(54) An element, provided with a support frame, to be inserted into the structure of a shoe

Vorrichtung mit Trägerstruktur zum Einbau in ein Schuhwerk

Elément à insérer dans le structure d’une chaussure, comprenant armature de maintien

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Description

[0001] The present invention relates to an element provided with a support frame that can be inserted into the structure of a shoe and, more in particular, into an insole, arch support or wedge of a shoe, in order to vary their consistence and response to the stress.


[0003] Elements that can be inserted into the structure of shoes are already known, especially elements for sport shoes, these elements being made of different materials so that they present different rigidity and can vary the characteristics of the shoes as to elasticity, resistance to pressure, torsion, and so on.

[0004] More in particular they affect mainly the part of the heel, being this part the one having the greater influence on the general characteristics of the shoe when it is worn.

[0005] These arch supports, insoles or wedges are anyway not adapted to prevent the soles from twisting along the longitudinal axis of the shoe and therefore do not prevent people wearing the shoes from spraining their foot. Besides, they cannot prevent completely the sole from collapsing, more in particular in the part which is in contact with the arch of the foot.

[0006] It is an object of the present invention to eliminate the above mentioned drawbacks.

[0007] Said object is achieved by means of an element that can be inserted in the structure of a shoe, at the point where the foot rests, either partly or completely, the element being characterised in what is claimed in claim 1.

[0008] Additional characteristics and advantages will become clear from the following description which refers to the appended drawings, provided as non-restrictive example, and in which

- figure 1 is a perspective view of a sole of a shoe coupled to an insole provided with a buried frame according to the invention and visible in the hatched part;
- figure 2 is a side view of a shoe provided with the insole of figure 1;
- figure 3 is a perspective view of a sole of a shoe coupled with a wedge external to the shoe, provided of a buried frame according to the invention and visible in the hatched part;
- figure 4 is a side view of a shoe provided with the external wedge in figure 3;
- figure 5 is a perspective view of a wedge internal to the shoe, provided with a buried frame according to the invention and visible in the hatched part;
- figure 6 is a partially sectioned side view of a shoe provided with the internal wedge of figure 5;
- figure 7 is a perspective view of an arch support, provided with the buried frame according to the invention and visible in the hatched part;
- figure 8 is a partially sectioned side view of a shoe provided with the arch support of figure 7;
- figure 9 is a perspective view of a second embodiment of the frame in figure 1.

[0009] With reference to figure 1 and figure 2 appended, reference number 2 indicates the sole of a shoe 3, a sports-shoe in this case, but which could as well be a classical/elegant shoe, made by means of a mould in elastomeric material, or different elastic material. Said sole is connected to an insole 4, by means of a suitable process. In its central part, corresponding to the arch of the foot, the insole presents a basically x-shaped insert consisting of a frame 5, made of a material adapted to the object, plastic, for instance. It is to be understood that the shape of said frame here shown is not binding and that different shapes can be chosen without going beyond the scope of the appended claims. The frame 5 is buried in the material which the sole is made of, generally rubber, para rubber, synthetic materials or their equivalents, and is placed transversally to the longer axis of the shoe so that the ends 7 of the branches 8 and 9 of the X can basically reach the external surface at the sides of the insole 3, or remain slightly shorter so that they cannot be seen on the external part.

[0010] A preferred embodiment of the invention, presents said ends 7 connected between them by two side stands and supports adequately the arch of the foot with the X-shaped part of the frame. The insole of this kind will then allow all required movements and will control their amplitude according to the discipline for which the shoe has been designed. Figure 2 shows a complete shoe 3, provided with the insole 4 with the frame 5.

[0011] In a second embodiment of the present invention, shown in figures 3 and 4, the frame 5 is not buried in the insole but in an external wedge 13, connected to the sole 2 by means of a process similar to the one described above. As it can be seen in figure 4, in which a complete shoe 14 is shown, the frame is placed in the front part of the wedge, so that it is used at the central part of the sole of the foot.

[0012] A third embodiment of the invention, shown in figures 5 and 6, presents the frame 5 buried in a wedge 16 that can be placed inside the shoe 17 (fig.6) achieving more or less the same effect provided by the wedge 13 of the embodiment previously described, with reference to figures 3 and 4. In the two wedges 13 and 16 described above, the stands 10 and 11 are in basically external position, or slightly internal and therefore buried in the material of which the wedges are made.

[0013] In another embodiment of the present invention, shown in figures 7 and 8, the frame 5 is inserted in the central part, into an arch support 18 which, in order to achieve the effects wanted, must be inserted inside the shoe 19 (figure 8) over the vamp 20 on which the sole is stuck. In this case too the stands 10 and 11 are positioned as in the embodiments previously described.

[0014] In a second embodiment of the frame 5, shown
in figure 9, the ends of the branches of the X are not united by stands but are separated and provided with appendixes 22 directed upwards and extending in order to be basically parallel to the longitudinal axis of the element that can be inserted and includes the frame 5.

[0015] It is to be understood that the shape and the materials used in the making of the frame of the element to be inserted and of the sole can vary without going beyond the scope of the present invention, which is defined in the appended claims.

Claims

1. An element to be inserted, at a part where the foot rests either partially or completely, into the structure of a shoe (3, 14, 17, 19), the shoe being of the type provided with a sole (2) made of elastic material, characterised in that it is provided with a basically x-shaped frame (5) which is buried in it transversally to its longer axis.

