

March 2, 1965

L. D'URBANO  
DETACHABLE HEELS

3,171,218

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3 Sheets-Sheet 1

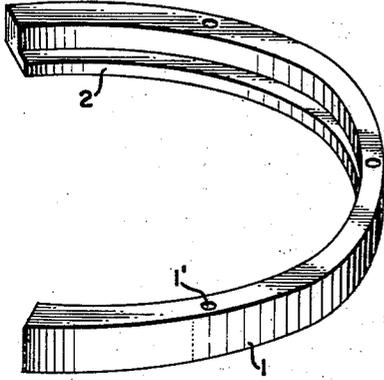


FIG. 1.

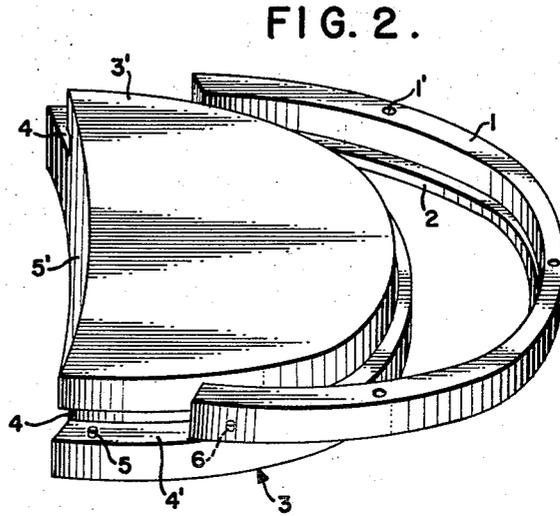


FIG. 2.

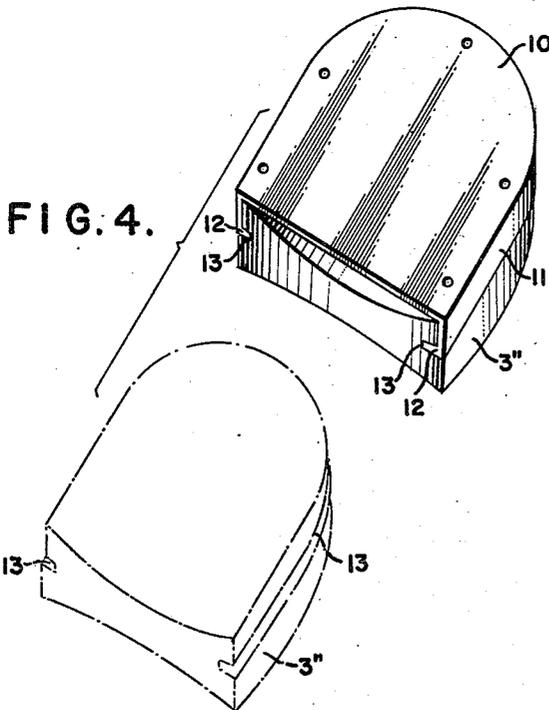


FIG. 4.

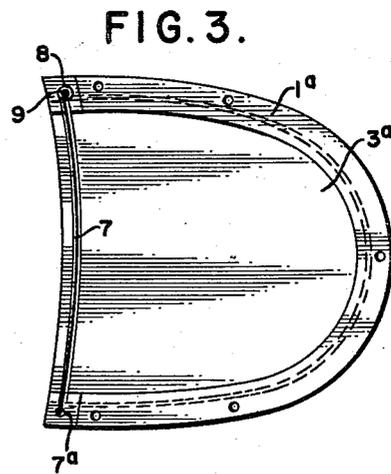


FIG. 3.

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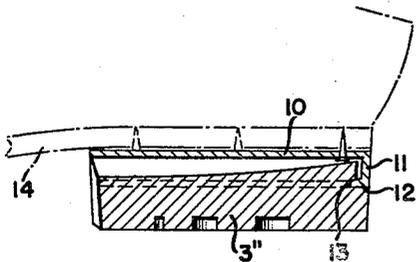


FIG. 5.

