsole will perfectly and exactly fit with the position of the receptacles in the midsole, otherwise it would clearly prove practically impossible for the screws to be inserted and engage the respective receptacles.

[0006] In addition, even the need for the screws to be tightened for a firm attachment ultimately contributes to a longer time needed to complete the sole replacement and attachment procedure.

[0007] A further drawback of the above-cited prior-art footwear item lies in the fact that the screws and the related receptacles are provided in correspondence to the toe portion and the heel portion of the shoe, i.e. exactly at those sites which are exposed to the greatest force and stress exerted by the foot of the wearer when practicing his/her sports activity. Under the circumstances, it can therefore be most readily appreciated that the receptacles and the shank of the screws fitted thereinto to engage said receptacles are quite likely to cause the wearer's foot to suffer a considerable amount of inconvenience, up to jeopardizing the actual ability of the wearer to perform adequately.

[0008] Still another drawback derives from the fact that, in order to ensure that the screws are firmly and reliably secured into their receptacles, the same receptacles must be provided in the midsole down to an adequate depth and this fact makes it necessary for the midsole to be provided with a correspondingly great thickness.

[0009] The practical result, therefore, is to have the position of the foot raised by an excessive extent relative to the shoe and the playground, in a manner that is certainly not correct in view of the sports activity being performed.

[0010] Yet a further drawback is represented by the fact that the method of attaching the outsole to the midsole by means of screws proves scarcely reliable, since the screws tend to work loose inside the respective receptacles owing to the stresses that are generated as the sports activity is being performed.

[0011] A further drawback lies in the fact that the through-bores in the interchangeable outsole are provided at the toe portion and the heel portion thereof and this sets definite limits - on these regions - as far as the positions are concerned, in which spikes may conveniently be provided and arranged on the interchangeable sole.

[0012] It therefore is a main object of the present invention to provide a footwear item with interchangeable outsole, which is effective in doing away with the above-cited drawbacks of prior-art footwear items of the same kind.

[0013] Within the above general object, another purpose of the present invention is to provide an interchangeable outsole that is capable of being firmly attached to the footwear item in an extremely simple and quick manner.

[0014] Yet another purpose of the present invention is to provide a footwear item with interchangeable outsole featuring a fastening mechanism that ensures a maximum extent of safety and reliability.

[0015] Still another purpose of the present invention is to provide a footwear item with interchangeable outsole, which is inherently simple in its construction and capable of being manufactured at competitive costs using generally and readily available tools and machinery.

[0016] According to the present invention, these aims, along with further ones that will be apparent in the following description, are reached in a footwear item with interchangeable outsole incorporating the characteristics as recited in the appended Claim 1.

[0017] Defined in the following sub-claims are further characteristics and advantages of the present invention.
[0018] Anyway, features and advantages of the footwear with interchangeable outsole according to the present invention will be more readily understood from the description of a preferred, although not sole embodiment that is given below by way of non-limiting example with reference to the accompanying drawings, in which:

- Figure 1 is a plan bottom view of an interchangeable outsole according to the present invention;
- Figure 2 is a side elevational view of the interchangeable outsole shown in Figure 1;
- Figure 3 is a partial enlarged view of the interchangeable outsole shown in Figure 2, illustrating the rear portion of the interchangeable outsole in detail;
- Figure 4 is a plan bottom view of the interchangeable outsole, as represented in a phase of its attachment procedure;
- Figure 5 is a side elevational cross-sectional view along the line V-V in Figure 4;
- Figure 6 is a perspective side view of the interchangeable outsole, as represented in the phase of its attachment procedure shown in Figures 4 and 5;
- Figure 7 is a plan bottom view of the interchangeable outsole, as represented in a further phase of its attachment procedure;
- Figure 8 is a side elevational cross-sectional view along the line VIII-VIII in Figure 7;
- Figure 9 is a perspective side view of the interchangeable outsole, as represented in the phase of its attachment procedure shown in Figures 7 and 8;
- Figure 10 is a plan bottom view of the interchangeable outsole in the state in which it is attached to the midsole;
- Figure 11 is a side elevational view of the interchangeable outsole shown in Figure 10;
- Figure 12 is a side elevational cross-sectional view along the line XII-XII in Figure 10;
- Figure 13 is a perspective side view of the interchangeable outsole, as represented in the state in which it is attached to the midsole and with the related bayonet coupling device in the disengaged state thereof;
- Figure 13A is a perspective view illustrating in detail the bayonet coupling device shown in Figure 13, as viewed from the interior of the shoe when the midsole is partially removed;
- Figure 14 is a perspective side view of the interchangeable outsole, as represented in the state in which it is attached to the midsole and with the related bayonet coupling device being rotated into the disengaged state thereof;
- Figure 14A is a perspective cross-sectional view illustrating in detail the bayonet coupling device shown in Figure 14, as viewed from the interior of the shoe when the midsole is partially removed;
- Figure 15 is a perspective side view of the interchangeable outsole, as represented in the state in which it is attached to the midsole and with the related bayonet coupling device in the locking, i.e. engaged state thereof;
- Figure 15A is a perspective view illustrating in detail the bayonet coupling device shown in Figure 15, as viewed from the interior of the shoe when the midsole is partially removed.

[0019] With reference to the Figures mentioned above, the footwear item with interchangeable sole according to the present invention, as generally indicated with the reference numeral 1 there, comprises an upper adapted to receive and accommodate a wearer's foot, a midsole 3 that is permanently associated to said upper, an interchangeable outsole 4, and coupling means provided to removably secure said interchangeable outsole 4 to said midsole 3.
[0020] The interchangeable outsole 4 comprises a front portion 5 and a rear portion 6 that are associated to each other via at least a flexure strip 7, 8 adapted to allow the interchangeable outsole 4 to both flexibly bend and spring back into an outstretched position thereof.
[0021] At the end portions thereof, the midsole 3 comprises a front peripheral undercut 9 and a rear peripheral undercut 10, which are adapted to receive a toe extremity 11 of the front portion 5 and a heel extremity 12 of the rear portion 6, respectively.
[0022] The front portion 5 and the rear portion 6 are adapted to bend at the flexure strip 7, 8 so as to cause the interchangeable outsole 4 to bend into a curved form to thereby enable said extremities 11, 12 of the interchangeable outsole 4 to be fitted into the respective peripheral undercuts 9, 10 of the midsole 3, said extremities 11, 12 being then caused to firmly engage said undercuts 9, 10 when said interchangeable outsole 4 is eventually allowed to spring back.
[0023] The midsole 3 defines a bottom surface 13 for the interchangeable outsole 4 to be able to be attached thereto, and - at least at the extremities thereof, i.e. the toe extremity and the heel extremity - it comprises a pe-

ripheral edge 14 that protrudes from the bottom surface 13 of the midsole 3. At said toe extremity and heel extremity of the midsole, such peripheral edge 14 defines a folded portion 15 that extends parallel to said bottom surface 13 separately, i.e. spaced therefrom so as to integrally form the front peripheral undercut 9 and the rear peripheral undercut 10. Advantageously, the peripheral edge 14 extends all along the whole periphery of the midsole 3 so as to delimitate a seat, i.e. a region adapted to receive and accommodate the interchangeable outsole 4.

[0024] As already stated briefly hereinbefore, the interchangeable outsole 4 is comprised of at least a front portion 5 and a rear portion 6, which are adapted to engage the front peripheral undercut 9 and the rear peripheral undercut 10 of the midsole 3, respectively. To this purpose, the front portion 5 and the rear portion 6 of the interchangeable outsole 4 define a toe extremity 11 and a heel extremity 12, respectively, which are adapted to be fitted into the respective peripheral undercuts 9, 10 to have the interchangeable outsole 4 applied and attached to the midsole 3. In practice, the toe extremity 11 and the heel extremity 12 form each a kind of tang adapted to be received into the undercuts 9, 10 when the interchangeable outsole 4 is applied on to the midsole 3.

