

May 15, 1951

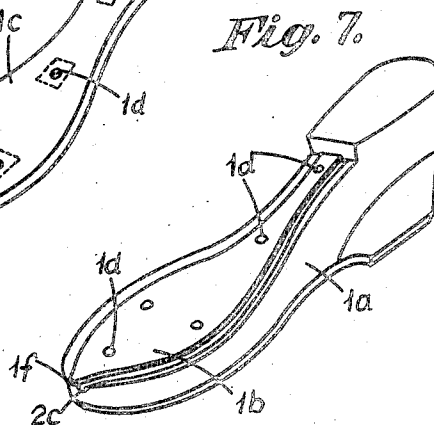
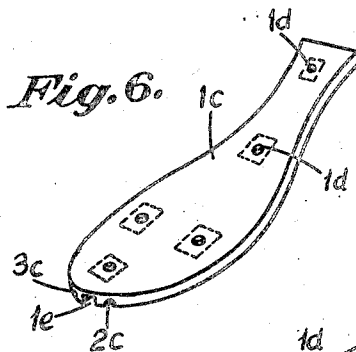
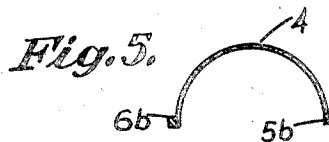
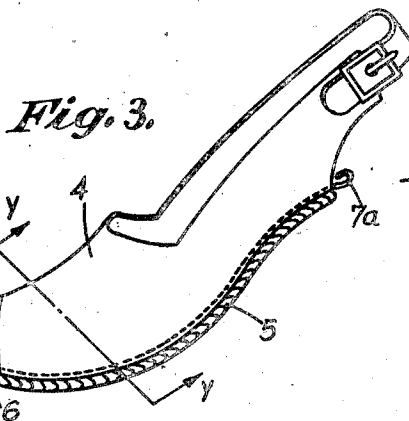
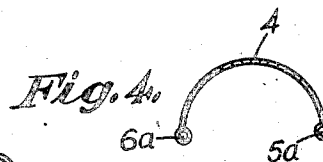
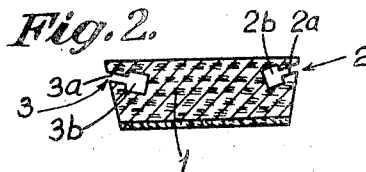
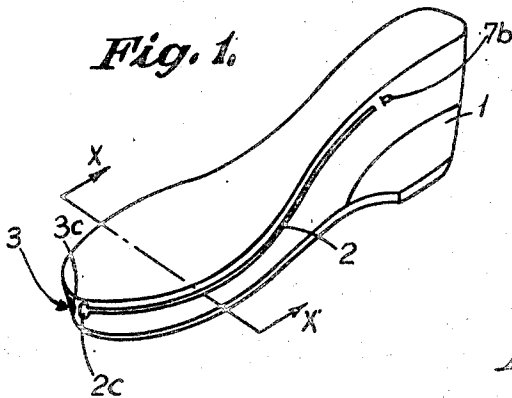
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2,552,943

SHOE HAVING A DETACHABLE UPPER

Filed April 30, 1948

2 Sheets-Sheet 1



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SHOE HAVING A DETACHABLE UPPER

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2 Sheets-Sheet 2

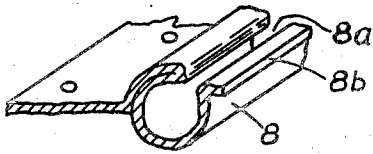


Fig. 8.

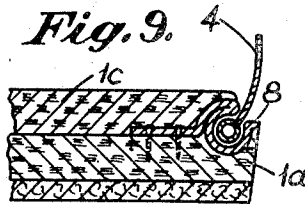


Fig. 9.

