

United States Patent

Frattallone

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[54] **HEEL WITH ORNAMENTAL MASK**

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[58] Field of Search.....36/42, 34 R, 34 B

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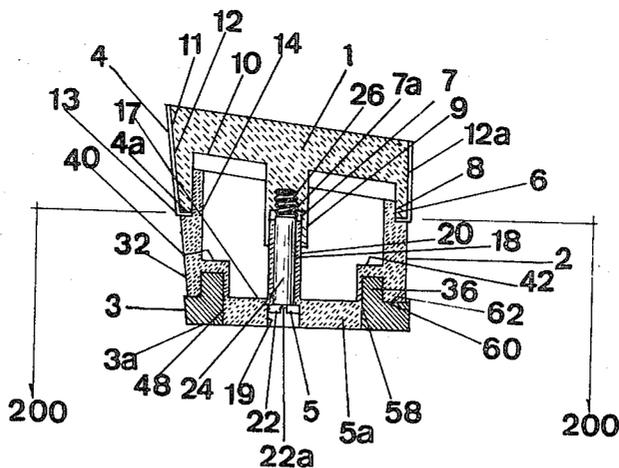
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[57] **ABSTRACT**

A heel containing an upper section permanently attached to the shoe, a detachable lower section and a detachable mask covering the upper section.