[0025] The front portion 5 and the rear portion 6 are joined to each other via at least a flexure strip 7, 8, at which said front portion 5 and said rear portion 6 are able to flex, i.e. be bent relative to each other so as to elastically bring the interchangeable outsole 4 into a curved configuration to thereby reduce the longitudinal dimension thereof. This enables the afore-cited extremities 11, 12 of the interchangeable outsole 4 to be fitted into the respective peripheral undercuts 9, 10 of the midsole 3. The flexure strip 7, 8 is further adapted to cause the front portion 5 and the rear portion 6 to elastically flatten out again, so that the interchangeable outsole 4 springs back into the outstretched state thereof, in which said extremities 11, 12 of the interchangeable outsole 4 are therefore able to keep being fitted into and engaging the respective undercuts 9, 10 of the midsole 3, in such manner that the interchangeable outsole 4 is fitted into the peripheral edge 14 and in contact with the bottom surface 13 of the midsole 3.

[0026] In this manner, the interchangeable outsole 4 is capable of being applied on to the midsole.

[0027] Advantageously, the interchangeable outsole 4 comprises first coupling means 16 adapted to reversibly, i.e. releasably engage second coupling means 17 provided in the midsole 3 to quickly lock/unlock the interchangeable outsole 4 to/from the midsole 3.

[0028] Preferably, said first coupling means 16 and said second coupling means 17 are provided at a front position and a rear position on the interchangeable outsole 4 and the midsole 3, respectively, i.e. substantially in correspondence of the toe portion and the heel portion.

[0029] It can however be quite readily appreciated that said first coupling means 16 and said second coupling means 17 may be provided in other positions, as well. For example, they can be provided at a middle position on the interchangeable outsole 4 and the midsole 3, respectively, i.e. in correspondence to the plantar arch of the foot of the wearer.

[0030] In a preferred embodiment of the present invention, the interchangeable outsole 4 comprises a middle portion 18, which is associated to the front portion 5 via a first flexure strip 7, and associated to the rear portion 6 via a second flexure strip 8.

[0031] Advantageously, the interchangeable outsole 4 is made in the form of a unitary, single-piece structure, in which there are provided two notches, flutes or similar indentations in order to achieve said flexure strips 7, 8. In practice, definite reductions in the thickness of the interchangeable outsole 4 enable said flexure strips 7, 8 to be formed integrally therewith.

[0032] The flexure strips 7, 8 constitute preferred bending axes of the interchangeable outsole 4, by means of which the same outsole is enabled to reversibly bend into a curved form and flatten out into its outstretched state. The front portion 5 and the rear portion 6 are adapted to flex relative to the middle portion 18 at the first flexure strip 7 and the second flexure strip 8, respectively, so as to bring the interchangeable outsole 4 into a curved form and, as a result, reduce the length of the same outsole in such a manner as to enable the toe extremity 11 of the interchangeable outsole 4 to be fitted into the front peripheral undercut 9 of the midsole 3, and the heel extremity 12 of the interchangeable outsole 4 to be fitted into the rear peripheral undercut 10 of the midsole 3.

[0033] In addition, such flexure strips 7, 8 are adapted to elastically bias back the front portion 5 and the rear portion 6 of the interchangeable outsole 4, so as to allow the same interchangeable outsole 4 to spring back into the outstretched state thereof. When the interchangeable outsole 4 is in this way restored into the flattened-out, i.e. outstretched state thereof, the extremities 11, 12 are adapted to engage the respective undercuts 9, 10.

[0034] The front portion 5, the rear portion 6 and the middle portion 6 of the interchangeable outsole 4 are adapted to be in contact with the bottom surface 13 of the midsole 3, while the peripheral edge 14 thereof is adapted to contain the interchangeable outsole 4 along the sides thereof.

[0035] Advantageously, the front portion 5 and the second portion 6 comprise said first coupling means 16 to releasably engage said second coupling means 17 provided in corresponding positions on the midsole 3, i.e. on the front and rear portions of the midsole 3.

[0036] In the embodiment being described by way of illustrative example, the first coupling means 16 of the interchangeable outsole 4 and the second coupling means 17 of the midsole 3 form a kind of bayonet coupling device.

[0037] In particular, the first coupling means 16 comprise a male coupling member 19, which is accessible from outside to be able to be actuated by a user, and the

second coupling means 17 comprise a female coupling member 20, which is adapted to receive and reversibly engage said male coupling member 19 by virtue of the bayonet mount mechanism.

[0038] It can on the other hand be quite readily appreciated that other kinds of coupling or locking devices may be used in the present invention, as well. For example, these may be automatic securing devices with complementary snap-fitting elements or even fastening devices with threaded, i.e. screw elements. According to the actual needs and the kind of device used, the possibility is further given for the male coupling member to be provided on the midsole and the female coupling member to be provided on the interchangeable outsole.

[0039] The male coupling member 19 is adapted to be accommodated in a containment body 21 that is integrally defined by the front portion 5 and the rear portion 6 of the interchangeable outsole 4, whereas the female coupling member 20 consists of a hollow seat or receptacle 22 protruding from the bottom surface 13 of the midsole 3. Advantageously, such hollow receptacle 22 is integrally defined by the midsole 3 and, as a result, is provided to form a unitary single-piece construction with the same midsole 3.

[0040] In a more detailed manner, the male coupling member 19 defines a first extremity 23, by means of which it is adapted to be rotatably associated to the containment body 21, and a second extremity 24, which is provided withy a pair of mutually opposed tabs 25. The first extremity 23 is accessible from the outside of the containment body 21 so as to be capable of being actuated with a tool in order to rotate the male coupling member 19. The hollow receptacle 22 is provided with an aperture 26 that is so shaped as to be complementary to the second extremity 24. The mutually opposed tabs 25, which are oriented in a given direction, are adapted to pass through the aperture 26 so as to enable the second extremity 23 of the male coupling member 19 to be inserted into the hollow receptacle 22 of the female coupling member 20.

[0041] Following an appropriate rotation of the male coupling member 19, as brought about by the first extremity 23 being actuated accordingly, the mutually opposed tabs 25 are adapted to engage the hollow receptacle 22, thereby locking the male coupling member 19 firmly in position in the female coupling member 20 and securing the interchangeable outsole 4 to the midsole 3.

[0042] The hollow receptacle 22 is provided internally with cogs or similar detents 27 adapted to cooperate with the mutually opposed tabs 25 to define a locking position, in which the second extremity 24 of the male coupling member 19 is locked, i.e. positively retained inside the hollow receptacle 22 of the female coupling member 20, and a release or disengagement position, in which the second extremity 24 of the male coupling member 19 is capable of being removed from the hollow receptacle 22 of the female coupling member 20 to release and set the male coupling member free.

[0043] The interchangeable outsole 4 may preferably comprise a plurality of pulling or gripping members 28, such as spikes or the like, which project downwards from the front portion 5 and the rear portion 6 thereof, so as to be able to be used in practicing a variety of sports activities, e.g. football. It is of course possible for the shoe or boot to be provided with a set of interchangeable outsoles, each one of them featuring a different configuration or arrangement of the spikes for a most appropriate utilization thereof on different playgrounds and under varying conditions of the playground itself.

[0044] The way in which the interchangeable outsole 4 is attached and secured to the midsole 3 of the footwear item according to the present invention is described below.

