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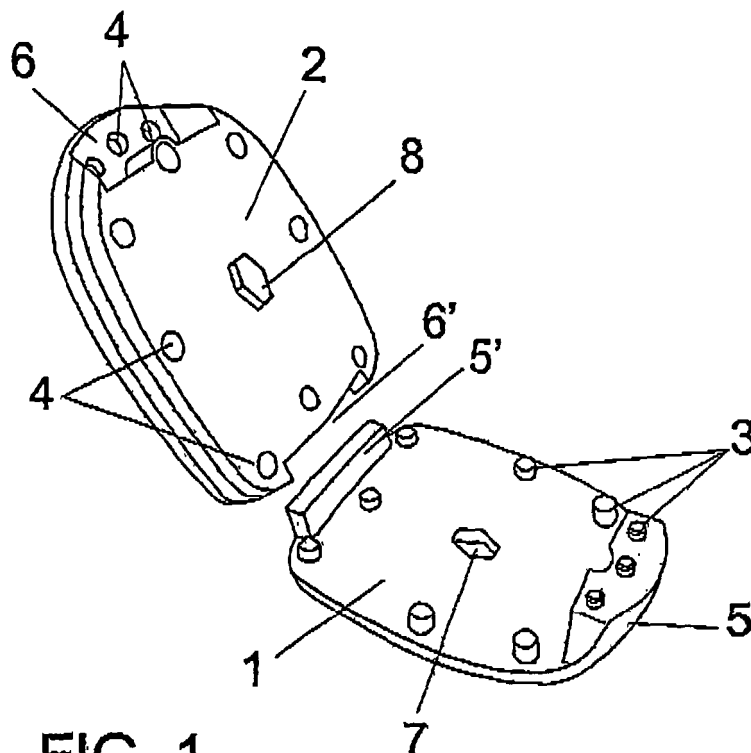
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(54) **Attachment system for tips to shoe heels**

(57) The system consists of the corresponding tip (1) being provided with protuberances (3) which are housed in and attached to the holes (4) established in a complementary manner in the corresponding heel (2), the attachment being secured by means of nails passing through the tip (1), in correspondence with the protuber-

ances (3), producing an expansion of the latter and their corresponding pressure, adjustment and attachment to the holes (4) of the heel (2). Said tip (1) can include projections (5, 5') which are positioned in recesses or depressions (6, 6'), respectively, established for the purpose in the heel (2), those projections (5, 5') constituting means of protection for the actual heel.



**FIG. 1**

## Description

### OBJECT OF THE INVENTION

[0001] The present invention relates to an attachment system for tips to shoe heels, both women's and men's, the system being applicable both to conventional tips and to others presenting a design peculiar to the traditional tip.

[0002] The object of the invention is to provide a system on the basis of which the tip can adopt different configurations without having its capacity and effectiveness undermined, furthermore maintaining intact and even improving its resistance both to wear and to detachment.

### BACKGROUND OF THE INVENTION

[0003] There exists a classical system which allows a tip to be attached to the corresponding heel of a shoe, this system being based on an adhesive which is applied to the faces of superposition or opposing faces between the tip and the heel, and although this system can sometimes be regarded as valid, it is nevertheless very often insufficient in situations of frequent and aggressive use and with regard to the regular impacts that take place when walking and in the event of sudden changes of temperature, rain or damp.

[0004] As a consequence of this, there is considerable limitation both in the application to all kinds of heels of different materials, and the actual shape of the manner of the tip, which usually has a homogenous shape.

[0005] There exists another traditional system of attachment which uses small nails which nail the tip to the heel, though the main drawback shown by this system is the appearance of new materials which will not always take nails or permit themselves to be nailed, with which the effectiveness in the use of nails becomes limited to heels made of wood or board.

[0006] New attachment systems have recently appeared consisting of the incorporation into the tip of the heel, mainly those known as stilettos, of a pin or a rod, usually grooved, which penetrates the body of the heel, generally by means of pressure or sometimes accompanied by a supplementary adhesive.

[0007] However, in spite of the initial efficiency of this latter system, it is very common for the tip to become detached due to frequent use and on account of the knocks it suffers when walking, to the point that the heel becomes detached and suffers irreparable damage, due mainly to the hardness of the pin.

### DESCRIPTION OF THE INVENTION

[0008] The system that is advocated has been conceived in order to solve the problem stated above, ensuring an optimum degree of attachment of the tip to the heel of the shoe with a union that ensures its durability and resistance, and adding an element which is the possibility of using tips that are not homogeneous, with dif-

ferent shapes.