1 Claims, 10 Drawing Figures



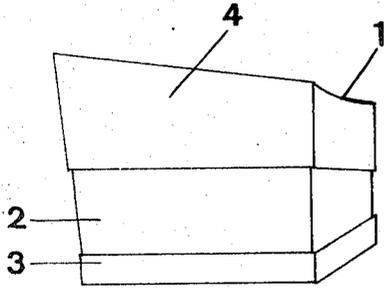


fig.1

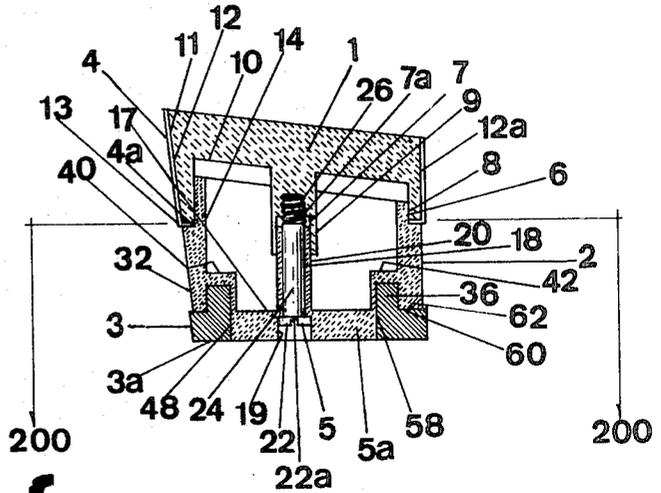


fig.2

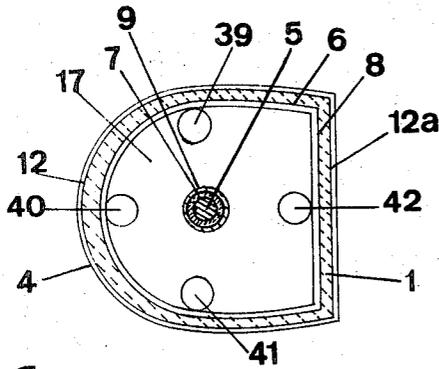


fig.3

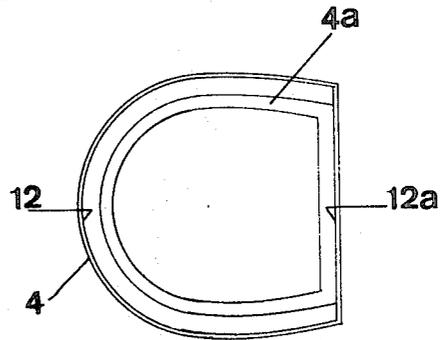


fig.4

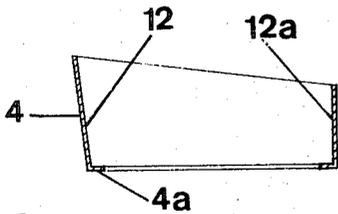


fig.5

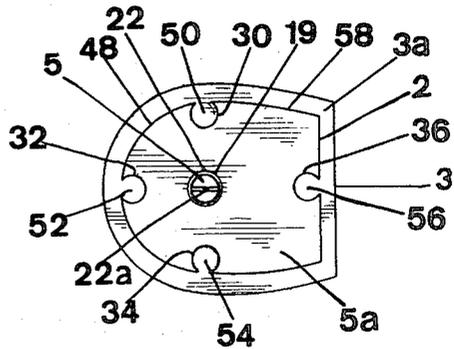


fig.6

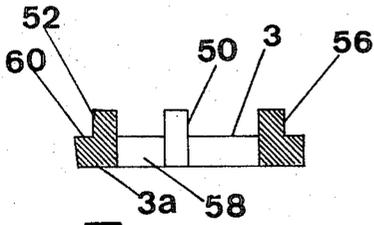


fig.7

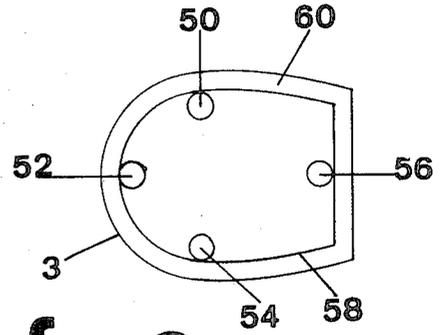


fig.8

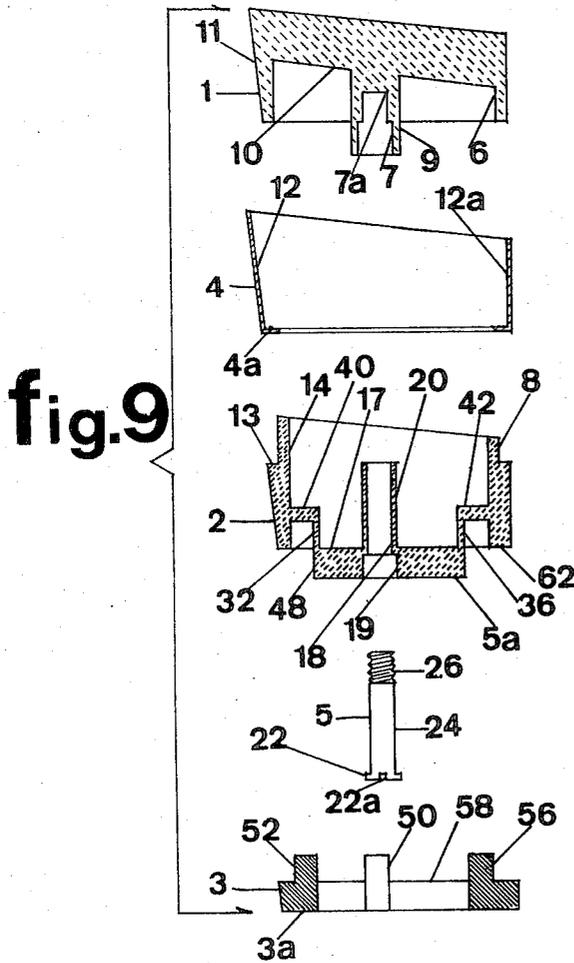


fig.9

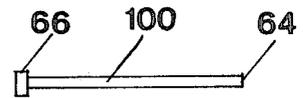


fig.10

HEEL WITH ORNAMENTAL MASK

DESCRIPTION OF THE INVENTION

This invention is connected with the fabrication of heels for shoes.

In the best known variety of heel, on the surface of the said heels is reproduced by impression the plan of the heel of the foot, called crown, placed at the end of the shaped sole for shoes. The heel mentioned, in-reproducing an impression conventionally called crown, follows a logical measurement fitted to the purpose of obtaining a harmonious relationship with the back part of the shoe which is applied according to the most suitable method, with nails or with glue and screws. In conventional heels in use, shaped all in one piece or made up of two elements, with their upper and lower sections, in practice it can in any case be said that they are all one, with separate application of a wear surface, known as heel-cap. With the conventional method of fabrication, therefore, the said heel being practically made up of a sole element with a heel-cap separately applied, there was no solution to the problem of obtaining more combinations, better effects of line, form, color, different heights of heel and practical means of substituting the element most subject to wear, very necessary attributes for a more effective presentation of the product as well as for simplicity of execution favoring industrial production. With my invention for the fabrication of heels for shoes, with an upper heel portion with applied an ornamental 'mask' and a lower 'interchangeable'd heel portion having an incorporated heel-cap with protective trimming applied externally, I intend by means of the various combinations to solve the problems mentioned.

