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(54) **STRUCTURE OF HEEL COUNTER**

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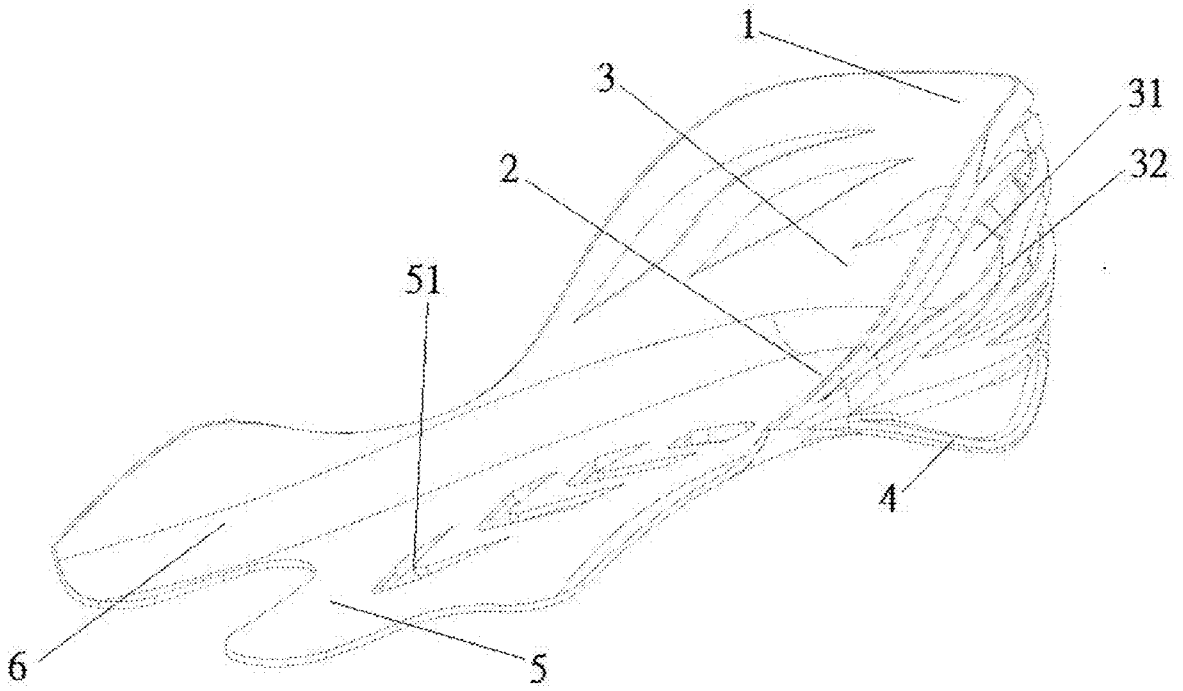
(57) **ABSTRACT**

A heel counter is roughly a U-shaped cup. The bottom of the cup is a support part with the effect of uniformly distributing pressure on the heel. The cup rim embraces the surrounding of the heel to provide protection and stability. The cup rim has several hollow parts to reduce the overall hardness, to enhance comfort by providing suitable elasticity, and to circulate air. The bottom surface of the support part of the cup is provided with arc-shaped supporting elastic plate to alleviate pressure on the heel by absorbing shocks. A midfoot and phalanx support part is formed from the cup bottom toward the midfoot. A lateral longitudinal arc support part is formed from the outer side of the cup bottom toward the midfoot.