[0009] More specifically, the system of the invention is based on the fact that the face of the tip facing the heel presents a series of protuberances which penetrate into respective holes made for the purpose in the heel, with the special particularity that once the tip has been coupled or attached to the heel by means of its protuberances, some nails are introduced through the outer face of the heel, via its protuberances, which cause these protuberances to expand inside the hole of the heel, preventing its detachment.

[0010] The said protuberances can be used in combination with lugs, which penetrate into complementary holes or recesses in the heel, which serve for an initial attachment, permitting easy location or positioning inside the heel.

[0011] In men's heels the tip will be able to incorporate one, two or more attachment protuberances which penetrate into the heel, and from the outer part of the tip respective nails can be introduced in predetermined points, corresponding to those protuberances in a vertical alignment.

[0012] For their part, in women's heels, more especially stilettos, on account of their small dimensions, the number of protuberances can be fewer than for men's shoes, though still maintaining the qualities of attachment and resistance.

[0013] By means of the described system a wide range of possibilities is opened up in terms of the design of tips, with traditional shapes being moved way from, since the efficient attachment of the tip allows it to be given different shapes, with the incorporation of false pieces, bas-reliefs and others, permitting the profile of the actual tip to vary considerably and consequently the shape of the actual heel.

[0014] The tip can also be built up in its front and rear part with the aim of achieving not just a more innovative appearance but also to protect the actual heel in the zones which commonly suffer the usual knocks produced when walking or standing.

### DESCRIPTION OF THE DRAWINGS

[0015] In order to complement the description that is going to be made and with the aim of aiding a better understanding of the characteristics of the invention, in accordance with an example of a preferred example of practical embodiment thereof, accompanying this description as an integral part thereof is a set of drawings in which, in an illustrative and non-limiting way, the following has been represented:

Figure 1.- Shows a representation according to an exploded perspective of a tip produced in accordance with the object of the invention, in the position of facing the corresponding heel of a shoe for its coupling and attachment thereto.

Figure 2.- Shows a conventional shoe with a tip attached to the heel by means of the system of the invention.

#### **PREFERRED EMBODIMENT OF THE INTENTION**

**[0016]** As can be seen in the said figures, and bearing in mind that the system is intended for attaching a tip (1) to a heel (2) of a shoe, independently of the shape and configuration of the tip (1.) and therefore the heel (2) and whether it concerns a man's or woman's shoe, the novelty of the invention is that the face of the tip (1) facing that of the heel (2) to which it has to be attached presents a series of protuberances (3) that can fit into holes (4) in the heel, in such a way that the holes (4) can logically be made on the flat surface of the heel or even in recesses (6) complementary to the projections (5) of the tip (1).

**[0017]** In any case, depending on the configuration of the heel (2), the tip (1) can have any shape and can even be provided with a window (7) in which a complementary lug (8) made in the respective zone of the heel (2) can be located.

**[0018]** Moreover, both the projection (5) of the protuberances (3), and the projection (5') provided in the edge or opposite part of the tip (1) allow themselves to be located in the respective recesses (6-6') of the heel (2), constituting means of protection for the latter, preventing scratches and deterioration to it caused by knocks and by the actual fact or circumstance of walking.

**[0019]** As can be seen in figure 2, the tip (1) can take on any configuration, whether it is applicable to a man's shoe (9), as represented in figure 2, or to a woman's shoe, and even to women's shoes with stiletto heels, since the important thing is that the tip (1) includes protuberances (3) and the heel (2) has holes (4) which fit in and attach themselves to each other, in such a way that depending on whether the shoe is a man's or a woman's the number of protuberances and therefore of holes will be greater or lesser, at all times establishing a means of attachment that is effective, secure and at the same time resistant, since it will preferably be complemented with nails that will be introduced via the rear or outer part of the tip (1), in correspondence with the protuberances (3), the zone being duly marked for this, in order to expand those protuberances (3) and establish greater pressure and attachment on the corresponding blind holes (4) of the heel (2).

to the protuberances (3), for housing of those protuberances (3) under pressure in said holes (4), being complemented with nails that are introduced following the attachment of the tip (1) to the heel (2), via the outer face of the tip (1), in correspondence with the protuberances (3), producing an expansion of the latter in the actual holes (4) in order to improve the attachment between tip (1) and heel (2).

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2. Attachment system for tips to shoe heels according to claim 1, **characterized in that** the number of protuberances (3) of the tip (1) and therefore of holes (4) in the heel (2), is variable, depending on the size of the heel.