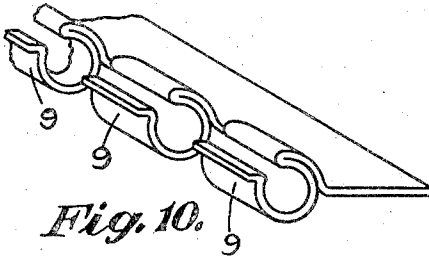


Fig. 10.

Fig. 11.

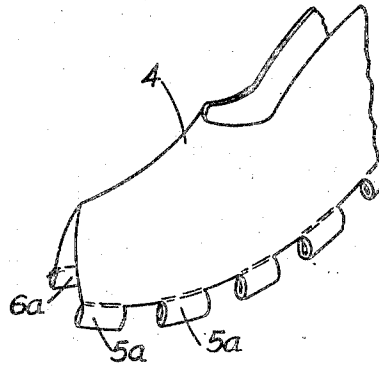


Fig. 12.

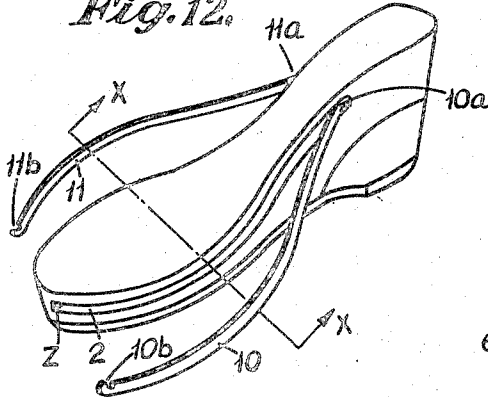
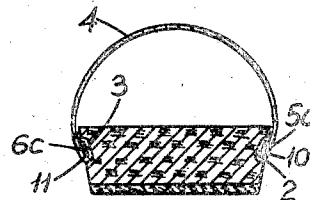


Fig. 13.



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SHOE HAVING A DETACHABLE UPPER

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4 Claims. (Cl. 36—15)

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This invention relates to shoes, sandals and other articles of footwear and has for its object to provide an improved article of footwear in which the upper can readily be detached, without the use of tools from the sole and heel member and replaced by another upper without sewing or sticking.

Although not exclusively limited thereto the invention is primarily intended for ladies' shoes enabling the same sole and heel member to be used interchangeably with a number of uppers, for example, of different design or colour, as may be required.

According to this invention the upper of a shoe, sandal or other article of footwear is provided with edge retainer means and the sole and heel member is provided with co-operating means in the edge or top for receiving said edge retaining means and for preventing withdrawal thereof. The said co-operating means may comprise one or more undercut grooves in the top or edge of the sole and heel member and the edge retainer means may be constituted by local thickening on the edge of the upper, the groove cross section being so dimensioned in relation to said thickening that the latter can be slid longitudinally into the grooving and cannot be removed therefrom otherwise than longitudinally. Alternatively the grooving cross section need not be such as to prevent withdrawal of the edge retainer means directly, such prevention being prevented by movable closure means which can be positioned to close the mouth of the grooving.

In a shoe with a backless upper, means, such as hooks and eyes or buttons and loops, may be provided to prevent longitudinal "working" of the edge retaining means in relation to the sole and heel member.

Any of a variety of different materials may be used for the edge retainer means, for example, in the type of construction using a grooved sole and heel member the said edge retainer means may be of leather and similarly the co-operating undercut groove may also take any of a variety of different constructional forms. Thus, for example, where the sole and heel member is of wood a groove may be merely formed therein.

In those at present fairly fashionable ladies' shoes in which the upper has no heel or rear portion, the retainer preferably runs around the edge of the upper as far back as the beginning of the cut-away portion which in more normal shoes would be the rear or heel portion. Where, however, the upper has a rear or heel portion this may be split vertically and provided with a zip

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or other fastener so that when the upper has been put in position with its retainer in the groove the heel or rear portion thereof may be closed by pulling up the zip.

By the expression "sole and heel member" as employed in this specification is meant that portion of an article of footwear other than the upper. It will normally consist of a sole and heel made in one piece or fabricated into one piece but in some cases, for example in certain forms of slipper, there may be no actual heel.