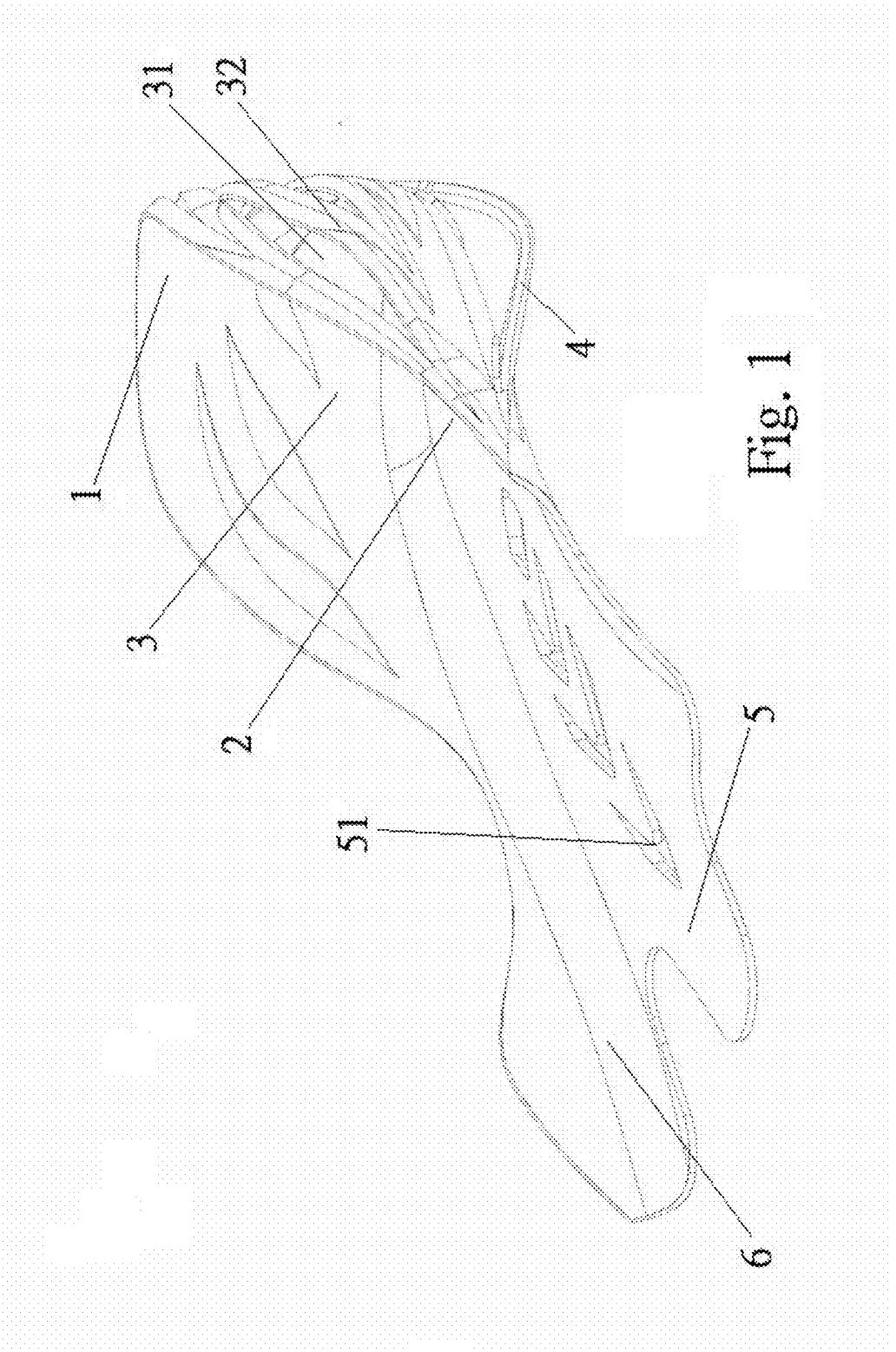


Fig. 1

STRUCTURE OF HEEL COUNTER

BACKGROUND OF THE INVENTION

[0001] 1. Field of Invention

[0002] The invention relates to a shoe and, in particular, to an improved heel counter.

[0003] 2. Related Art

[0004] To avoid a sprained ankle due to the sideway motion of the show heel and to prevent vertical motion of the shoe heel due to deformation, the shoe heel is often installed with a hard protector called the heel counter. It is used to fix the shoe heel. The counter is particularly important for motion control shoes.

[0005] The structure of a typical heel counter has been detailed in U.S. Pat. No. 4,821,430. The counter is roughly a U-shaped cup, whose bottom is the support part to distribute pressure on the heel. The cup rim with a narrow upper part and a wide lower part embraces the surrounding of the heel, providing protection and stability.

[0006] The inside of the cup bottom further extends toward the midfoot to form a triangle-like medial longitudinal arch support section.

[0007] However, the material of the cup rim of the above-mentioned heel counter is an integrally formed hard plastic. Although the heel counter provides protection, the air circulation around the heel is hindered because there is no hollow part. Such a plastic reduces the comfort of the shoes. This needs to be improved.