The first objective of my invention is a shaped ornamental 'mask,' into which will fit the upper section of the heel in such a position as to allow the fixing of the 'interchangeable' lower section having a protective trimming applied to the incorporated heel-cap. This fixing will be achieved by means of a pin and small tube incorporated in the 'interchangeable' section and fitted into the shaped housing and into the joining member incorporated in the upper section of the heel. The four definite parts which make up the heel can be of any material (e.g., wood, iron, aluminum, brass, copper, plastic etc.) as long as at the point of junction the established measurements are respected.

The second objective of my invention is exact shaping of the internal faces of the ornamental mask so as to allow good application of the mask to the upper-section. The external faces of the said mask could be of different line and shape from the upper section of the heel, and the appendix of the said mask could also not follow the connection with the 'interchangeable' lower section. Besides, the said mask being produced in different sizes will be able to be easily combined with the upper section of the heel. In this way it will be possible to obtain modification in the form or line of the heel even if the upper section of the heel has already been applied to the shoe, completing it harmoniously.

The third objective of my invention is that the upper section of the heel with ornamental mask will be connected with the 'interchangeable'd lower section by means of a shaped pin which will fit into the housing in the upper section of the said heel. In a hole in the center of the external surface of the heel-cap incorporated in the 'interchangeable' section a screw is inserted, which passing through a tube incorporated in the inside of the 'interchangeable' section will extend to the outside to enter the aligned, concentric hole of smaller diameter in the joining member, incorporated in the upper section, so as to screw in by means of a self-threading portion of the said screw and allow the perfect uniting of the two main sections which make up the said heel.

The fourth objective of my invention is to achieve the perfect coupling the two main sections so as to render superfluous in some cases the insertion of the screw mentioned under the previous objective.

The fifth objective of my invention is the possibility of obtaining a change of color in the upper section of the heel already applied to the shoe by means of the ornamental mask; this will naturally be possible only after disconnecting the two sections of heel. The uncoupling of the said two sections will be effected with a screwdriver if the sections are joined with a supplementary screw, or by means of a nail without a point, if possible in tempered steel, which at the moment it is desired to unjoin the parts will be easily inserted in the hole in the center of the bottom external surface of the heel-cap incorporated in the 'interchangeable' section. Once the said nail is inserted, if the shoe is held in the hand and knocked on a flat surface the nail hitting the appendix of the joining member incorporated in the inside of the upper section will allow the parts to come apart easily, although this is almost impossible without the said nail.

The sixth objective of my invention is that the two principal sections which make up the said heel, as also the ornamental mask, can be produced with completely transparent plastic materials so that they can be used for the internal application of writing for publicity purposes, ribbons with phosphorescent colors and other various applications.

The seventh objective of my invention is the easy application of the protective trimming, so as to obtain a better color contrast between 'interchangeable' section having an incorporated heel-cap with the said protective trimming.

The eighth objective of my invention is that another mask can be applied at will to the 'interchangeable' lower section.

The ninth objective of my invention is that applying the said heel to conventional shoes other combinations can be obtained, for example:

A. The ornamental masks and the 'interchangeable' lower section with its protective trimming externally applied to the heel-cap incorporated in the said 'interchangeable' section, being preferably molded in plastic in their variety of lines, forms and colors, will be put on the market so as to be able to be bought directly by the consumer at a ridiculous price;

B. A quick and easy substitution of the 'interchangeable' section will be possible, as also of the mask applied to the upper section of the heel and if wanted also another ornamental mask applied to the 'interchangeable' section, an operation which can easily be performed by the users themselves;

C. At the moment of substituting the 'interchangeable' section with a new one, the user besides having the possibility of selecting the color and the line of the heel can also alter the height of the heel, with a more or less high 'interchangeable' section.