The invention is illustrated in the accompanying drawings which show, by way of example only, a few of the numerous possible embodiments thereon.

Referring to Figs. 1 to 5 a lady's shoe with a wooden sole and heel member 1 (Fig. 1) has the faces of the marginal edges at the sides formed with undercut grooves 2, 3 each of which extends along the faces of the edges or sides from a point near the front or toe to the side of the heel. In section this groove may be circular or rectangular and the entrance or slot thereof is relatively narrow. A typical suitable section is shown in Fig. 2 wherein the narrow entrance portion or slot is indicated or undercut portion at 2a, 3a and the interior section at 2b, 3b is shown rectangular. Fig. 2 is a cross section taken on the line X—X of Fig. 1 looking in the direction of the arrows. The upper 4 (see Fig. 3), which in the example chosen for illustration is of the strap or sandal back type with a so-called "peep toe" hole in the front is of cloth or other desired material and has retainers in the form of two leather cord or other suitable strips 5, 6 sewn along the edges from either side of the "peep toe" hole to either side of the cut-away heel portion. The retainers are of such cross-section as to fit into the groove as to be accommodated in the section 2b, 3b but to be unable to pass through the portions or slots 2a, 3a. Each groove 2, 3 has a locally enlarged entrance 2c, 3c, (Fig. 1) at the toe end thereof to enable the retainer 5 or 6 to be entered into the groove. Fig. 4 is a cross section of the upper 4 taken on the line Y—Y of Fig. 3 looking in the direction of the arrows. In Fig. 4 the retainers are shown as comprising wire or other cores 5a, 6a sewn into loops formed in the material of the upper 4 but many other constructions are possible. For example as shown in Fig. 5, which is a view similar to Fig. 4, leather strips 5b, 6b sewn to the material of the upper, could be used. To place the upper in position the retainers 5, 6 are entered into the two grooves 2, 3, the rear of each retainer being entered into

the entrances 2c, 3c at the forward end of each groove. The retainers are then slid longitudinally along the grooves as far as they will go so that the upper is brought into the correct position with relation to the sole and heel member. If desired loops or the like fastening element, such as that shown at 7a (Fig. 3) adapted to fit over securing elements like hooks or pegs such as 7b (Fig. 1) may be provided to prevent any working forward of the upper when it has been positioned.

It will be seen that owing to the dimensions of the grooves 2, 3 and of the retainers 5, 6 the upper 4 will be firmly held in position on the sole and heel member 1 with the cloth or other material thereof in the slot entrances 2a, 3a to the grooves 2, 3 for the retainers cannot come through these slots. If, however, it is required to exchange one upper for another it is a simple matter to slide out the retainers and slide in those of another upper.

Figs. 6 and 7, which should be read together, show one convenient way of making a grooved sole and heel member for use in carrying out the invention. The construction consists of a main portion 1a having a central raised part 1b and an overlay member 1c which is shaped and dimensioned to fit over the raised part 1b to which it is attached in any convenient way as by screws, nails or pegs at 1d. The member 1c may be of any convenient material, e. g. metal and its underside is peripherally grooved or its edge is constituted by a downwardly projecting flange so that when it is in position the peripheral space between the parts 1a and 1c and inwardly limited by the edge of the raised part 1b, provides the required narrow entrance grooving at 2 and 3. In Fig. 6 the edge of the part 1c is a downwardly extending flange having a step 1e cut out to fit over the corresponding step 1f of the raised part 1b and other cut outs 2c, 3c to perform the same function as the correspondingly numbered parts of Fig. 1.

Where the sole and heel member is of leather a groove formed therein may be strengthened by metal or other liner means in the form of a split tube inserted in the leather and held there in any convenient way as by sewing. Thus, as illustrated in Figs. 8 and 9, a metal liner member 8 shaped for example as shown in perspective and broken away in Fig. 8 may be fitted, as shown in the sectional part view of Fig. 9 between the main portion 1a and the overlay portion 1c of a sole and heel member.