[0008] The bottom surface of the support part at the cup bottom of the above-mentioned heel counter is directly attached onto the outer sole. Therefore, the heel has less ability to absorb shocks and alleviate the pressure. This needs to be improved.

[0009] Moreover, although the above-mentioned heel counter has an extended support section to protect the medial longitudinal arch, there is no appropriate protection for the lateral longitudinal arch and the phalanx. This needs to be improved.

SUMMARY OF THE INVENTION

[0010] In view of the foregoing, the invention provides an improved heel counter.

[0011] To solve the drawbacks of the heel counter in the prior art, the disclosed heel counter is roughly a U-shaped cup, whose rim has several hollow parts to reduce the hardness thereof, to improve comfort by providing appropriate elasticity, and to circulate air.

[0012] The disclosed heel counter is roughly a U-shaped cup, wherein the bottom surface of the support part at the cup bottom has an arc-shaped supporting elastic plate, thereby better absorbing shocks on the heel to alleviate the pressure.

[0013] The disclosed heel counter is roughly a U-shaped cup, wherein the cup bottom is extended toward the midfoot with a midfoot and phalanx support part.

[0014] The disclosed heel counter is roughly a U-shaped cup, wherein the outside is extended toward the midfoot with an L-shaped lateral longitudinal arch support part.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015] These and other features, aspects and advantages of the invention will become apparent by reference to the following description and accompanying drawings which are given by way of illustration only, and thus are not limitative of the invention, and wherein:

[0016] FIG. **1** is a perspective view of the invention.

DETAILED DESCRIPTION OF THE INVENTION

[0017] The present invention will be apparent from the following detailed description, which proceeds with reference to the accompanying drawings, wherein the same references relate to the same elements.

[0018] Please refer to FIG. **1**. Similar to the heel counter in the prior art, the invention is roughly a U-shaped cup **1**. The cup bottom is a support part **2** to distribute pressure on the heel. The cup rim **3** with a narrow upper part and a wider lower part embraces the surrounding of the heel to provide protection and stability.

[0019] The invention differs from the prior art in that the cup rim **3** has several hollow parts **31** to reduce the overall hardness, to improve comfort by providing appropriate elasticity, and to circulate air.

[0020] The invention differs from the prior art in that the bottom surface of the support part **2** has an arc-shaped supporting elastic plate **4** to better absorb shocks on the heel and alleviate pressure.

[0021] The invention differs from the prior art in that the cup bottom is extended toward the midfoot with a midfoot and phalanx support part **5**.

[0022] The invention differs from the prior art in that the outside of the cup bottom is extended toward the midfoot with an L-shaped lateral longitudinal arch support part **6**.

[0023] The surrounding of any of the hollow parts on the cup rim is formed with a reinforcing rib **32**.

[0024] The midfoot and phalanx support part **5** extending from the cup bottom toward the midfoot has several hollow parts **51** to reduce the overall hardness of the support part, to keep appropriate elasticity, and to provide more comfort.

[0025] Although the invention has been described with reference to specific embodiments, this description is not meant to be construed in a limiting sense. Various modifications of the disclosed embodiments, as well as alternative embodiments, will be apparent to persons skilled in the art. It is, therefore, contemplated that the appended claims will cover all modifications that fall within the true scope of the invention.

What is claimed is:

1. A heel counter being roughly a U-shaped cup, whose bottom is a support part to distribute pressure on the heel and whose rim embraces the surrounding of a heel to provide protection and stability, wherein the cup rim has several hollow parts to reduce the overall hardness thereof, to improve comfort by providing appropriate elasticity, and to circulate air; the bottom surface of the support part at the cup bottom has an arc-shaped supporting elastic plate to better absorb shocks on the heel and alleviate the pressure; the cup bottom is extended toward the midfoot with a midfoot and phalanx support part; and the outside of the cup bottom is extended toward the midfoot with a lateral longitudinal arch support part.

2. The heel counter of claim **1**, wherein any of the hollow parts on the cup rim is reinforced with a rib.

3. The heel counter of claim **1**, wherein the midfoot and phalanx support part extending from the cup bottom toward the midfoot has several hollow parts to reduce the overall hardness thereof and to maintain appropriate elasticity.

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