The tenth objective of my invention is that the fabrication of the said heel can be adapted to heels for women's, men's and children's shoes, whether for conventional dove-tail working, embedding, external application to the sole of the shoe, or for working with sole and heel all in one piece (this last case refers to the sole and heel made up of only one element obtained by pressing and vulcanization), and for all heights.

The elements which as one whole constitute the object of the present invention, realized, described and illustrated in a preferred form, can assume other forms and measurements and variations in the single details of fabrication without going beyond the scope of the invention itself and therefore of the control of the present patent.

The invention will be illustrated in the following pages with reference to the drawings shown on the enclosed sheet in which are illustrated some forms as examples of a preferred form of execution.

FIG. 1 shows a general view of the heel, for women's shoes, with the elements assembled;

FIG. 2 is the same as FIG. 1 but the same elements are seen in cross-section;

FIG. 3 is a cutaway view starting from line 200—200 with respect to FIG. 2;

FIG. 4 is a view from above of the ornamental mask as illustrated in FIG. 2;

FIG. 5 is the same as FIG. 4, but seen in cross section;

FIG. 6 is a view from above of the lower external surface of the interchangeable section (2) relating to the incorporated heel-cap treated with diagonal knurling, with applied external protective trimming (3), also treated with diagonal knurling;

FIG. 7 is a cutaway view of the protective trimming in the following FIG. 8;

FIG. 8 is a view from above of the upper internal surface relating to the external protective trimming (3) not yet applied to the incorporated heel-cap;

FIG. 9 is a detail seen in cross section as illustrated in FIG. 2, completely detached;

FIG. 10 is a view from above of a nail without point serving as extractor;

Illustrated in FIGS. 1 and 2 is the fabrication of the heel with ornamental mask (4), with 'interchangeable' lower section (2), having a protective trimming (3) applied externally to the incorporated heel-cap 5a, made up of an upper section (1) and an incorporated joining member 9, having a concentric hole 7 which extends inwards coming into direct communication with another concentric hole 7a of smaller diameter. The upper section (1) has a shaped housing 6 with an oblique internal surface 10, to allow the coupling of the pin 8 incorporated in the 'interchangeable' section (2), into which it is fitted.

The 'interchangeable' section (2) has on the upper surface (13) a pin 8 which projects upwards, which, being shaped, besides obtaining the joining of the two principal sections 1 and 2, which make up the said heel suitable for being dismantled, will avoid any possibility of rotation.

In the said 'interchangeable' section (2) beginning from 5a there is a circular external opening 19 which extends upwards entering in direct communication with another opening of smaller diameter 18 continuing to pass through the said 'interchangeable' section to protrude on the outside.

In the 'interchangeable' section (2) an opening 14 extends inside downwards to stop at fixed depths 39-40-41-42 and 17 as later illustrated in FIG. 3.

The concentric hole 18 in the 'interchangeable' section (2) is aligned to the opening 7a, the latter however of smaller diameter. The small tube 20 is incorporated in the 'interchangeable' section, and a portion of the external surface (of the said tube 20) fits into the internal circular housing 7 of the joining member 9 incorporated in the upper section (1).

A possible auxiliary safety screw (5) is inserted in the opening 19 and then in the concentric hole 18 of the tube 20 incorporated in the 'interchangeable' section (2), crossing it in its whole length for a self-threading portion 26 of the screw (5) to then emerge. The lower portion 22 of the screw (5) which is of larger diameter with respect to the portion 24 of the said screw (5), with a horizontal impression 22a, is divided in two by the said horizontal impression to allow the approach of the appendix of a common screwdriver allowing a regular rotation, assuring at the same time the introduction of the portion 22 into the inside of the opening 19 stopping at a fixed depth. The self-threading portion 26 of the screw (5) by screwing and inserting itself in the hole 7a in the joining member 9 incorporated in the upper section (1) insures a solid coupling of the two sections -1 and-2 which make up the said heel, made to be dismantlable in order to allow the interchangeability of the section (2).

