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(54) **Especially comfortable anatomical arch support**

Anatomische Fusswölbungstütze

Support de voûte plantaire anatomique

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Description

[0001] The present patent application relates to an anatomical arch support capable of considerably increasing the comfort of the shoes that adopt it.

[0002] As it is known, in the last few years the technology of the footwear sector has been engaged to provide the highest comfort possible for the foot and, in particular, optimal support conditions for the plant with respect to the sole of the shoe.

[0003] To this purpose, the use of the so-called anatomical arch supports has become very popular in the last few years. Apart from being soft, the said anatomical arch supports are characterised in that their upper surface features a series of raised profiles and concavities that perfectly match with the plant, in order to provide correct support to the foot from the physiological viewpoint.

[0004] According to this, the currently available anatomical arch supports feature a curved profile capable of acting as support for the plantar arch in the central part, a sort of groove with transversal pattern capable of acting as support for the retro-digital area in the front part, as well as two main cavities, with the front and the rear cavity containing the toes and the heel, respectively.

[0005] CH-A-496 411 discloses a support with the features of the preamble of claim 1. Furthermore, it comprises a slightly raised area with a triangular shape, with the vertex looking a backwards and a fairly protruding relief with a transversal pattern.

[0006] The purpose of this invention is to provide an anatomical arch support featuring better comfort with respect to traditional arch supports. The arch support according to this invention is the result of a series of researches and experiments. Thanks to its innovative morphological characteristics and considerable differences compared to traditional arch supports, the said arch support is capable of offering an excellent level of comfort to the user while walking.

[0007] For major clarity the description of the invention continues with reference to the enclosed drawing, which is intended for purposes of illustration and not in a limiting sense, whereby:

- figure 1 is an axonometric view of the arch support according to the present invention;
- figure 2 is a section of figure 1 with plane II-II;
- figure 3 is a section of figure 1 with plane III-III;
- figure 4 is a section of figure 1 with plane IV-IV;
- figure 5 is a section of figure 1 with plane V-V;
- figure 6 is a section of figure 1 with plane VI-VI;
- figure 7 is a section of figure 1 with plane VII-VII.

[0008] With reference to the above figures, this invention relates to an arch support (1) preferably made of latex for higher softness.

The modelling areas formed on the upper surface are

capable of exactly matching with the user's plant and, consequently, offering optimal support conditions to the plant of the foot.

In particular, the arch support (1) according to the present invention features:

- a slightly raised retro-capital olive-shaped area (2), preferably with triangular shape, with the vertex looking backwards, used to gently discharge all metatarsal heads, without overloading the second and third ones;
- a flat retro-digital support (3) with transversal pattern, capable of improving the action of the toes on the ground when acting as springs to lift the metatarsal heads while walking;
- a frontal cavity (4) capable of containing the toes, housing a longitudinal septum (4a) suitable for providing lateral support to the hallux and maintaining it separate from the remaining four toes, which, in turn, find lateral support on the suitably raised external perimeter (5) of the arch support according to the present invention; it being provided that the function of the longitudinal septum (4a) is to prevent the formation of the extremely painful interdigital ty-lomas between the 1st and the 2nd toe;
- a central raised area (6) located on the internal side, capable of perfectly matching with the plantar arch while walking, as well as carrying out a valuable, although modest, phlebologic action through a more effective squeezing of the plantar pump;
- a bowl-shaped cavity (7) on the heel capable of reducing the tossing of the heel when the foot lands on the ground, consequently increasing the stability of the ankle and preventing the risk of impingement pain on the neck of the foot.

[0009] Although it is generally stated in the introduction that the arch support is preferably made of latex, it must be noted that its best functional capacities - also in terms of stimulation of the blood circulation in the foot - are provided when the said arch support is made with the specific material known as "VALSOFT" produced by Elastogran Italia S.p.a. (BASF Group).