[0045] In the first place, the user or wearer has the rotational position of the male coupling member 19 duly checked so as to make sure that the mutually opposed tabs 25 are oriented in the appropriate direction in view of the ability of the second extremity 24 of the male coupling member 19 to be inserted through the aperture 26 of the female coupling member 20.

[0046] The user will then flex the front portion 5 and the rear portion 6 relative to the middle portion 18 so as to bend the interchangeable outsole 4 into a curved configuration and, as a result, reduce the longitudinal dimension thereof.

[0047] At this point, the possibility is given for the toe extremity 11 of the front portion 5 to be fitted into the front peripheral undercut 9 of the midsole 3, and the heel extremity 12 of the rear portion 6 to be fitted into the rear peripheral undercut 10 of the midsole 3.

[0048] By exerting a pressure upon the middle portion 18 of the interchangeable outsole 4, the user now helps the first flexure strip 7 and the second flexure strip 8 to elastically bias back the front portion 5 and the rear portion 6, respectively, thereby causing them to flatten out.

[0049] At this point, the interchangeable outsole 4 snaps back into the longitudinally outstretched state thereof.

[0050] The interchangeable outsole 4 moves into contact with the bottom surface 13 of the midsole 3, while arranging itself along the peripheral edge 14 thereof. The toe extremity 11 and the heel extremity 12 get engaged in the respective undercuts, whereas the mutually opposed tabs 25 of the second extremity 24 of the male coupling member 19 get inserted - through the aperture 26 - in the hollow receptacle 22 of the female coupling member 20.

[0051] The user then rotates the male coupling member 19 via the first extremity 23 thereof to complete its bayonet-like coupling with the female coupling member 20 and secure the interchangeable outsole 4 to the midsole 3 in a firm manner.

[0052] For the interchangeable sole 4 to be then removed, all it takes is to actuate the bayonet-like coupling mechanism in order to release the male coupling member 19 from the female coupling member 20, and then flex

the interchangeable outsole 4 into a curved form again by acting on the front portion 5 and the rear portion 6 thereof accordingly. When the interchangeable outsole 4 is curved in this way, the possibility is given for the toe extremity 11 and the heel extremity 12 to be slipped off the respective undercuts 9, 10.

[0053] Fully apparent from the above description is therefore the ability of the present invention to effectively reach the afore-cited aims and advantages by providing an interchangeable outsole that is capable of being attached and secured to the footwear item in an extremely quick and simple manner.

[0054] In particular, it is an advantage of the present invention to provide a mechanism for securing the interchangeable outsole to the midsole, which is not only simple and effective, but also fully safe and reliable.

[0055] It shall be appreciated that the inventive footwear item with interchangeable outsole as described above may of course be the subject of a number of modifications and may be embodied in a number of different manners without departing from the scope of the present invention, wherein all afore-cited details may furthermore be replaced with technically equivalent elements.

[0056] It should finally be noticed that the materials used to manufacture the footwear structure of the present invention, as well as the shapes and the sizing of the individual component parts thereof, may each time be selected so as to more appropriately meet the particular requirements or suit the particular application, again without departing from the scope of the present invention.

Claims

1. Footwear item with interchangeable outsole, comprising an upper adapted to receive and accommodate a wearer's foot, a midsole (3) that is permanently associated to said upper, an interchangeable outsole (4), and coupling means (16, 17) provided to removably secure said interchangeable outsole (4) to said midsole (3), **characterized in that** the interchangeable outsole (4) comprises a front portion (5) and a rear portion (6) that are associated to each other via at least a flexure strip (7, 8) adapted to allow the interchangeable outsole (4) to both flexibly bend and spring back into an outstretched position thereof, and **in that**, at the end portions thereof, the midsole (3) comprises a front peripheral undercut (9) and a rear peripheral undercut (10), which are adapted to receive a toe extremity (11) of the front portion (5) and a heel extremity (12) of the rear portion (6), respectively, wherein said front portion (5) and said rear portion (6) are adapted to bend at said flexure strip (7, 8) so as to cause the interchangeable outsole (4) to bend into a curved form to thereby enable said extremities (11, 12) of the interchangeable outsole (4) to be fitted into the respective peripheral undercuts (9, 10) of the midsole (3), said extremities (11, 12) being then caused to firmly engage said undercuts (9, 10) when said interchangeable outsole (4) is allowed to spring back.

2. Footwear item according to claim 1, wherein said interchangeable sole (4) comprises first coupling means (16) adapted to reversibly engage second coupling means (17) provided on the midsole to thereby lock/unlock the interchangeable outsole (4) to/from the midsole (3) in a quick manner.

3. Footwear item according to claim 2, wherein said first coupling means (16) and said second coupling means (17) are provided at a front position and a rear position on the interchangeable outsole (4) and the midsole (3), respectively.

4. Footwear item according to claim 3, wherein said interchangeable outsole (4) comprises a middle portion (18), which is associated to the front portion (5) via a first flexure strip (7) and to the rear portion (6) via a second flexure strip (8).

5. Footwear item according to claim 4, wherein said front portion (5) and said rear portion (6) are adapted to flex relative to the middle portion (18) at the first flexure strip (7) and the second flexure strip (8), respectively, so as to bring the interchangeable outsole (4) into a curved form and, as a result, reduce the length of the same outsole in such a manner as to enable the toe extremity (11) of the interchangeable outsole (4) to be fitted into the front peripheral undercut (9) of the midsole (3), and the heel extremity (12) of the interchangeable outsole 4 to be fitted into the rear peripheral undercut (10) of the midsole (3).

6. Footwear item according to claim 5, wherein said flexure strips (7, 8) are adapted to elastically bias back the front portion (5) and the rear portion (6) of the interchangeable outsole (4), so as to allow the same interchangeable outsole (4) to spring back into the outstretched state thereof.

7. Footwear item according to claim 6, wherein said front portion (5) and said rear portion (6) comprise said first coupling means (16) to removably engage said second coupling means (17) provided at a corresponding position on the midsole (3), i.e. on a front portion and a rear portion of said midsole (3).

8. Footwear item according to claim 7, wherein said first coupling means (16) of the interchangeable outsole (4) and said second coupling means (17) of the midsole (3) form a bayonet coupling device.

9. Footwear item according to claim 8, wherein said first coupling means (16) comprise a male coupling member (19), which is accessible and actuatable

from outside, and said second coupling means (17) comprise a female coupling member (20), which is adapted to receive and reversibly engage said male coupling member (19).

10. Footwear item according to claim 9, wherein said male coupling member (19) is adapted to be accommodated in a containment body (21) that is provided in the middle portion (18), whereas the female coupling member (20) includes a hollow seat or receptacle (22) protruding from a bottom surface (13) of the midsole (3).

11. Footwear item according to claim 10, wherein said male coupling member (19) defines a first extremity (23), by means of which it is adapted to be rotatably associated to the containment body (21), and a second extremity (24), which is provided withy a pair of mutually opposed tabs (25), and wherein said first extremity (23) is accessible from the outside of the containment body (21) so as to be capable of being actuated with a tool for the male coupling member (19) to be rotated.

12. Footwear item according to claim 11, wherein said hollow receptacle (22) is provided with an aperture (26) that is so shaped as to be complementary to said second extremity (24), and wherein said mutually opposed tabs (25) are adapted to pass through the aperture (26) so as to enable the second extremity (24) of the male coupling member (19) to be inserted into the hollow receptacle (22) of the female coupling member (20).

13. Footwear item according to claim 11, wherein said mutually opposed tabs (25), following an appropriate rotation of the male coupling member (19), are adapted to engage the hollow receptacle (22), thereby locking the male coupling member (19) firmly in position in the female coupling member (20) and securing the interchangeable outsole (4) to the midsole (3).

