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(54) **Clear shoe sole associated with internal gel with common shock absorbers ovals to cushion the impact when walking**

(57) The present invention refers to a clear shoesole, soft and flexible polyurethane that is complemented with a matching shoeplate gel that can be removed from the shoe. Both show the same design of oval-shock absorb-

ers, which causes the reduction of the impact when walking and the increase of the cushioning effect. Applicable to any type of footwear regardless of sex and age.

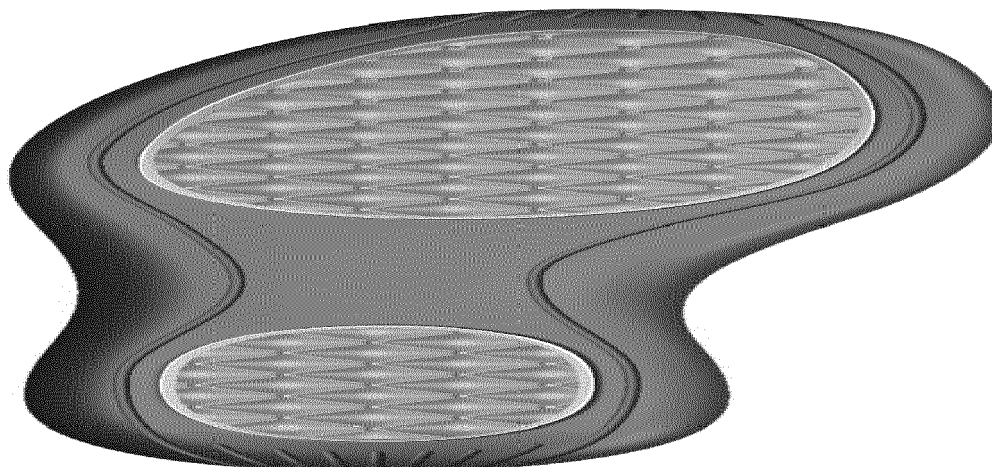


FIG. 1

## Description

**[0001]** This invention relates to the field of the shoe-making and the manufacture of footwear and parts thereof, as well as taking care of the integral health of the human by favoring the footfall and reduce the impact when walking.

## Background

**[0002]** Nowadays, there are different technical solutions that describe shoes or components thereof such as shoe soles, heels that favor the cushion of the impact when walking in a aesthetic way, most of people use rubber soles of transparent materials. The most relevant are described below.

**[0003]** The patent WO2002982 protects a type of sporting shoe that contains a colored liquid or gel in reservoirs that communicate using transparent pipes with the shoe sole. These are external, visible and can extend throughout the shoe. Its function is to absorb and visualize the shock of impact. On its behalf, the utility model JP05018305U suggests a vibration damping material that is in the clear shoe sole, objectively in the midsole forming prismatic projections.

**[0004]** The patent JP09182603 suggests a shoe that is fitted with a cushioning in the heel that is composed of two chambers. The first is transparent and is filled with a liquid or gel, is linked with the second available on the shoe sole and both are filled with gas cells between their walls. The shoe sole has openings that allow the composition of the gel that can be seen from the outside. In the case of patent EP0500247 describes a shoe with a sole which presents peripheral edges and an element of cushioning with joint flexion in the camera, with flexible and transparent walls, filled with a liquid gel-based composition that is transmitted by the partitions.

**[0005]** The patent JP02191403 protects a shoe sole that absorbs shocks, through the inclusion of a soft and elastic body transparent with compression holes in the heel. These holes consist of circular shapes, elliptical and polygon elements in the horizontal section and are drilled vertically in a transparent body composed of polyvinyl chloride resin and transparent rubber. Also, the utility model CN201675126OR describes a novel elastic shoe sole that presents a block of cushioning in the heel, which has different colors on both sides of rubber and is transparent.

**[0006]** The technical object of the invention refers to a clear shoe sole, soft and flexible polyurethane and a gel-associated shoe template, which are matching dampers ovals that increase the damping when walking. This design improves the cushioning effect of the footfall, as well as allows the removal of the soleplate of the shoe to visualize and feel its technical qualities.

## Brief description of the drawings

### [0007]

5 Figure 1 is an aerial view of the soleplate and the shoe sole without stepping.

Figure 2 is a side view of the soleplate with gel and the sole of the shoe without stepping or in static form.

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Figure 3 is a side view of the soleplate with gel and the shoe sole shoe when footfall or stepping has done, once exercised the pressure of the foot when walking.

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## Detailed description of the invention

**[0008]** The shoe sole of the present invention is transparent (1), soft and flexible, made of polyurethane and presents ovals shock absorbers of the step when walking. It is complemented with a soleplate that contains gel (1) and the same design of ovals being both matching and engaged, causing an increase of the cushioning effect.

25 **[0009]** Its technical characteristics as the inner qualities of cushioning can be felt and observed due to the design they present, in addition to reduce the impact of the footfall to walk (3). The soleplate consists of a system that allows removal of the shoe to appreciate its qualities.

30 **[0010]** May be applied to any type of footwear, either as a child, woman, man. Casual, semi-formal, school, sports and sandals what offers you a great versatility.

