

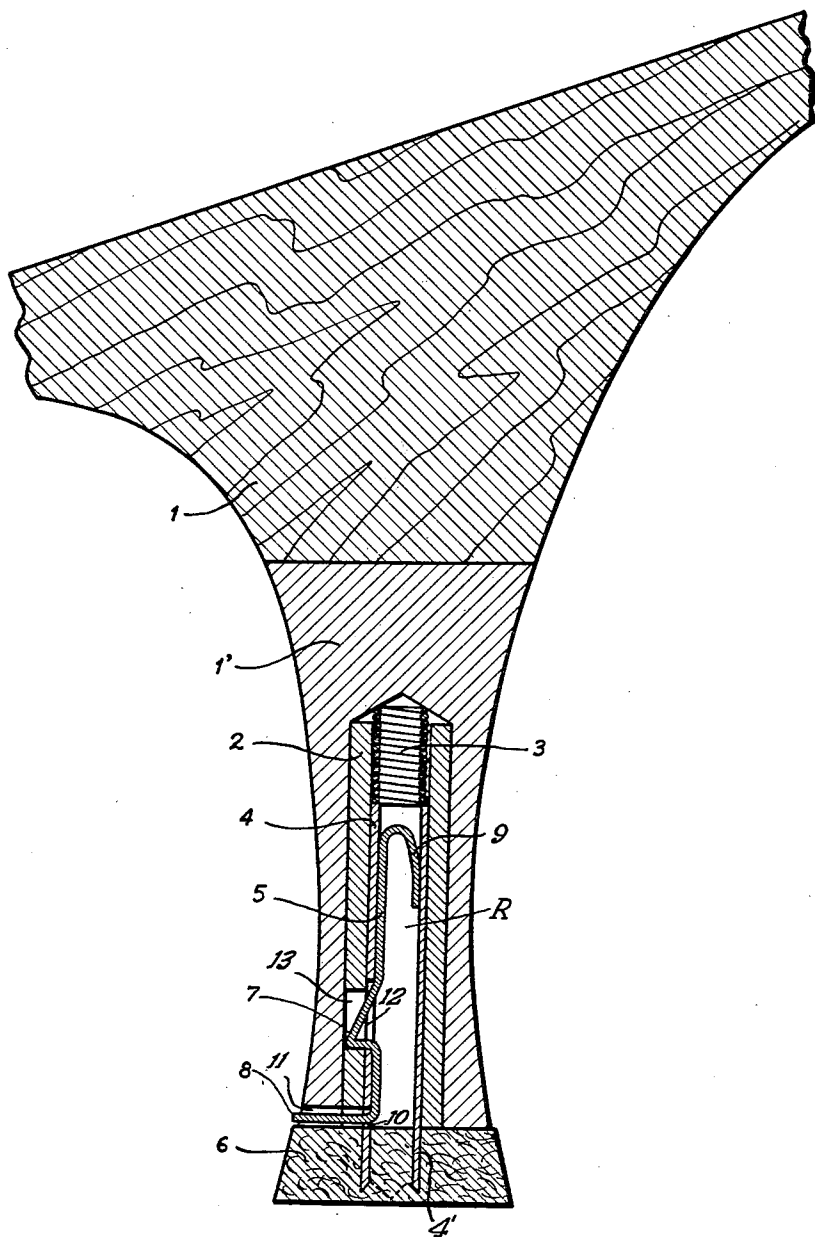
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TOP LIFTS

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3,079,709
TOP LIFTS

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2 Claims. (Cl. 36-42)

This invention relates to devices for the quick replacement, manually or automatically, of worn out top lifts of shoe heels. It comprises a recessed shoe heel, the recess of which accommodates a device for the quick replacement of the top lift. It is particularly useful for ladies' shoes.

In one embodiment for manual operation, the device according to this invention is essentially characterized by a fixed tube inserted in a suitable recess formed in the heel and by a removable assembly comprising a movable tube slidably mounted in the fixed tube and secured to the top lift; in the movable tube, there is fitted a blade-like spring having an outer lateral beak or projection adapted to engage removably, through a hole in the movable tube, a hole in the fixed tube intermediate the height thereof; the blade-like spring has, at its lower end, a lateral outward projection which engages movably a hole in the movable tube, just above the top lift, and a corresponding lateral transverse channel formed between the bottom of the fixed tube and of the heel on the one hand, and the top of the top lift; this lateral projection forms a push-member adapted, upon being pushed inwardly by hand, to release the beak of the blade-like spring from the hole in the fixed tube. When the removable assembly is in place in the heel, inside the fixed tube, and the beak engages the hole in the latter, the beak is held fast against the bottom wall of said hole by a compressed coil spring located between the upper rim of the movable tube and the top of the recess. When the push-member has been pushed inwardly by hand, thus releasing the beak of the blade spring from the hole in the fixed tube, the coil spring expands and ejects the entire movable assembly, carrying the worn out top lift, out of the fixed tube and of the heel. It must be noted that, as the top lift wears out, the lower portion of the movable tube, which is engaged in the top lift, wears out correspondingly. When the movable assembly carrying the worn out top lift has been ejected from the heel, a new assembly carrying a new top lift can be inserted rapidly inside the fixed tube and the heel.