3. Attachment system for tips to shoe heels according to the above claims, **characterized in that** the tip (1) is able to include lugs or projections (5, 5') which are coupled to the depressions or recesses (6-6'), respectively, established for the purpose in the respective zones of the heel (2), those projections (5, 5') constituting means of protection for the actual heel.

4. Attachment system for tips to shoe heels according to the above claims, **characterized in that** the projections (5) optionally incorporate protuberances (3) that can be coupled in respective holes (4) in the heel (2),

5. Attachment system for tips to, shoe heels according to the above claims, **characterized in that** the tip (1) is able to adopt any external configuration, both in size and in support surface thereof.

#### **Claims**

1. Attachment system for tips to shoe heels which, being applicable to both men's and women's shoes, and even to slender heels of the kind known as "stiletto", is **characterized in that** it comprises a series of protuberances (3) in the upper face of the tip (1) facing the respective heel (2), in which provision has been made for some blind holes (4) complementary

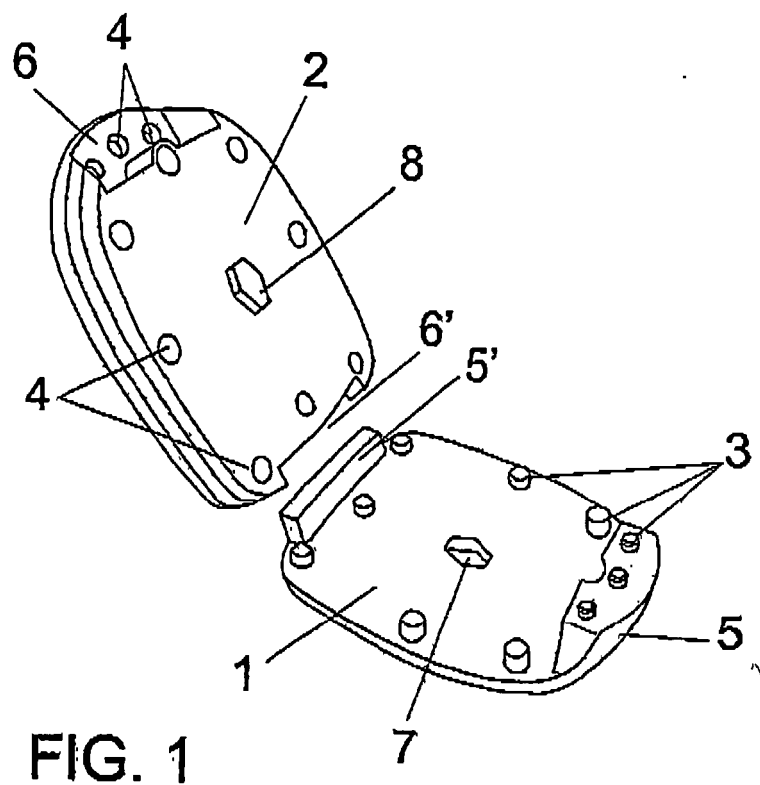


FIG. 1

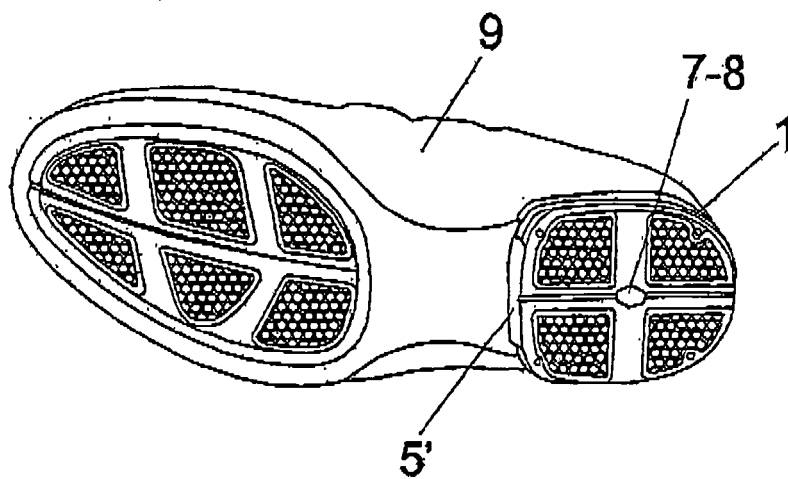


FIG. 2



## EUROPEAN SEARCH REPORT

Application Number  
EP 11 00 3066

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 25 January 2012	Examiner Vesin, Stéphane
<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  
ON EUROPEAN PATENT APPLICATION NO.**

EP 11 00 3066

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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25-01-2012

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