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Pais

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[54] **DEVICES FOR ATTACHING HEELS TO SHOE SOLES**

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[52] **U.S. Cl.** **36/42**

[51] **Int. Cl.** **A43b 21/36**

[58] **Field of Search** ..... 36/34 A, 42

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[57] **ABSTRACT**

A device for coupling the sole and heel of a shoe comprising a plate which is secured adjacent to the sole and which has a shank extending rearwardly to engage the heel. The shank has a hook which is adapted to be received in a recess in the heel to retain it in position.

1 Claim, 6 Drawing Figures

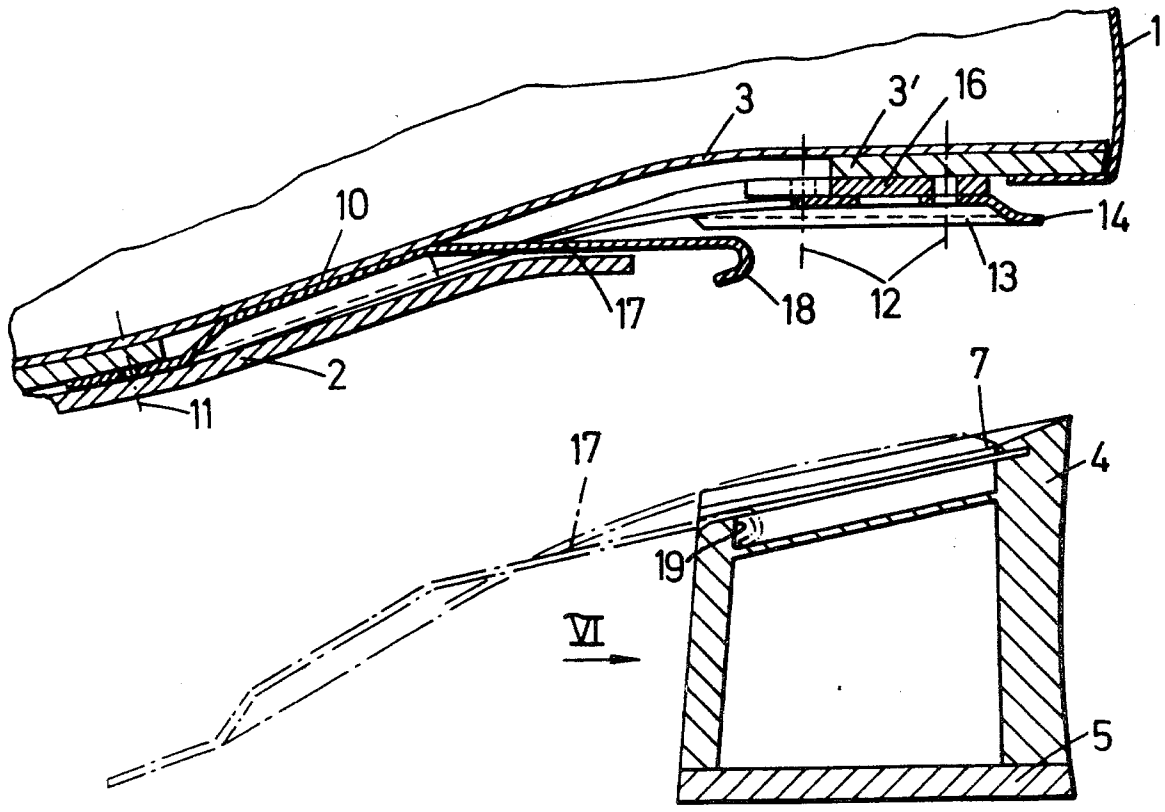
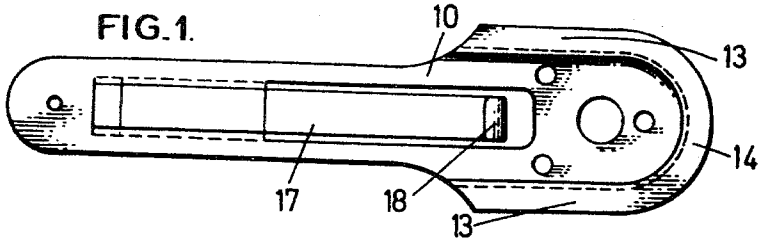


FIG. 1.