The ornamental mask (4) applied between the upper section (1) and the 'interchangeable' section (2) with its internal faces 12 and 12a covers entirely all the external faces of the upper section (1), and at the same time a base 4a incorporated in the said mask covers-partly the lower surface of the upper section (1), following the perimeter of the seat of the said upper section (1) and aligning itself with the pin 8 incorporated in the 'interchangeable' section (2). The upper internal surface 13 of the said 'interchangeable' section (2) being superimposed on the base 4a of the said mask (4), will make all one piece with the mask and upper section (1).

The protective trimming (3) with lower external surface 3a treated with diagonal knurling, on the outside of the heel-cap

incorporated 5a in the 'interchangeable' section (2), is applied by means of four little pegs of partly cylindrical form arranged in a cross and having generally an area covering about 270°, which extend sideways inwards and at the same time project upwards to stop at a fixed height. The said pegs 50-52-54-56 as illustrated in the following FIGS. 6 and 8 will fit into their respective housings 30-32-34-36 placed on the external perimeter 48 relating to the heel-cap 5a incorporated in the lower surface of the ('interchangeable' section (2). One face 58 of the internal perimeter of the trimming (3) follows the same shaping as the external face 48 in relation to the heel-cap 5a incorporated in the 'interchangeable' section (2). The upper internal surface 60 of the trimming (3) being superimposed on the lower external surface 62 of the 'interchangeable' section (2) which together with the two faces 48 and 58 relating to the internal faces of the heel-cap in the 'interchangeable' section (2) will adhere perfectly to each other, will guarantee solid joining and avoid any possible rotation and expansion.

The upper section (1), the 'interchangeable' section (2) and the ornamental mask (4) are generally molded in plastic material, while as far as the protective trimming (3) applied externally to the 'interchangeable' trimming section is concerned, it could be molded preferably of materials more suitable for allowing greater resistance and silence during wear (e.g. rubber, coria, and nylon etc.).

As illustrated in FIG. 4, the ornamental mask (4) has an internal face 12 partly conical and united completely with another internal face 12a smooth perpendicularly which closes the perimeter of the said mask (4) extending downwards with a base completely united 4a to the said faces 12 and 12a. The base 4a delimits an area along the whole perimeter of the said mask (4).

Into the said mask (4) will be fitted the upper section (1) as illustrated in FIGS. 1 and 2.

Illustrated in FIG. 6 is a view from above of the interchangeable section (2) having a heel-cap incorporated 5a with a shaped external face 48 with slight knurling and an opening 19 in which is inserted a portion 22 of the screw (5) which extends inside the following opening 18 of smaller diameter projecting on the outside and coming into communication with the concentric hole 7a of the joining member 9 in the upper section (1) as illustrated in FIG. 2.

Shown in FIG. 8 is a view from above of the protective trimming (3) to be applied externally to the heel-cap 5a incorporated in the 'interchangeable' section (2), with four little pegs 50-52-54 and 56 incorporated in the internal face 58 of the protective trimming (3), which will fit into their respective housings 30-32-34 and 36 in the 'interchangeable' section (2) with relation to the lower external surface of the incorporated heel-cap 5a as illustrated in the preceding FIG. 6.

Illustrated in FIG. 9 are the protective trimming (3), the auxiliary screw (5), the 'interchangeable' section (2), the ornamental mask (4) and the upper section (1), all elements seen in cross section and detached distinctly from each other, to be joined as shown in FIG. 2.

As illustrated in FIG. 10, the nail serving as extractor (100) has a perfectly cylindrical form with one end 64 having a flat surface and the other end also with a flat surface but with a larger diameter 66.

I claim:

1. A heel comprising in combination:

- a. upper heel section (1) adapted to be permanently attached to the shoe, and having a lower peripheral edge, a recess within said lower edge (10) and a depending, internally threaded socket (9) extending out of said recess;
- b. lower heel section (2) having a lower trim or lift section (3), a socket (20) extending upwardly and engaging in said socket (9) of said upper section, outer edge (13), and upwardly extending lip (8) spaced inwardly from edge (13);
- c. a mask (4) covering the exterior surface of said upper heel section (1) and having a lower, inward rim (4a) registering with edge (13);

d. an elongated threaded member extending from the lower exterior of lower heel section (2) through said sockets and threadable engaged in said socket (9) of said upper section;

Said heel being characterized in that said lower section (2), and said mask (4) are readily assembled and disassembled by operation of said threaded member.

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