14. Footwear item according to any of the preceding claims, wherein said interchangeable outsole (4) comprises a plurality of spikes (28), which project downwards from the front portion (5) and the rear portion (6) thereof.

15. Footwear item according to any of the preceding claims, comprising a set of interchangeable outsoles, each one of them featuring a different configuration or arrangement of the spikes (28).

16. Footwear item according to any of the preceding claims, wherein a peripheral edge (14) extends all along the whole periphery of the midsole (3) so as to delimitate a seat, i.e. a region adapted to receive and accommodate the interchangeable outsole (4), and wherein said peripheral edge (14) forms the front peripheral undercut (9) and the rear peripheral undercut (10) integrally.

17. Footwear item according to any of the preceding claims, wherein said interchangeable outsole (4) is made in the form of a unitary single-piece construction, and wherein localized reductions in the thickness of said interchangeable outsole (4) are provided in view of forming said flexure strips (7, 8).

18. Interchangeable outsole, **characterized in that** it comprises a middle portion (18), which is associated to a front portion (5) via a first flexure strip (7), and is further associated to a rear portion (6) via a second flexure strip (8), wherein said flexure strips (7, 8) are adapted to enable the interchangeable outsole (4) to reversibly flex into a curved form and spring back out into its outstretched state.

19. Interchangeable outsole according to claim 18, wherein coupling means (16) are provided on the front portion (5) and the rear portion (6) of the interchangeable outsole (4).

20. Interchangeable outsole according to claim 19, wherein said coupling means (16) and further coupling means (17) provided on the footwear item combine to form a bayonet coupling device.

21. Interchangeable outsole according to claim 20, wherein said coupling means (16) comprise a male coupling member (19), which is accessible from outside to be able to be actuated by a user.