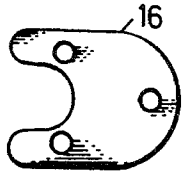


FIG. 2.

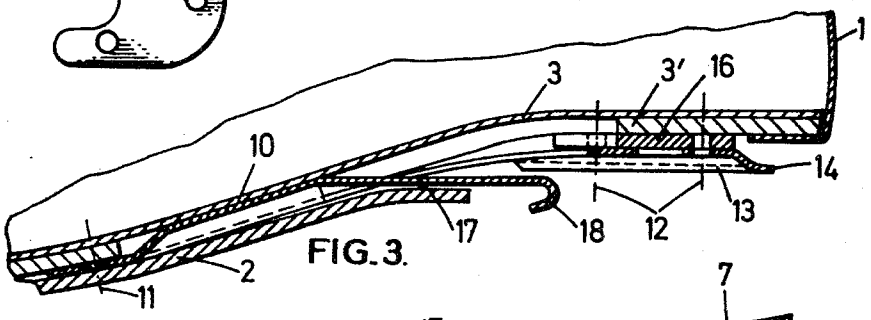


FIG. 3.

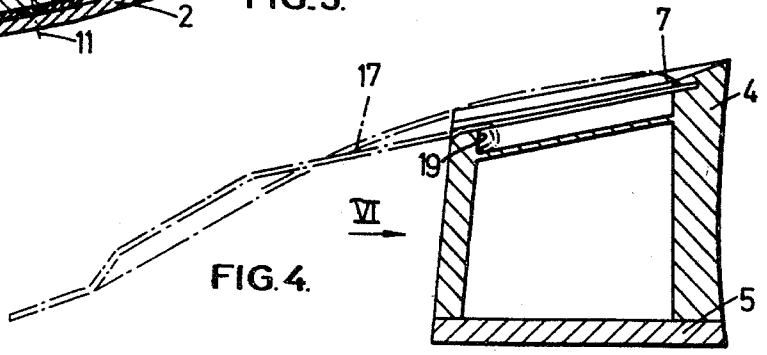


FIG. 4.

FIG. 6.

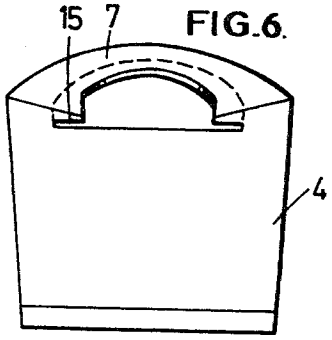
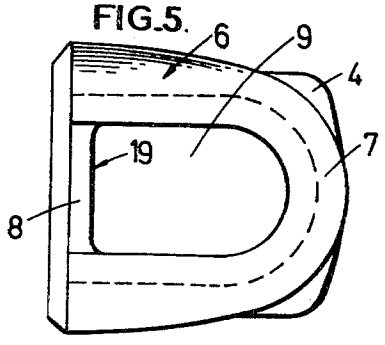


FIG. 5.



DEVICES FOR ATTACHING HEELS TO SHOE SOLES

This invention relates to a device for coupling a sole and a shoe heel, said device comprising an elongated plate used as shank which extends up to adjacent the sole back end, said plate having in that area facing the heel, an edge displaced towards the heel and outwards of the shoe, the heel having along the upper surface thereof engaging the sole, a circumferential rim open on the heel side directed towards the shoe instep, which rim is displaced towards the sole and outwards, said plate edge entering slidingly said rim, said plate being moreover provided with a resilient locking means cooperating with a recess provided in the heel upper surface.

Even when the most usual way for repairing and manufacturing women shoe heels lies in having a shoemaker replace the lower layer of the heel, it often occurs that the complete shoe heel has to be replaced because said heel is damged all over the circumference thereof. With the standard mounting of the heels, this means heavy work for the shoemaker, which results in high costs for the repair.

The invention relates to improvements to devices for attaching the heel to shoe soles, providing a high simplicity both in the manufacturing and in the use of such devices, with the result that the user may by herself proceed with the replacement of her shoe heels without resorting to tools. The manufacturer of shoes provided with the improvements according to the invention will advantageously add to the box containing a new pair of shoes, a plurality of replacement heels which will simplify the maintenance and also the sale of the shoes.