35 **[0011]** During the manufacturing process, the injection of polyurethane shoe sole avoiding that the transparent area is contaminated with another color gel is carried out. It is a rather cheap procedure, in which the materials used represent 10 per cent of its cost. In addition, the coupling process for the ovals in the shoe sole and soleplate requires a special design.

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## Claims

1. Sole plate associated with soleplate that presents special design and matching characterized because it reduces the impact when walking and increases the power of cushioning.
2. Shoe sole associated with a soleplate that presents special design and matching according to the claim 1, wherein the shoe sole is soft transparent and flexible.
3. A Shoe sole associated with a soleplate that presents special design and matching according to claim 1, wherein the shoe sole is soft transparent and flexible.

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4. A Shoe sole associated with a shoe plate that presents special design and matching according to claim 1, wherein the shoe sole presents cushioning ovals of footstepping when walking. 5
5. A shoe sole associated with a shoeplate with special design and matching according to claim 1; wherein shoeplate contains gel and the same design of the soleplate ovals. 10
6. Soleplate associated with template with special design and matching according to claim 1, wherein technical characteristics and the inner qualities of cushioning can be felt and observed due to its design and transparency. 15
7. A shoe sole associated with a shoeplate with special design and matching according to claim 1; wherein shoeplate may be taken out from the shoe to appreciate technical quality thereof. 20
8. Shoeplate associated with a shoe plate with special design and matching according to claim 1, wherein they apply to all kinds of footwear regardless of the age and sex. 25

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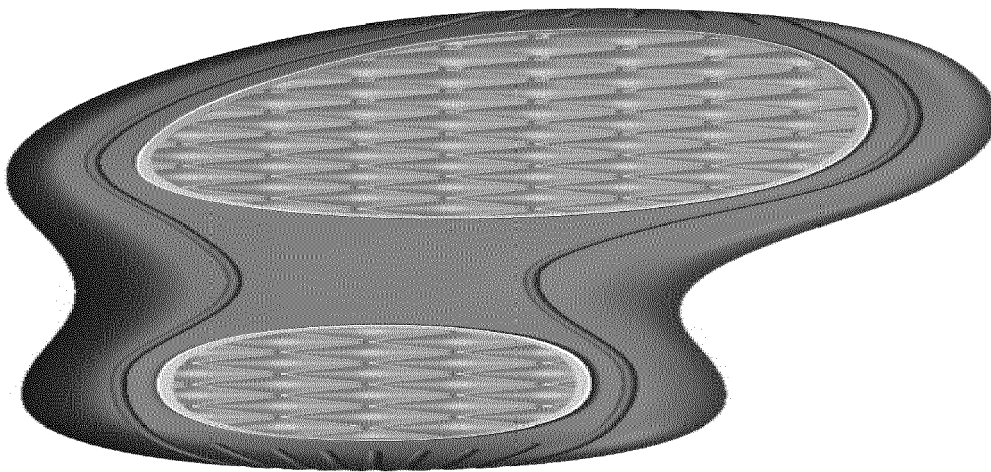


FIG. 1

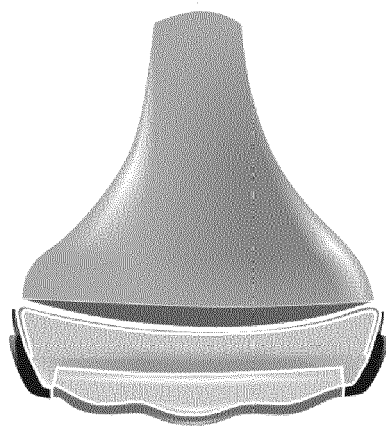


FIG. 2

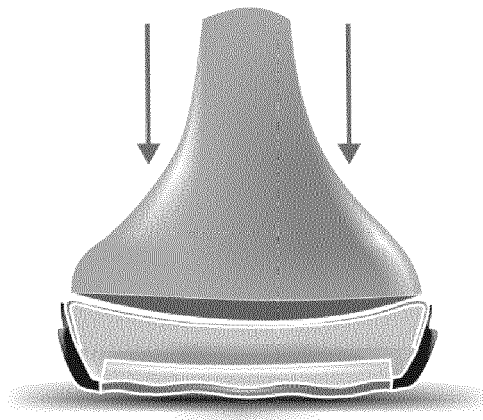


Fig.3



## EUROPEAN SEARCH REPORT

Application Number  
EP 12 19 6241

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2010/251565 A1 (LITCHFIELD PAUL E [US] ET AL) 7 October 2010 (2010-10-07) * paragraph [0018] - paragraph [0154]; figures 1-45B * * paragraph [0093]; figures 3-5 * -----	1-8	INV. A43B1/00 A43B3/00 A43B13/18
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X	US 7 213 354 B1 (BYRD BENNETT CLAY [US] ET AL) 8 May 2007 (2007-05-08) * column 2, line 46 - column 8, line 25; figures 1-7 * -----	1-8	
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			TECHNICAL FIELDS SEARCHED (IPC)
			A43B
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 17 February 2014	Examiner Oelschläger, Holger
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ..... &amp; : member of the same patent family, corresponding document</p>			

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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT  
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EP 12 19 6241

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
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17-02-2014

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