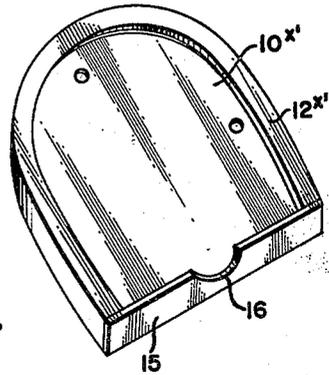


FIG. 6.

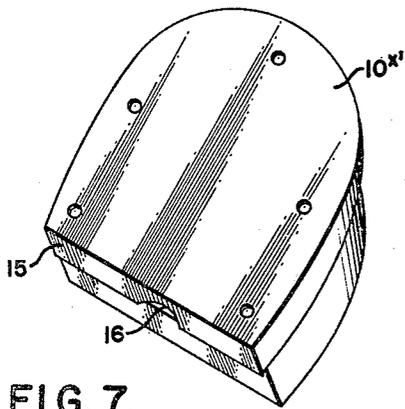


FIG. 7.

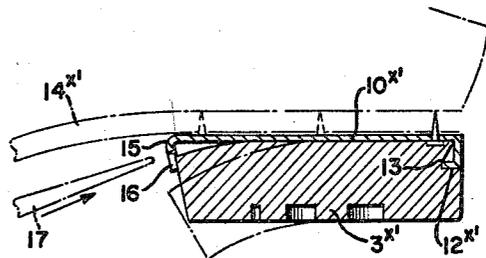


FIG. 8.

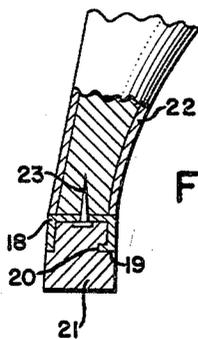


FIG. 9.

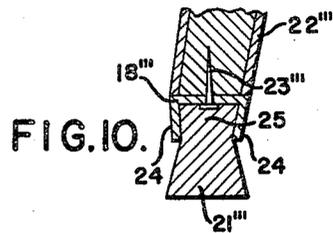


FIG. 10.

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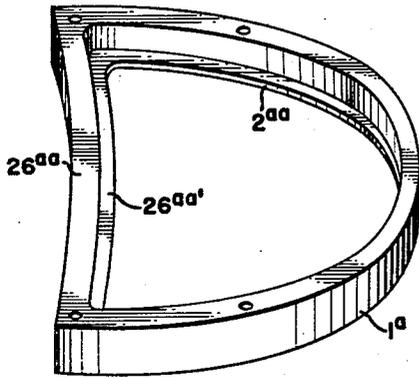


FIG. II.

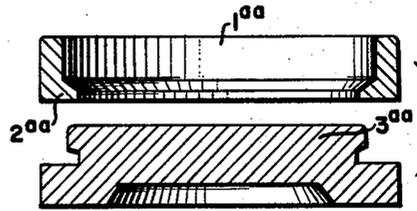


FIG. 12.

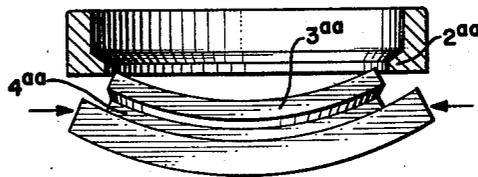


FIG. 13.

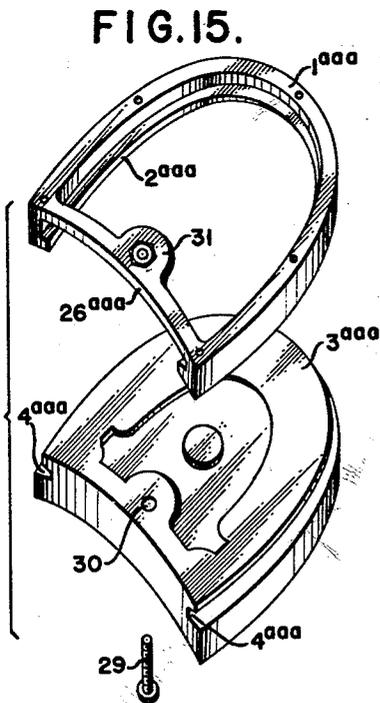


FIG. 15.