Other objects, features and advantages of this invention will be apparent from the following description and accompanying drawing illustrating an embodiment thereof. In the drawings:

The single FIGURE is a vertical sectional view of a lady's heel showing a quick manual replacement device for the top lift.

In the embodiment shown in the drawing, a heel body 1 has a lower heel portion 1'; within the latter there is provided a recess R inside of which is force-fitted a fixed tube 2, which may have a square internal cross-section; a movable tube 4 is slidably fitted in fixed tube 2 and held in position therein by a blade spring 5 having at its upper end a turned down flange 9 which bears against the inner wall of tube 4; blade spring 5 is also provided: intermediate its height with a beak or outward projection

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7 and at its lower end with a flange 8 turned outwardly of the heel, parallel with the top of the top lift 6 and projecting slightly from the heel portion 1' through a hole 10 in movable tube 4 and a transverse channel 11 provided through fixed tube 2 and heel portion 1', between the lower ends of the latter and the top of top lift 6.

In the normal walking position, movable tube 4 and blade spring 5 are held securely and immovably in recess R by engagement of the beak or projection 7, through a hole 12 in the movable tube 4, within a corresponding hole 13 in fixed tube 2, intermediate the height thereof. In that position, the bottom of beak 7 is held against the bottom wall of hole 13 by means of a compressed coil spring 3 located between the top of recess R and the upper edge of movable tube 4. In that position, heel body 1 and heel portion 1' are rigid with top lift 6, which may be made of leather or rubber, and which is force-fitted onto the lower end 4' of movable tube 4, which protrudes beyond heel portion 1'.

For replacement of a worn-out top lift 6, the user needs merely to push inwardly on bottom flange 8; the beak or projection 7 of spring 5 is thus disengaged from hole 13 of the fixed tube 2, and the downwardly directed thrust of spring 3, which is then free to expand, ejects the assembly, comprising movable tube 4, spring 5 and top lift 6 from the heel. It suffices then to replace said assembly by a new assembly having a new top lift, which can be done rapidly.

The above-described device can be fitted into the heels of any new or worn shoes; it is most convenient since it is sufficient to have available, either at home, in a pocket or in a handbag, the standard spares which are adapted to be instantaneously inserted, without resort to a shoemaker. Moreover the device is invisible and therefore do not affect the smartness of the shoe.

While a particular embodiment of this invention has been described to illustrate the invention, it must be understood that many changes and modifications may be brought thereto without departing from the scope of the invention as set forth in the appended claims.

What is claimed is:

1. In a shoe heel having a detachable top lift, co-operating means for the quick removal of a worn-out top lift and replacement thereof by a new one, said co-operating means comprising: a central substantially vertical recess in the shoe heel; a fixed assembly comprising a fixed tube force-fitted in said recess; a movable assembly comprising an inner tube slidable in and out of said fixed tube, having an upper edge and a lower end embedded in said top lift; a first hole in said inner tube intermediate the height thereof; a second corresponding hole in said fixed tube; a first spring fitted in said inner tube and having an outer lateral projection adapted to engage removably said first and second holes when said movable assembly is fully inserted within said fixed tube; an aperture in said inner tube and a corresponding transverse channel, both at the lower end of said fixed tube and of said shoe heel, both being substantially parallel to the upper surface of said lift piece; in said first spring, a bottom lateral outward extension, engaging movably said aperture and said channel when said movable as-

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sembly is inserted in said fixed tube; said extension forming a push member adapted to disengage, by manual inward push, said projection from said first and second holes; second coil spring means between the top of said recess and the upper of said inner tube, for expansion when said projection is disengaged from said first and second holes; whereupon said movable assembly including the worn-out top lift is ejected by the thrust of said coil spring from said fixed assembly, allowing the insertion of a new movable assembly rapidly in the shoe heel.

2. A shoe heel as claimed in claim 1, in which said

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first spring includes, at the top thereof, a turned-down flange engaging frictionally said inner tube.

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