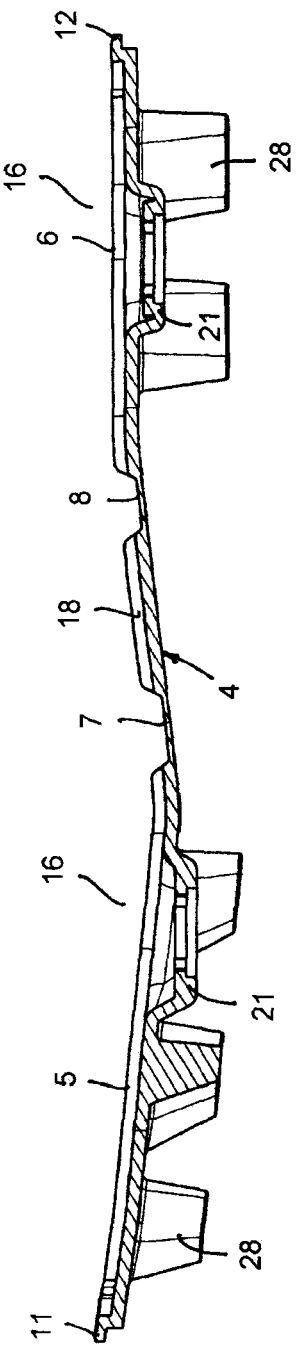

FIG. 2

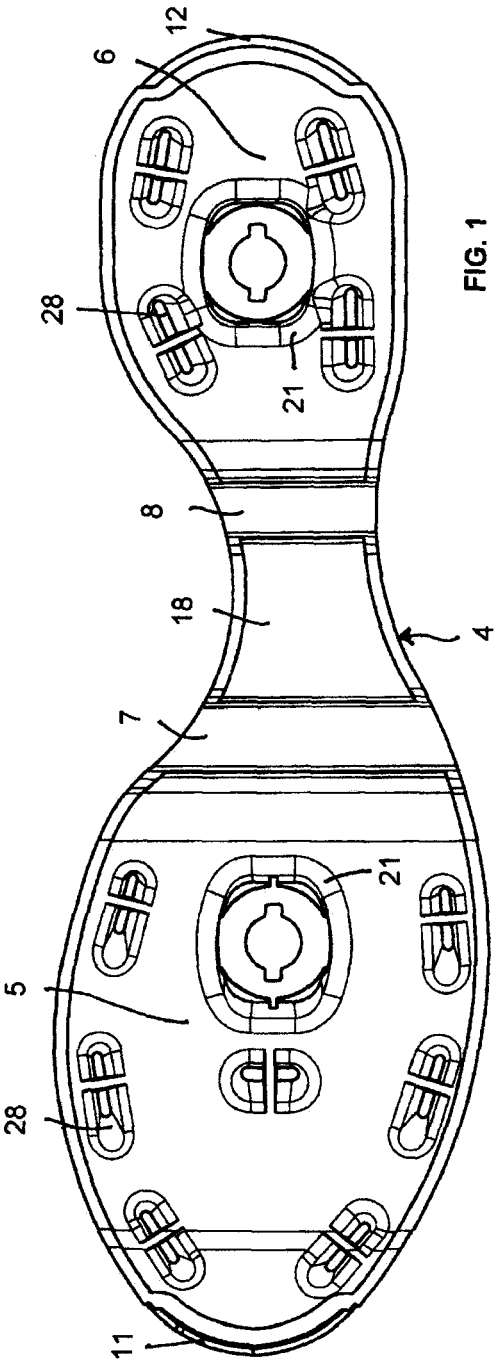

FIG. 1

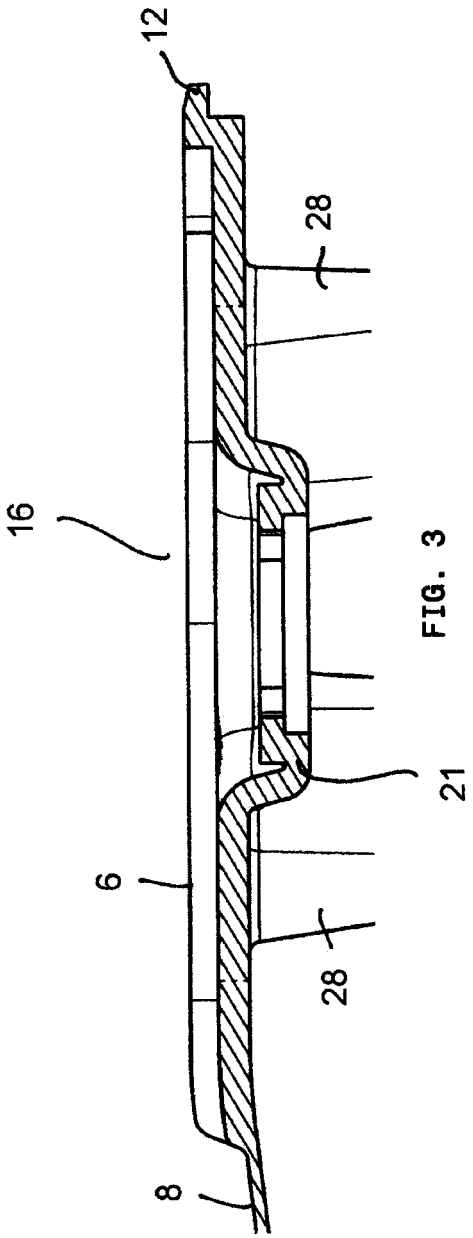

FIG. 3

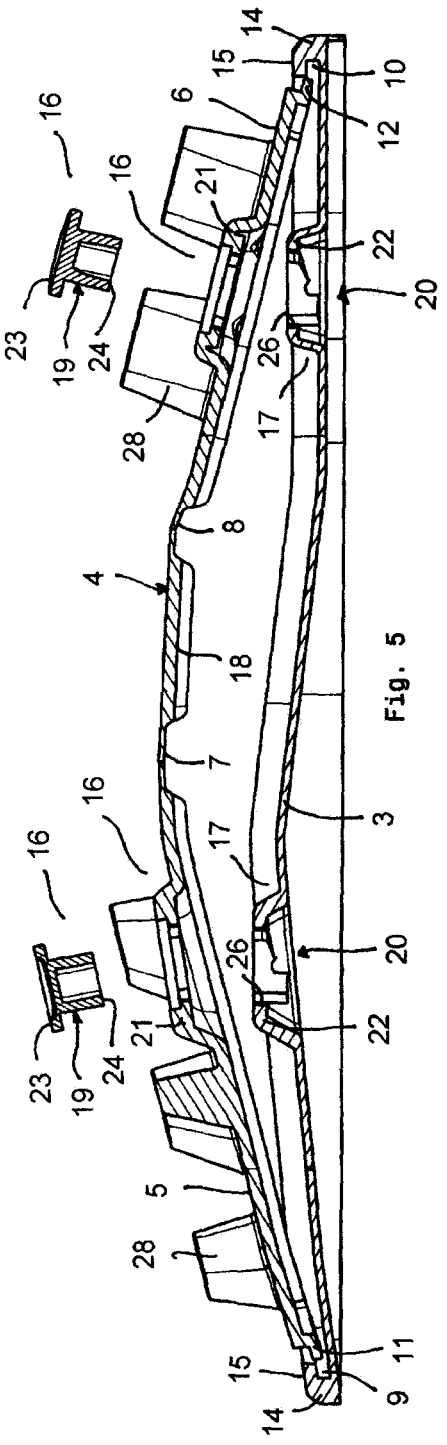
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Fig. 5

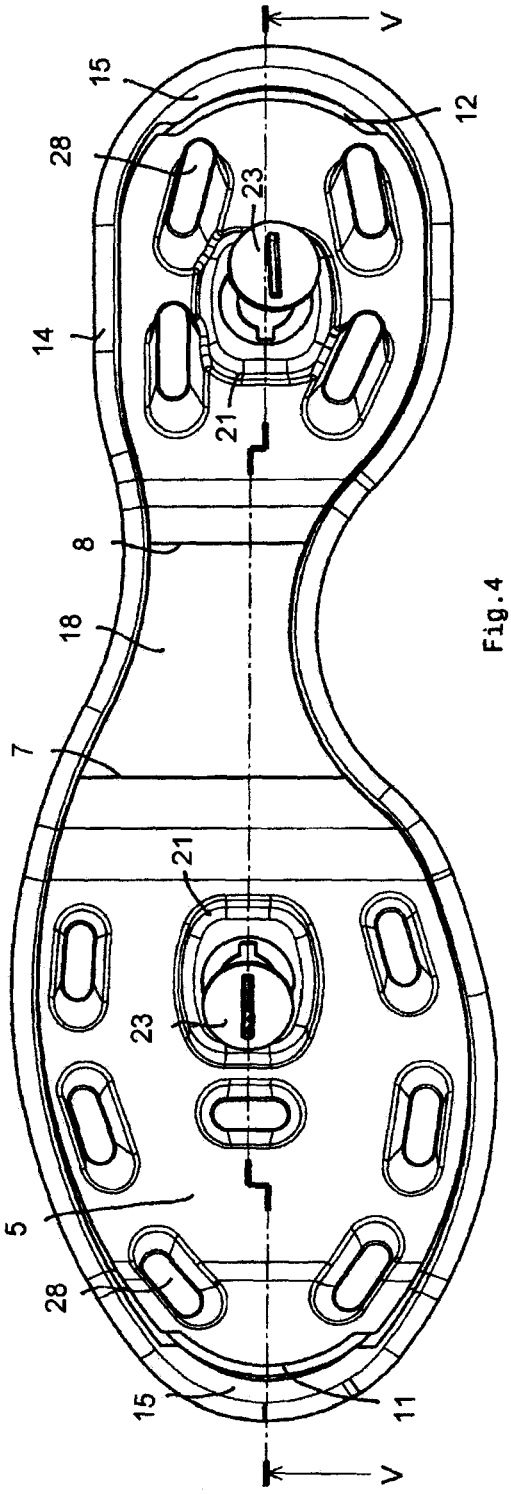
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Fig.4