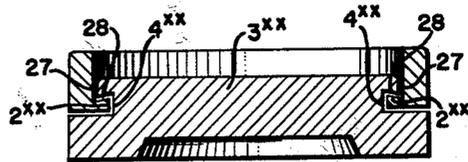


FIG. 14.

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**DETACHABLE HEELS**

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3 Claims. (Cl. 36—36)

This invention relates to heels for shoes and more particularly to a device for detachably securing a heel portion to a shoe heel.

Generally, the device of this invention is based on an arrangement by means of which a worn out shoe heel may be easily removed by the user and replaced by a new heel lift without requiring skilled labor for making such repair.

It follows from the above that a user by having spare shoe heel lifts at hand may readily repair the worn out heels, thereby avoiding the necessity of resorting to a repair shop with the resulting loss of time.

A practical embodiment of a device of this invention comprises a substantially U-shaped or arcuate member having the shape of the perimeter of a shoe heel with an inwardly extending flange along the bottom edge of the inner face thereof adapted to coact with a correspondingly shaped groove in a shoe heel.

Other objects and advantages of the invention will appear in the course of the following description taken with the accompanying drawings, in which—

FIG. 1 is a perspective view of a device embodying one form of the invention, shown in inverted position.

FIG. 2 is a perspective view thereof partly applied to a shoe heel.

FIG. 3 is a top plan view of a device embodying a modified form of the invention shown applied to a shoe heel.

FIG. 4 is a perspective view of a device embodying a further modified form of the invention shown applied to a shoe heel, the heel being shown detached in dot-dash lines.

FIG. 5 is a longitudinal sectional view of the device of FIG. 4 applied to a heel and applied to a shoe heel portion.

FIG. 6 is a perspective view of a further modified form of the invention.

FIG. 7 is a perspective view of the device shown in FIG. 6 applied to a shoe heel.

FIG. 8 is a longitudinal sectional view through the parts of FIG. 7 shown applied to a heel portion.

FIG. 9 is a central sectional view of still another embodiment of the invention shown applied to a woman's shoe heel.

FIG. 10 is a similar view of yet a further embodiment of the invention shown applied to a woman's shoe heel.

FIG. 11 is a perspective view of yet a further modified embodiment of the invention.

FIG. 12 is a cross-sectional view of the device shown in FIG. 11 and a shoe heel in cross section shown ready for insertion into the device.

FIG. 13 is a cross-sectional view of the device shown in FIG. 11, with a heel in position ready for attachment thereto.

FIG. 14 is a cross-sectional view of still another further embodiment of the device, with a shoe heel in cross section applied thereto.

FIG. 15 is a disassembled perspective view of yet a further embodiment of the invention and a shoe heel preparatory to being attached thereto.

As shown in the drawings, and referring first to FIGS. 1 and 2, the device according to this form of the invention comprises a substantially U-shaped or arcuate-shaped member 1 following the perimetrical outline of the heel of a shoe. A flange 2 is formed on the inner face thereof

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along the bottom edge as viewed in FIG. 1 extending inwardly, therearound. A shoe heel 3 of ordinary shape is shown in FIG. 2 with a reduced upper portion 3' as shown in FIG. 2 and a wider lower portion 5' forming a shoulder 4' around the wider portion 5'. A groove 4 is formed around the body of the heel at the juncture of the portions 3' and 5'. The device is adapted to be applied to the heel by sliding the free ends of the flange 2 in the groove 4 of the device from the rear side to the front side of the heel or from the right to the left as viewed in FIG. 2. When the device 1 is pushed forwardly its complete length the flange 2 interlocks with the edge walls of the groove 4 and the bottom of the device seats on the shoulder 4' whereby the top surface of the device is flush with the top surface of the heel as viewed in FIG. 2 and whereby the peripheral edge of the device 1 is flush with the peripheral edge of the lower portion 3<sup>a</sup> of the heel body. Pins 5 projecting upwardly from the shoulder extend into socket recesses 6 formed in the bottom face of the device that engages the shoulder 4' of the device for interlocking the device to the heel. The device 1 is formed with holes 1' for receiving nails or the like for securing the device with the heel to a heel portion on the shoe.