In the simplest embodiments of the invention, like those already illustrated the retainer is continuous along almost the whole edge of the upper and there is a continuous groove along most of the periphery of the sole and heel member. It is, however, possible to carry out the invention by using a discontinuous retainer, i. e. a series of retainers spaced apart along the edge of the upper. Thus an interrupted groove may be provided by fitting a series of short metal liner parts 9 end to end and spaced apart along the groove of the sole and heel member as illustrated in perspective part view of Fig. 10. The retainer means on the upper are similarly interrupted as shown in Fig. 11 at 5a, 6a. To fit the upper 4 to the sole and heel member the former is placed over the latter with each short retainer length 5a or 6a in the groove between the appropriate pair of short liner parts 9 and then drawn back a short distance so as to enter the appropriate length 5a

or 6a into the length of grooving provided by the appropriate part 9.

In yet another form of construction the edge retainer means is arranged to be sprung directly into grooving either the said means or the said grooving or both being springy to allow the one to be forced directly into the other. The construction is such that the edge retaining means, once sprung into the grooving, is retained thereby and will not be released by a direct pull on the upper, release being effected by overcoming the spring of the said grooving or retainer means as the case may be. Figs. 8 and 9 may also serve to illustrate a construction of this nature. If in these figures the part 8 is made of springy material the edge retainer of an upper may be forced into the groove constituted thereby by deforming the said part 8 against its spring. Once in, however, it will be retained in normal use and to remove it again it is necessary to open the slot 8a by forcing down the lip 8b against its spring.

Figs. 12 and 13 illustrate yet another construction, Fig. 12 being a perspective view, corresponding to that of Fig. 7 of the sole and heel member and Fig. 13 being a sectional view on the line X—X of Fig. 12 but with the upper in position. As will be seen, in this construction the upper 4 is provided with the loop edges 5c, 6c which are threaded on metal or other suitable springy closure bars 10, 11 which are hinged or sprung to the sole and heel member at their rear ends 10a, 11a. The said member is provided with open mouthed grooves 2, 3 which will receive the closure bars 10, 11 with the loop edges 5c, 6c thereon, said bars tending to spring into said grooves. The ends of the bars may be hooked as at 10b, 11b to engage and be retained by suitable detents, such as that schematically indicated at Z in the toe ends of the grooves. When an upper is in position the bars lie flush in the grooves and being covered by the loop ends 5c, 6c are practically hidden, thus giving the shoe a normal external appearance.

The groove may be in the edge of the sole and heel member or in the upper face of it depending upon the general design of the article of footwear. In all the illustrations the groove is in the edge but it will be obvious, without further illustration, that where the sole overlaps the upper the grooving may be in the upper face of the sole and heel member.

What I claim is:

1. An article of footwear comprising an upper and a sole and heel member in detachable relation, said upper having a lower marginal edge provided with elongated retainers disposed one on each of the two sides thereof, said member having a pair of relatively long grooves for the reception of said retainers upon sliding said upper longitudinally of said member, said grooves being located one on each of the marginal sides of said member with each groove having one end at the toe of said member, and such groove ends in spaced-apart relation, said grooves being undercut and having their narrow portions open at the face of the marginal side edges of the said member, whereby the upper adjacent the retainers will occupy and slide in said narrow portions while the retainers will occupy and slide in the undercut portions of the grooves and be thereby held against lateral detachment.

2. An article of footwear according to claim 1 having detachably engageable elements to secure said upper and said member against relative sliding movement.

3. An article of footwear according to claim 1 having a fastening element at the rear end of one of said retainers and means on the said member engaged by said fastening element to detachably secure said upper and said member against relative sliding movement.

4. An article of footwear according to claim 1 wherein said sole and heel member has a raised part, an overlay member interfitted with said raised part, said raised part and overlay member at their sides and adjacent their junctions coacting to provide said grooves.

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