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M. WINKEL

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SHOE

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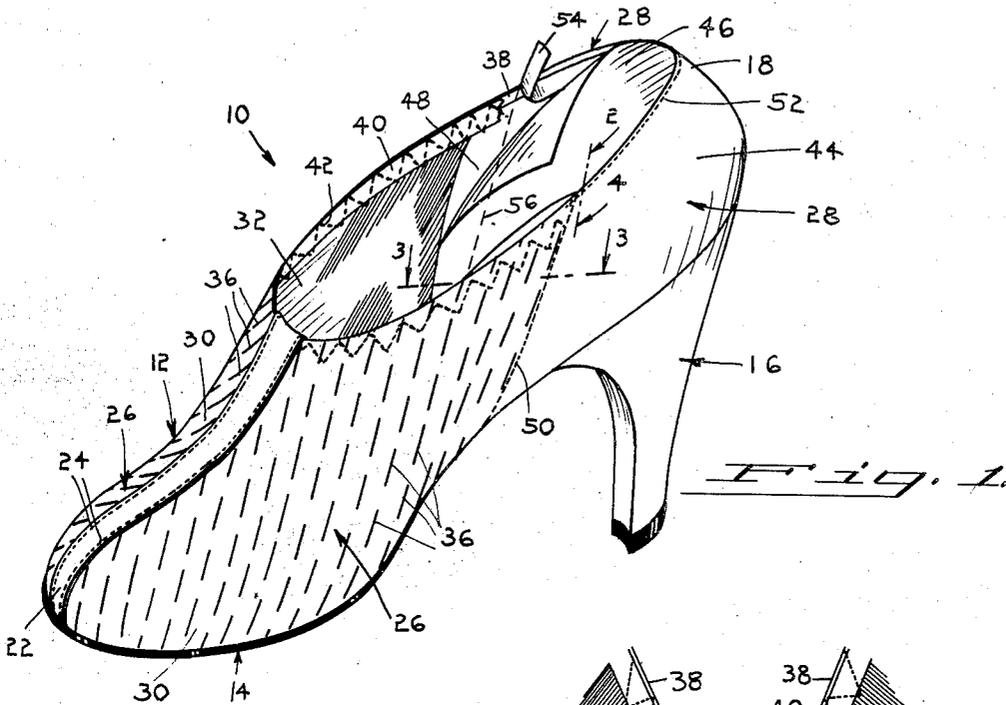


Fig. 1.

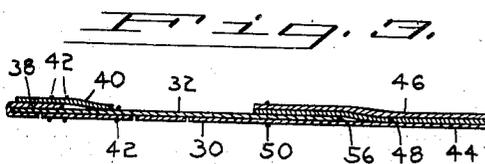


Fig. 3.

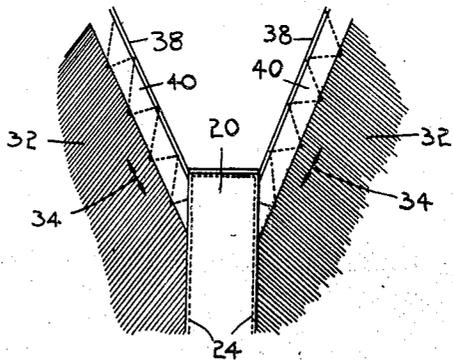


Fig. 2.

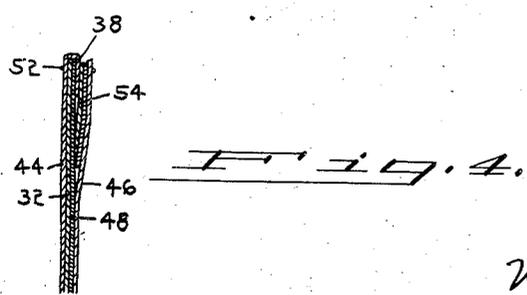


Fig. 4.

39

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SHOE

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1 Claim. (Cl. 36-45)

This invention relates to shoes.

One object of the invention is to provide a shoe having an outer layer of shoe upper material such as leather, which is normally substantially inelastic, but which is rendered elastic in accordance with the present invention whereby the shoe upper is elastic in predetermined portions thereof for yieldable engagement with the wearer's foot.