The modified form of the invention shown in FIG. 3 shows another way of locking the heel 3<sup>a</sup> to the arcuate member 1<sup>a</sup>. In this form of the invention, a transverse rod member 7 has an angular end inserted into a hole 7<sup>a</sup> formed at one end of the arcuate member 1<sup>a</sup>. The rod member 7 terminates at the other end in a loop 8 which is sleeved around a pin 9 fixed in the opposite end of the arcuate member. The rod member is slightly curved to conform to the curvature of the front face of the heel and contacts said face therealong thereby locking the heel against movement outwardly of the member 1<sup>a</sup>.

In the embodiment illustrated in FIGS. 4 and 5, the device comprises a plate 10 following the perimetrical outline of a shoe heel and having a side skirt portion 11 terminating in an inwardly extending flange 12 therearound. The flange 12 is adapted to seat in and be engaged by the walls of a groove 13 formed in the periphery of a shoe heel 3'' inserted in the skirt portion 11 after the plate 10 has been secured to the heel portion 14 of a shoe as shown in FIG. 5.

In the embodiment illustrated in FIGS. 6 to 8, inclusive, the inner edge of the plate 10<sup>x</sup> is provided with a front wall 15 bent against both ends of the flange 12<sup>x</sup>. The free edge of the wall portion 15 adjacent said flange is formed with a notch 16 for facilitating the removal of a worn out heel for repair, for example by the insertion of a pointed tool 17 as shown in FIG. 8.

In the embodiment illustrated in FIGS. 6 to 8, inclusive, the heel 3<sup>x</sup> is coupled to the plate 10<sup>x</sup> by bending the heel portion 14<sup>x</sup> of the shoe longitudinally.

In the embodiment illustrated in FIG. 9, the device comprises an inverted cup-shaped member 18, the opening edge of which is formed with a flange 19 for engaging a groove formed in the surface of a counter-heel lift 21, which is connected to a woman's shoe heel 22 by means of said cup-shaped member 18. The latter member is secured to the heel portion of a shoe by means of a nail 23 or the like.

In the embodiment illustrated in FIG. 10, the side walls 24 of the inverted cup-shaped member 18''' are downwardly tapered as shown, said member 18''' being secured to the heel 22''' by means of a nail 23''' or the like. The tapering cup-like member 18''' is thus adapted to receive a correspondingly tapered portion 25 of said counter-heel lift 21'''.

In the embodiment shown in FIGS. 11 to 13, the arcuate member 1<sup>aa</sup> forms a frame having a perimetrical

outline similar to that of a heel, the inner end of said frame comprising a cross member 26<sup>aa</sup> as shown in FIG. 11. The cross member 26<sup>aa</sup> is also L-shaped in cross section including a flange 26<sup>aa'</sup> which is a continuation of the flange 2<sup>aa</sup> around the inner face of the arcuate-shaped member 1<sup>aa</sup>. In this embodiment, the heel 3<sup>aa</sup> is fitted into the frame by bending same as shown in FIG. 13, said heel 3<sup>aa</sup> being provided with a continuous groove 4<sup>aa</sup> therearound including the front face thereof arranged to be engaged by the flanges 2<sup>aa</sup> and 26<sup>aa'</sup>.

In the embodiment shown in FIG. 14, the inner edge of the flange 2<sup>xx</sup> is enlarged with its upper surface sloping inwardly and upwardly. The upper edge 28 of the groove 4<sup>xx</sup> in the heel 3<sup>xx</sup> is curved downwardly and outwardly so as to fit and seat on the top surface of the flange as indicated at 27 and to interlock with said flange. This arrangement affords a more secure lock of the device on the heel.