Claims

1. Especially comfortable anatomical arch support, whereby the upper surface features:

- a frontal cavity (4) capable of containing the toes, housing a longitudinal septum (4a) suitable for providing lateral support to the hallux and maintaining it separate from the remaining four toes; it being provided that the said cavity is bordered on the external side by a raised external perimeter (5) capable of providing support to the four minor toes;

- a bowl-shaped cavity (7) on the heel;

ist und von der Firma Elastogran Italia S.p.a. (BASF-Gruppe) produziert wird.

characterised in that it has:

- a flat support (3) with a transversal pattern, located in retro-digital position;
- a slightly raised olive-shaped area (2), preferably with triangular shape, with the vertex looking backwards, located in retro-capital position, used to gently discharge all metatarsal heads, without overloading the second and third ones ;
- a central raised area (6) located on the internal side, capable of perfectly matching with the plantar arch.

2. Especially comfortable anatomical arch support, according to claim 1, **characterised in that** the same is produced using the specific material known as "VALSOFT™" produced by Elastogran Italia S.p.a. (BASF Group).

Patentansprüche

1. Anatomisches Fußbett mit hohem Komfort, dessen obere Oberfläche folgendes aufweist:

- eine vordere Vertiefung (4), die in der Lage ist, die Zehen aufzunehmen und in welcher eine Längsscheidewand (4a) angebracht ist, die den großen Zehen seitlich abstützt und von den übrigen vier Zehen trennt, wobei vorgesehen ist, dass diese Vertiefung auf der Außenseite durch einen erhöhten umlaufenden Rand (5) begrenzt wird, der den vier kleineren Zehen Halt gibt;
- eine schalenförmige Vertiefung (7), die an der Ferse herausgearbeitet ist, **dadurch gekennzeichnet, dass** sie folgendes umfasst:
- eine flache, beinahe quer verlaufende Auflage (3), die sich in retrodigitaler Position befindet;
- eine nicht allzu stark betonte Pelotte (2), vorzugsweise mit dreieckiger Grundfläche und einer nach hinten gerichteten Spitze, die sich in retrokapitaler Position befindet und dazu dient, alle Metatarsalköpfe sanft abzustützen, ohne den zweiten und dritten Metatarsalkopf zu überlasten;
- einen erhöhten mittleren Bereich (6), der sich an der Innenseite befindet und perfekt mit der Erhebung für das Fußgewölbe verbindet.

2. Anatomisches Fußbett mit hohem Komfort gemäß Anspruch 1, **dadurch gekennzeichnet, dass** es aus einem speziellen Material hergestellt wird, das im Handel unter dem Namen "VALSOFT®" bekannt

Revendications

1. Semelle anatomique particulièrement confortable où la surface supérieure présente:

- une cavité antérieure (4) en mesure de contenir les doigts, sur laquelle une séparation longitudinale (4a) est réalisée, séparation apte à fournir un support latéral à l'orteil et donc à le maintenir séparé des autres quatre doigts; étant prévu que cette cavité est délimitée sur le côté externe par un bord de périmètre rehaussé (5), apte à fournir un support aux quatre autres doigts plus petits;
- une cavité en forme de coupe (7), réalisée en correspondance du talon, **caractérisée en ce qu'elle** présente;
- un support plat (3), ayant direction quasi transversale, situé en position rétro-digitale;
- une olive (2), légèrement prononcée, ayant préférentiellement une plante triangulaire avec le sommet tourné vers l'arrière, située en position rétro-capitale, préposée à décharger doucement toutes les têtes des métatarses, sans surcharger ni la seconde, ni la troisième;
- une zone rehaussée médiane (6), située sur le côté interne, apte à se conjuguer parfaitement avec l'arc plantaire.

2. Semelle anatomique particulièrement confortable, selon la revendication 1, **caractérisée en ce qu'elle** est réalisée en utilisant une matière spécifique connue dans le commerce sous le nom de "VALSOFT®" produite par la société Elastogran Italia S.p.a. (BASF Group).