Another object of the invention is to provide a low shoe having a relatively high instep portion and which nevertheless can be put on and taken off the wearer's foot without the provision of releasable fastening means. In other words, in accordance with this object of the invention, the shoe has a forward upper portion which is substantially higher than that of the ordinary pump and yet requires no laces, buttons, buckles or other releasable fastening devices to permit the foot opening to be enlarged for the insertion and removal of the wearer's foot, the enlargement of the foot opening being accomplished by the provision of the elastic shoe upper material which can stretch and contract automatically in response to the pressure exerted thereon when the shoe is being placed on and removed from the wearer's foot.

A further object of the invention is to provide a shoe in which the upper at the edge of the foot opening is elastic for closely conforming to the wearer's foot at the foot opening.

Another object of the invention is to provide a shoe upper which in the same piece of leather or other normally inelastic shoe upper material can be elastic in certain portions of the shoe upper and inelastic in other portions thereof.

A yet further object of the invention is generally to provide a shoe of improved comfort and appearance.

The above objects of the invention and other objects which might hereinafter appear will be fully understood from the following description considered in connection with the accompanying drawing.

In the drawing:

Fig. 1 is a perspective view of a shoe embodying the present invention;

Fig. 2 is a fragmentary inside view of the shoe upper adjacent the front edge of the foot opening;

Fig. 3 is a sectional view on the line 3-3 of Fig. 1;

Fig. 4 is a sectional view on the line 4-4 of Fig. 1.

Referring now more particularly to the drawing, the shoe 10 embodying the present invention is here shown as a lady's low shoe, but it will be

understood as the description proceeds that the invention may be embodied in shoes of other types as well as in men's shoes. Said shoe comprises an upper 12, a sole 14, and a heel 16 assembled together in any suitable way in accordance with any of the well known processes of making shoes. Preferably, however, the shoe of the present invention is made in accordance with any of the well known processes of making cemented shoes.

The shoe upper 12 comprises two appropriately shaped parts of shoe upper material, preferably leather which is normally inelastic, stitched at the heel of the shoe by a rear seam 18 and stitched together at the front of the shoe along a longitudinal median line extending from the front edge of the foot opening to the tip of the shoe, the securing of said parts of the upper at the front of the shoe comprising inner and outer strips 20 and 22, respectively, of leather or other suitable material secured to the adjacent edges of the parts of the shoe upper by spaced lines of stitching 24. As thus constructed each part of the upper just referred to comprises a forward portion or vamp 26 and a rear portion or quarter 28, the vamp and quarter portions in each part of the shoe being preferably in integral relation, although it is within the scope of the present invention to provide initially separate vamp and quarter sections suitably stitched together at their adjacent edges.

A dominant feature of the present invention resides in the construction of the material of the vamp portions 26 whereby said material is elastic, although comprising as an outer layer normally inelastic material such as ordinary shoe upper leather. Each vamp portion 26 comprises an outer layer 30 of shoe upper leather and an inner layer or lining 32 of elastic sheet material, preferably woven elastic fabric. Said fabric may be of the type known as "Lastex" and may comprise inelastic yarn woven with elastic or rubber containing yarn whereby said fabric is elastic in a direction transversely of the threads composed of inelastic yarn, as indicated by the arrows 34 in Fig. 2 of the drawing. Said leather and lining layers 30 and 32 are preferably co-extensive and are adhesively united with each other throughout their contiguous surfaces. Leather layer 30 of each vamp portion 26 is provided with a plurality of slits 36 arranged in spaced rows, with the slits in adjacent rows disposed in staggered relation. It will be observed that in each row there are a plurality of relatively short slits which are spaced from each other. As the lining 32 is elastic in a direction transversely of the direction of the slits in leather layer 30, it is apparent that said leather

layer can stretch and contract together with its lining layer and that by reason of the provision of the multiplicity of slits in such leather layer and because of the staggered relation of said slits, said leather layer can stretch and contract substantially uniformly throughout the extent thereof substantially in all directions except along the line in which each row of slits extend.