In the embodiment of FIG. 15, which is somewhat similar to the embodiment of FIG. 11, the cross member 26<sup>aaa</sup> of the frame 1<sup>aaa</sup> is thinner than the rest of the frame to adapt the frame to mate with the projecting reduced end portion 3<sup>aaa</sup> of the heel whereby the flange 2<sup>aaa</sup> of the frame interlocks with the groove 4<sup>aaa</sup> in the heel. It will be observed that the cross member 26<sup>aaa</sup> extends across between the ends of the top surface of the frame as viewed in FIG. 15 and not across the ends of the groove thereby leaving the front of the frame open to permit the frame to be slid onto the heel from the rear to front or from right to left as shown in the drawings. The frame 1<sup>aaa</sup> is adapted to be secured in position by a bolt 29 extending through a hole 30 in the heel adjacent the inner end thereof and through an aligned perforated ear 31 formed on the inner edge of the cross member 26<sup>aaa</sup>.

While several specific embodiments of the invention have been illustrated and described, it is evident that many changes and/or modifications will occur to those skilled in the art, without departing from the scope of the invention as clearly set forth in the appended claims.

I claim:

1. A removable heel for shoes comprising a heel body having two portions, one portion being smaller than the other portion forming a shoulder along said other portion, said body having a groove extending thereabout at the juncture of said portions, means retaining the heel body to a portion of a shoe, said means comprising a U-shaped member having an inturned flange along one surface thereof, extending about the sides and rear of the U-shaped member, said groove and inturned flange forming mating interlocking means to permit the U-shaped member to be slid onto the heel body from rear to front, pins protruding upwardly from the shoulder, said U-shaped member having socket recesses in one surface thereof for receiving said pins to interlock the U-shaped

member to the heel body, said U-shaped member having spaced holes therein to receive elements for fastening the heel body to a portion of a shoe.

2. A removable heel for shoes comprising a heel body having two portions, one portion being smaller than the other portion forming a shoulder along said other portion, said body having a groove extending thereabout at the juncture of said portions, means retaining the heel body to a portion of a shoe, said retaining means comprising a plate U-shaped in plan to conform to the shape of a heel body, said plate having a depending flange around its sides and rear, said depending flange terminating in an inwardly directed flange therearound, a wall extending from the front of the heel body to a point flush with the inwardly extending flange, said plate with flanges receiving the smaller portion of said heel body with the inwardly extending flange inserted into said groove and coacting with the walls of said groove, said plate having holes for receiving elements for fastening the heel to a portion of a shoe, said wall having a notch along the edge thereof to receive a fingernail for manually removing the heel for repair.

3. A removable heel for shoes comprising a heel body having two portions, one portion being smaller than the other portion, forming a shoulder along said other portion, said body having a groove extending thereabout at the juncture of said portions, means retaining the heel body to a portion of a shoe, said retaining means comprising a U-shaped frame including a U-shaped body with a cross member across the ends of the body, an inturned flange along the inner face of the U-shaped body adjacent one surface thereof, a similar inturned flange along the inner face of the cross member adjacent one surface thereof, said flanges forming a continuous flange around the retaining means, said groove and inturned flanges forming mating interlocking means, the side portions of said groove being open at the front to permit the U-shaped body to be slid onto the heel body from rear to front, and a perforated ear on the cross member midway its ends to receive a fastening element for fastening the heel to a portion of a shoe.

References Cited by the Examiner

UNITED STATES PATENTS

1,346,841	7/20	Padden	36—42
1,920,170	8/33	Brockman	36—36
2,121,353	6/38	Hustad	36—36
2,428,245	9/47	Roman	36—36
2,435,723	2/48	Moffatt	36—36
2,806,302	9/57	Sharpe	36—36
3,043,024	7/62	Haug	36—36
3,078,599	2/63	Mileto	36—42

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