For this purpose according to the invention, a small spacing plate is sandwiched between the undisplaced plate portion facing the heel, and the sole.

Preferably the heel comprises a plastic core the upper surface of which is provided with said open circumferential rim.

In such an embodiment, said small plate allows to reach a suitable spacing between on the one hand the small plate edge entering the rim of the heel upper surface and on the other hand, the sole plane, thus avoiding a difficult industrial making of the plate.

In a preferred embodiment of the invention, the locking means is comprised of a tab or strip cut out from the plate, which tab ends in a hook curved towards the instep.

Other details and features of the invention will stand out from the description given below by way of non limitative example and with reference to the accompanying drawings, in which :

FIGS. 1 and 2 each show a plan view of an element which is part of a coupling device according to the invention between a heel and a shoe sole.

FIG. 3 is an elevation view in section of the elements shown in FIGS. 1 and 2, as associated to the shoe sole to which the heel has not yet been connected.

FIG. 4 is an elevation view in section of a heel having complementary coupling means, as associated with the element shown in FIG. 1.

FIG. 5 is a plan view of the heel shown in FIG. 4.

FIG. 6 is a view of the heel shown in FIG. 4, along arrow VI.

In the various figures, the same reference numerals pertain to similar elements.

In the figures, 1 1 is shown the upper of a shoe, in 2 the wearing sole, in 3 the insole to which is associated in the usual way the half sole 3', and in 4 the heel.

The heel 4 comprises a hard synthetic resin core provided with a tip 5. The upper surface 6 of the heel has a raised circumferential rim 7 which is directed inwards and which extends along the side edges and the back rounding of the heel but not on that side directed towards the instep. Inside the space bounded by rim 7 and a margin 8 on that side directed towards the instep, the upper surface 6 of the heel is provided with a recess 9 for a purpose defined hereinbelow.

To the half sole 3' of the shoe is attached in 11 on the one hand a metal plate 10 serving as shank and extending to the vicinity of the back end of the sole 3 where said plate is attached in 12. In that area located adjacent the heel the plate 10 is provided with two straight lengthwise edges 13 which are joined by a rounded back portion 14, slightly projecting towards the edges of sole 3 and displaced towards the heel so as to form a male circumferential rim which may be engaged in the groove 15 formed by the raised rim 7 of the heel.

A small plate 16 is sandwiched between that area facing the heel of plate 6 and the halfsole 3', to obtain a suitable spacing between the sole and the rim 13,14 of plate 6 to receive therein the thickness of the heel inside rim 7. The small plate 16 is attached by rivets 12.

A locking tab or strip 17 is cut out from the plate or shank 10 and has a spring-like shape ; the end of tab 17 forms a hook 18 which has a tendency to project downwards through the cut out and which when coupling the heel and the sole by sliding the rim 13,14 inside the groove 15, hooks over the generally vertical wall 19 of the recess 9 provided in the upper surface 6 of the heel. Thus any separation between the heel and the sole 3 is prevented until a pressure is exerted on the free portion of tab 17 which is generally hidden by the wearing sole 2 so as to disengage hook 18.

It must be understood that the invention is in no way limited to the above-described embodiments and that many changes may be brought therein without departing from the scope of the invention as defined by the appended claims.

I claim :

1. An apparatus for coupling a shoe heel to a shoe comprising an elongated plate comprising the shank piece for the shoe and a sheel to be coupled to said plate, means for coupling said plate to the sole of the shoe, said plate comprising a front end and a back end, said back end to be disposed adjacent the heel portion of the shoe and comprising an edge, said edge being outwardly directed and displaced toward said heel, means for resiliently locking said heel to said plate, said means comprising an elongated tab supported by said plate and extending rearwardly and downwardly therefrom, said tab ending in a downwardly curved hook that is directed toward said front end, said heel comprising an upper surface to be disposed in facing relation to said plate, an upwardly and inwardly directed rim on said upper surface, said rim being open on the side of said heel facing said front end, said upper surface comprising a recess having a wall on said last named side, and said outwardly directed edge is slidably receivable in said rim and said hook is engageable with said wall to releasably couple said heel to said plate.

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