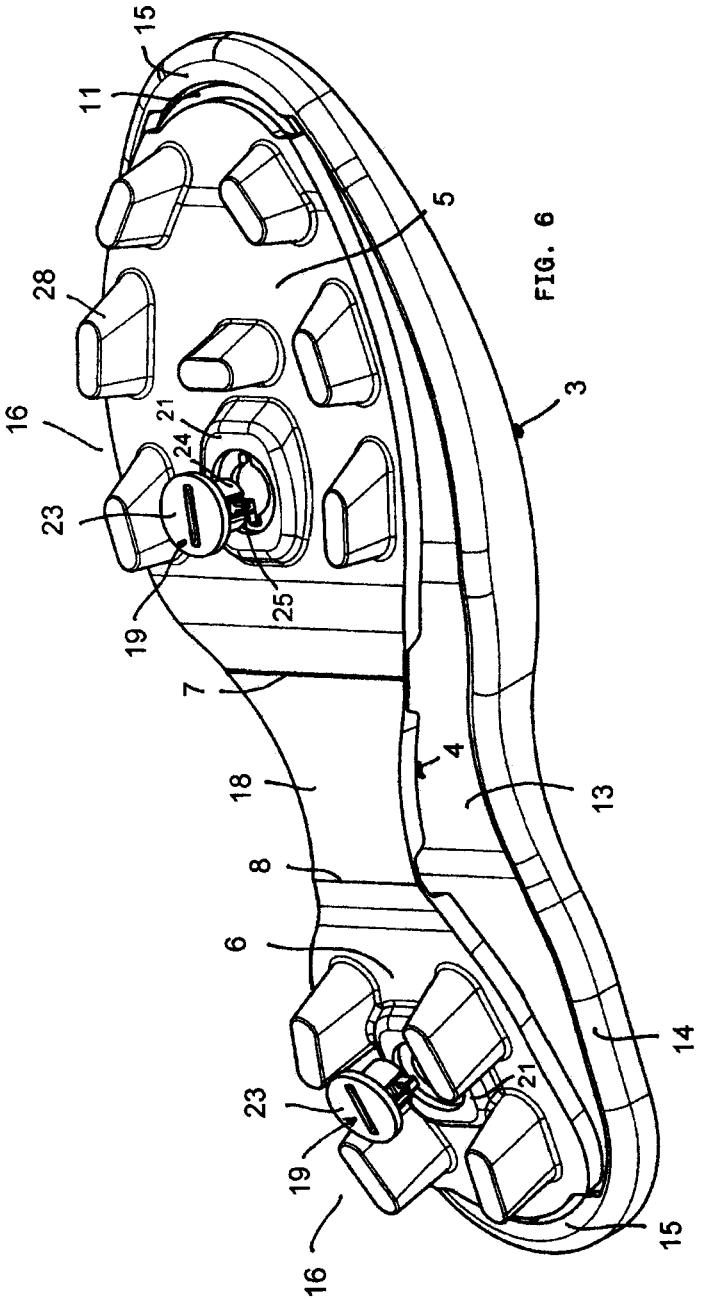

FIG. 6

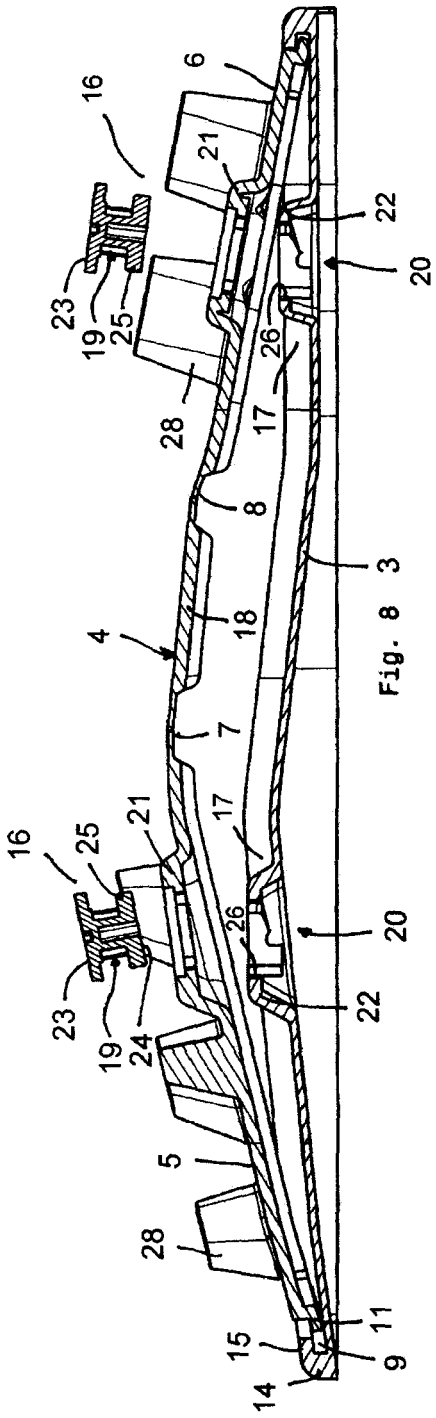
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Fig. 8

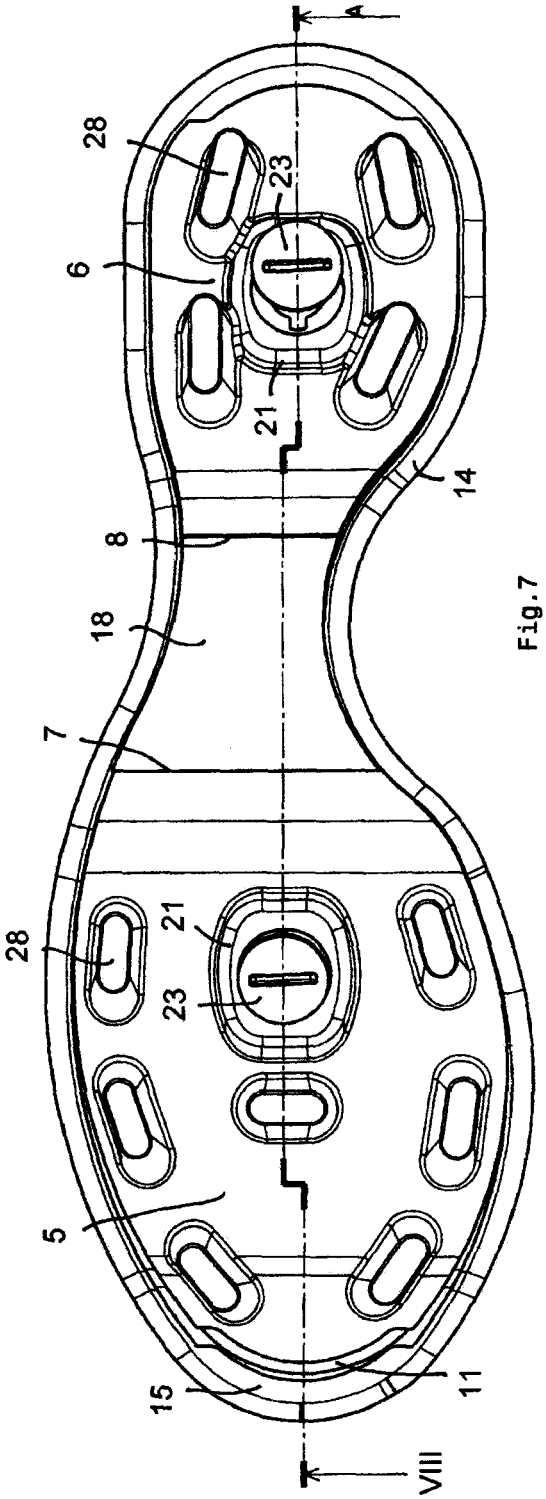
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Fig.7