It will be observed that vamp portions 26 extend to and define the edge of the foot opening at the front and forward side portions of the shoe and that the slits in layer 30 are positioned in the edge portion of the upper at the foot opening so that the marginal edge portions of the upper at said foot opening in vamp portions 26 are elastic and can stretch and contract for yieldable engagement with the wearer's foot. The upper edge portions 38 of each part of the shoe upper is folded inwardly for the full extent thereof in the vamp and quarter portions 26 and 28. A strip of elastic tape 40 is stitched to the infolded edge portion 38 of vamp portions 26 of the upper for reinforcing and finishing said upper edge portions 38 at the forward part of the shoe at the foot opening, said finishing tapes 40 being elastic so that said edge portions 38 can stretch and contract. Elastic tape 40 is secured to marginal portions 38 of vamp portions 26 by a line of zig zag stitching 42 which permits the parts to stretch and contract.

The quarter portions 28 of the shoe upper are preferably inelastic. Each of said quarter portions 28 includes an outer layer 44 of leather which, as described above, is integral with the leather layer of vamp 26 at the same side of the shoe. Each of said quarter portions also comprises a leather lining 46 and a doubler lining 48. The forward edges of said linings are secured to the outer layer of the shoe upper by a line of stitching 50 which continues at the upper edge of the shoe in the counter portion thereof as indicated at 52. Said stitching 52 secures together the upper edge portions of the outer leather layer 44, the lining 46, and the doubler 48 as well as a reinforcing strip 54 which is positioned between the inturned folded portion 38 of the outer layer of the upper and the lining 46. It will be observed that the elastic lining 32 terminates at its rear edge 56 a short distance rearwardly of the forward edges of linings 46 and 48 of each quarter portion of the shoe. It will be observed also that as more clearly shown in Figs. 3 and 4, the inwardly folded edge portion 38 of the outer layer of the upper is folded over elastic lining 32 and doubler 48.

Thus, it is seen that the shoe having the upper constructed as herein shown or described is well adapted to accomplish the several objects of the present invention. It will be observed that the vamp portions of the shoe upper are elastic

so that the foot opening can stretch and contract whereby the edge of the upper at the foot opening can appropriately and comfortably fit the wearer's foot. Although in the shoe here shown by way of illustration, the instep portion thereof is substantially higher than the instep of a shoe of the vamp type, nevertheless releasable laces, buckles, straps, or other releasable fastening elements are unnecessary. It will be noted also that the provision of the slits in the shoe upper leather besides permitting said leather to stretch and contract together with the elastic lining impart a pleasing ornamental appearance to the shoe. In this connection it will be understood that instead of ordinary slits, as illustrated, narrow cut-outs of any desirable and pleasing configuration may be provided. The elastic lining 32 is attached to the leather layer 30 in unstretched condition, as the stretchability of the leather layer 30 is derived from the provision of the slits therein. Accordingly, it will be understood that when the leather layer is stretched, as when the shoe is on the wearer's foot, the edges of each slit are moved slightly apart so that the openings constituted by said slits are somewhat widened and the edges of the leather at the slits are more fully exposed to view. The leather in this stretched condition has a pleasing appearance which adds considerably to the value of the invention in respect to the elastic features of the shoe upper material. It will be understood that while I have shown and described the preferred embodiment of my invention, the latter may be embodied otherwise than as here shown and also it will be understood that in the illustrated embodiment certain changes in the construction and arrangement of parts may be made without departing from the invention as defined by the appended claim.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

In a shoe, an upper having a vamp comprising a lining of elastic fabric and an outermost layer of normally inelastic shoe upper material, such as leather, secured to said lining, said exposed layer having a multiplicity of relatively short slits formed therein and arranged in a plurality of rows so that said outermost layer can stretch and contract with said lining thereby forming with the latter composite elastic shoe upper material, said vamp of composite elastic shoe upper material extending along the sides of the shoe from the bottom of the shoe to the edge of the upper at the foot opening whereby to permit expansion and contraction of the upper in the vamp portion thereof and at the front and sides of the foot opening, and quarter sections of inelastic shoe upper material joined to said vamp.

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