2. An element to be inserted as claimed in claim 1, characterised in that the ends (7) of the branches (8, 9) of the frame (5) are connected between them by means of stands (10, 11) made integral to them.

3. An element to be inserted as claimed in claim 2, characterised in that the stands (10, 11) are basically external to the element to be inserted.

4. An element to be inserted as claimed in claim 2, characterised in that the stands (10, 11) are basically internal to the element to be inserted.

5. An element to be inserted as claimed in claim 1, characterised in that the ends of the branches of the frame (5) are provided with appendixes (22) directed upwards and parallel to the longitudinal axis of said element.

6. An element to be inserted as claimed in claim 1, characterised in that it consists of an insole (4) connectable to the sole (2) of the shoe (3).

7. An element to be inserted as claimed in claim 1, characterised in that it consists of a wedge (13) connectable to the sole (2) of the shoe (14).

8. An element to be inserted as claimed in claim 1, characterised in that it consists of a wedge (16) that can be placed inside the shoe (17).

9. An element to be inserted as claimed in claim 1, characterised in that it consists of an arch support (18) that can be placed inside the shoe (19).

Patentansprüche

1. Element, das dazu dient, in einem Bereich in den Aufbau eines Schuhs (3, 14, 17, 19) eingefügt zu werden, wo der Fuß entweder teilweise oder vollständig aufliegt, wobei der Schuh von der Art ist, die eine aus elastischem Werkstoff hergestellte Sohle (2) aufweist, dadurch gekennzeichnet, dass das Element mit einem im Wesentlichen X-förmigen Rahmen (5) versehen ist, der darin quer zu dessen Längsachse eingebettet ist.

2. Einzufügendes Element nach Anspruch 1, dadurch gekennzeichnet, dass die Enden (7) der Streben (8, 9) des Rahmens (5) über Stege (10, 11) miteinander verbunden sind, die einstücksig mit diesen ausgebildet sind.

3. Einzufügendes Element nach Anspruch 3, dadurch gekennzeichnet, dass sich die Stege (10, 11) im Wesentlichen außerhalb des einzufügenden Elements befinden.

4. Einzufügendes Element nach Anspruch 2, dadurch gekennzeichnet, dass sich die Stege (10, 11) im Wesentlichen innerhalb des einzufügenden Elements befinden.

5. Einzufügendes Element nach Anspruch 1, dadurch gekennzeichnet, dass die Enden der Streben des Rahmens (5) mit Fortsätzen (22) versehen sind, die nach oben und parallel zu der Längsachse des Elements ausgerichtet sind.

6. Einzufügendes Element nach Anspruch 1, dadurch gekennzeichnet, dass dieses eine Einlegesohle (4) darstellt, die sich mit der Sohle (2) des Schuhs (3) verbinden lässt.

7. Einzufügendes Element nach Anspruch 1, dadurch gekennzeichnet, dass dieses aus einem Keil (13) besteht, der sich mit der Sohle (2) des Schuhs (14) verbinden lässt.

8. Einzufügendes Element nach Anspruch 1, dadurch gekennzeichnet, dass dieses einen Keil (16) darstellt, der sich in den Schuh (17) einlegen lässt.

9. Einzufügendes Element nach Anspruch 1, dadurch gekennzeichnet, dass dieses eine Senkfußendlage (18) darstellt, die sich in den Schuh (19) einlegen lässt.
Revenements

1. Elément destiné à être inséré, à une partie où le pied repose partiellement ou totalement, dans la structure d'une chaussure (3, 14, 17, 19), la chaussure étant du type comportant une semelle (2) réalisée en matériau élastique, caractérisé en ce qu'il présente une ossature (5) basiquement en forme de X, qui est noyée dans celui-ci selon une direction transversale par rapport à son axe longitudinal.

2. Elément destiné à être inséré selon la revendication 1, caractérisé en ce que les extrémités (7) des branches (8, 9) de l'ossature (5) sont reliées entre elles par des ligaments (10, 11) qui sont d'une pièce avec celles-ci.

3. Elément destiné à être inséré selon la revendication 2, caractérisé en ce que les ligaments (10, 11) sont basiquement externes audit élément destiné à être inséré.

4. Elément destiné à être inséré selon la revendication 2, caractérisé en ce que les ligaments (10, 11) sont basiquement internes audit élément destiné à être inséré.

5. Elément destiné à être inséré selon la revendication 1, caractérisé en ce que les extrémités des branches de l'ossature (5) présentent des appendices (22) dirigés vers le haut et s'étendant parallèlement à l'axe longitudinal dudit élément.

6. Elément destiné à être inséré selon la revendication 1, caractérisé en qu'il consiste en une première (4) pouvant être fixée à la semelle (2) de la chaussure (3).

7. Elément destiné à être inséré selon la revendication 1, caractérisé en ce qu'il consiste en une talonnette (13) pouvant être fixée à la semelle (2) de la chaussure (14).

8. Elément destiné à être inséré selon la revendication 1, caractérisé en ce qu'il consiste en une talonnette (16) qui peut être disposée à l'intérieur de la chaussure (17).

9. Elément destiné à être inséré selon la revendication 1, caractérisé en ce qu'il consiste en un support de voûte plantaire (18) qui peut être disposé à l'intérieur de la chaussure (19).