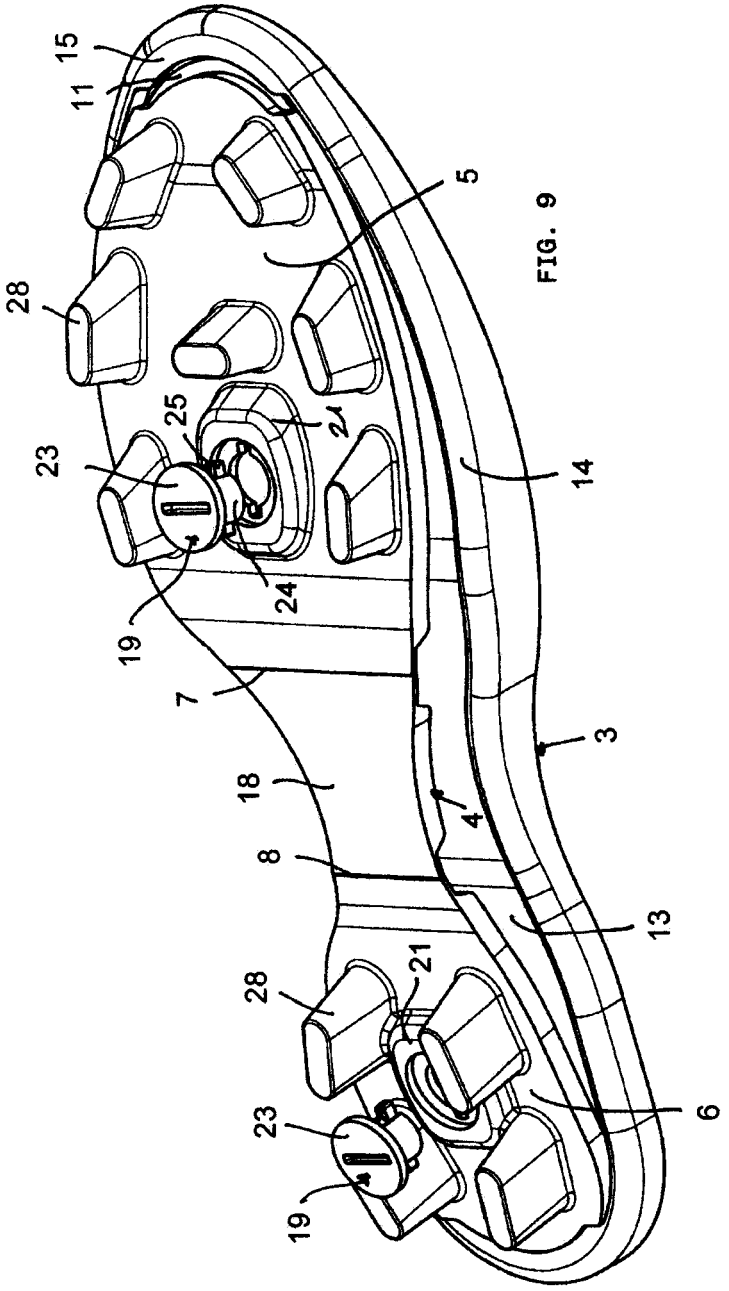

FIG. 9

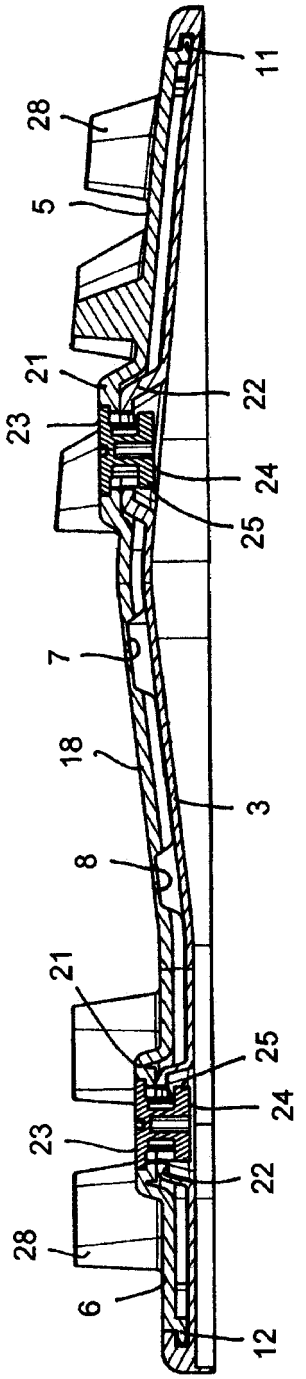

FIG. 12

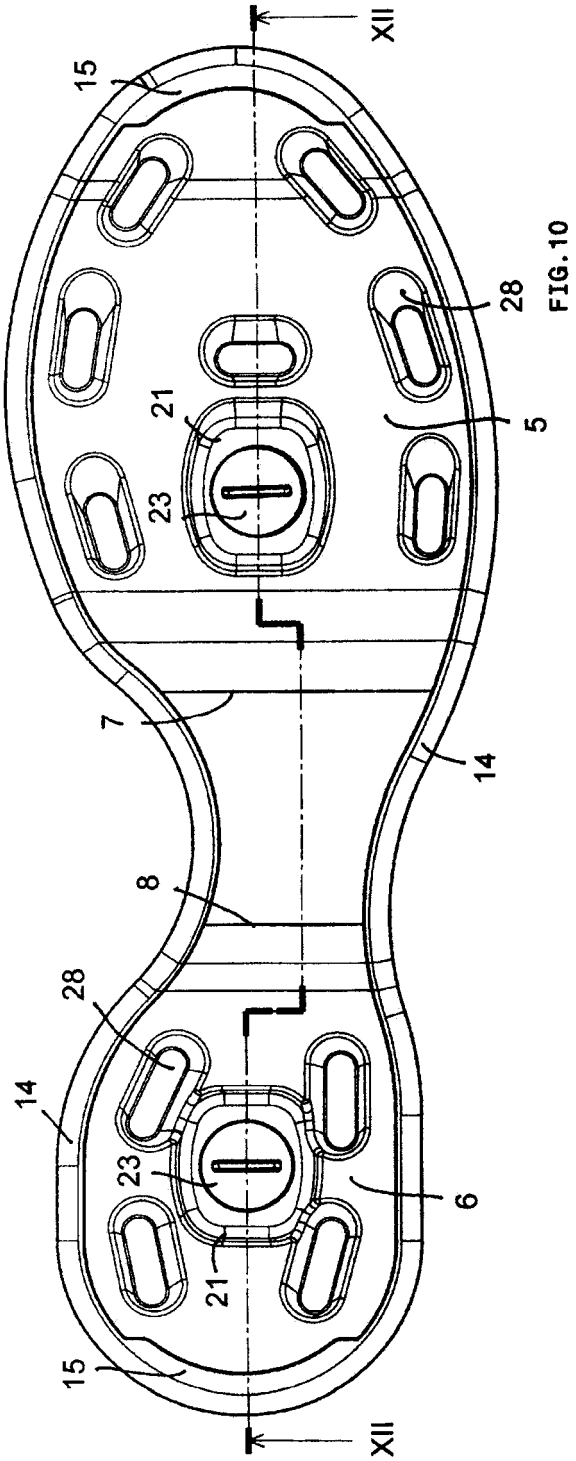

FIG.10

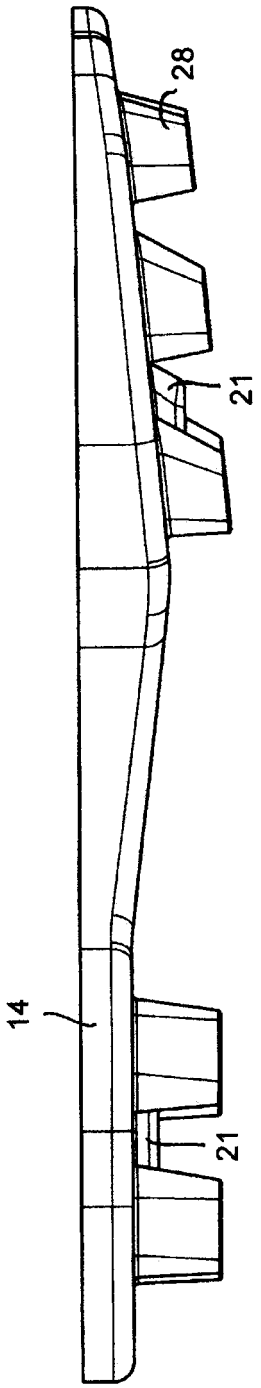

FIG.11

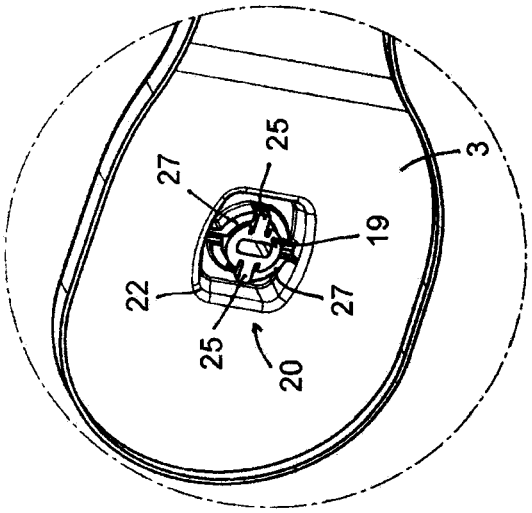

FIG. 13 A

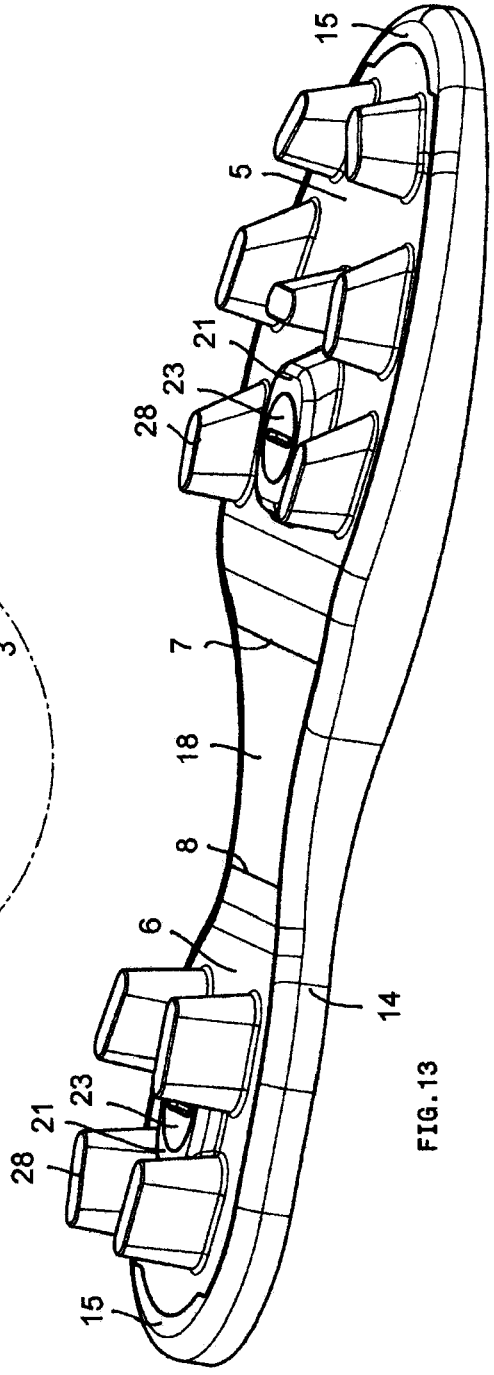

FIG.13

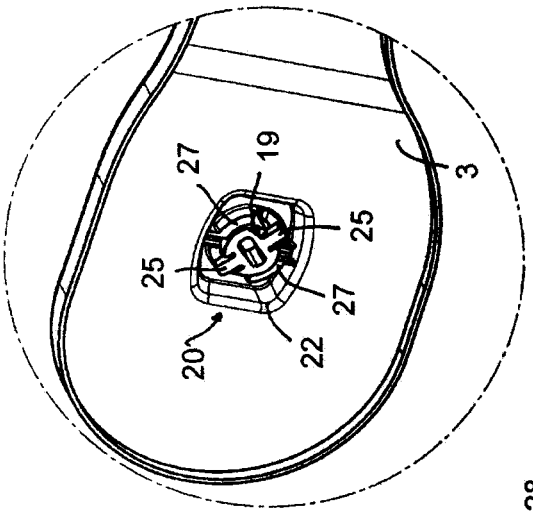

FIG. 14 A

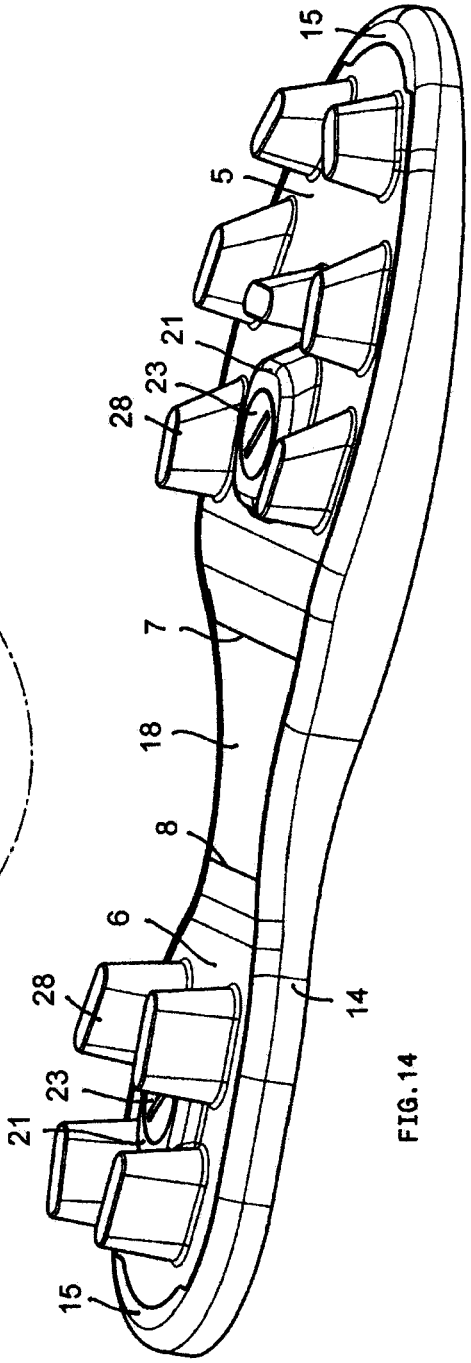

FIG. 14

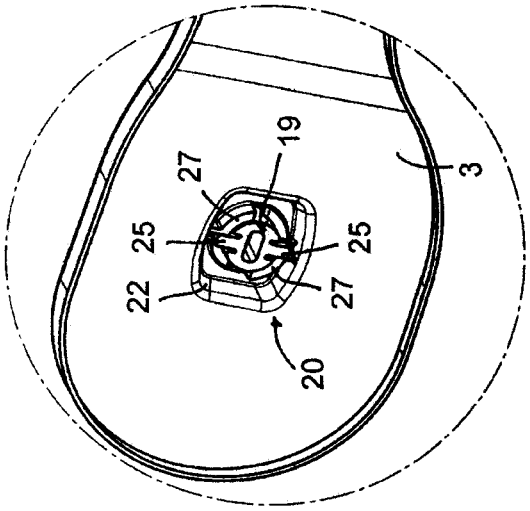

FIG. 15 A

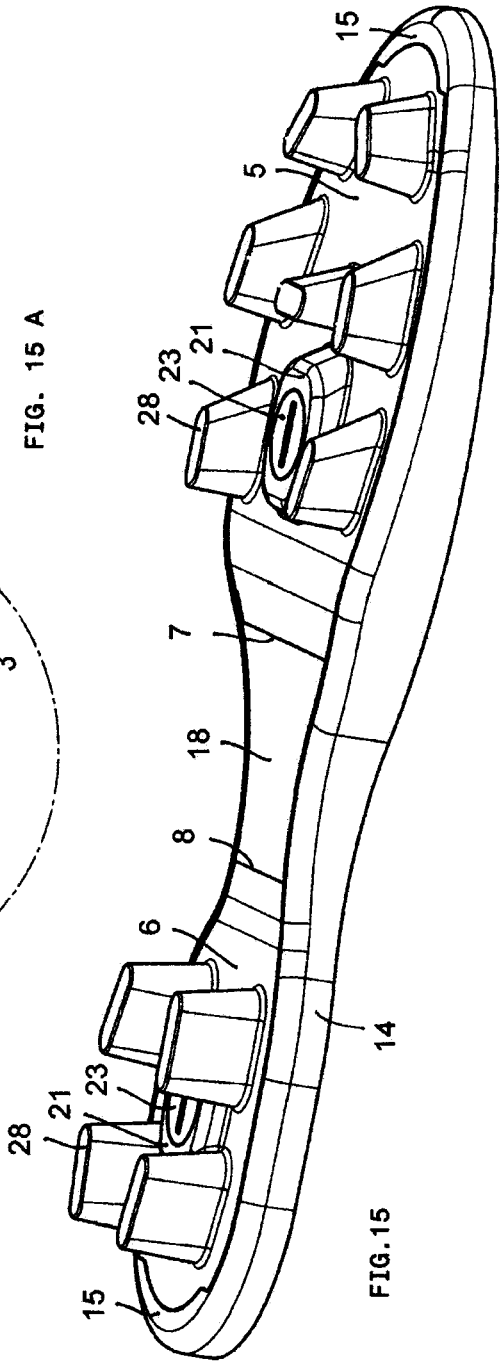

FIG.15

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 07 12 3384

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X Y	FR 2 790 370 A (ROCQUENCOURT DAVID [FR]) 8 September 2000 (2000-09-08) * page 3, line 24 - page 6, line 28; figures 1,10,11 *	1-7, 14-19 8-13,20	INV. A43B5/02 A43B13/14 A43B13/36
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A43B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	17 March 2008	Vesin, Stéphane

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17-03-2008

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