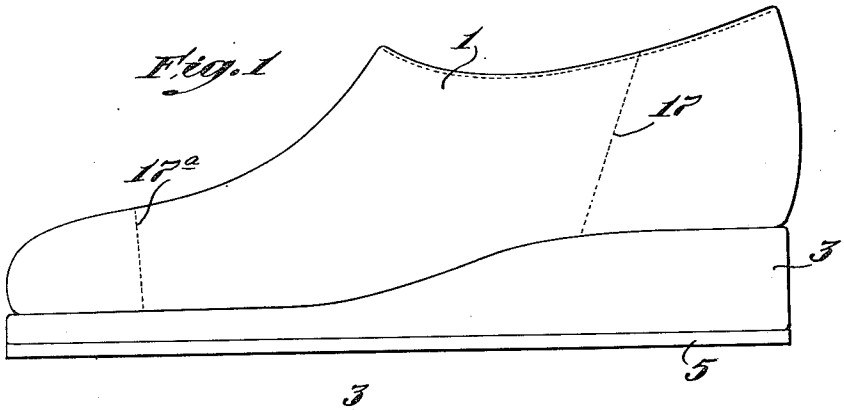
May 25, 1948. W. F. HERLIHY 2,442,239

METHOD OF MAKING SHOES

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Fig. 1



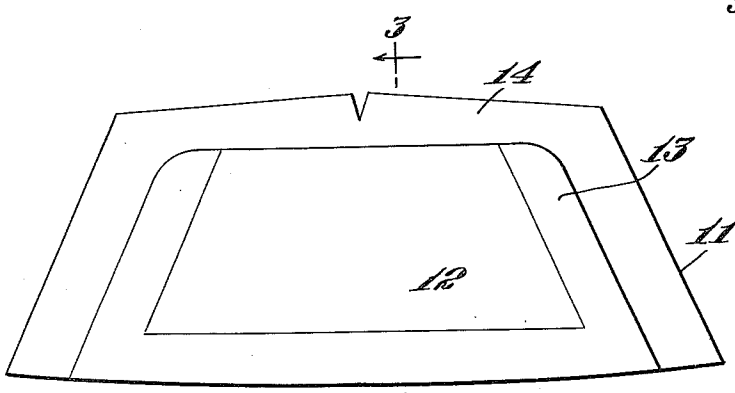


Fig. 2

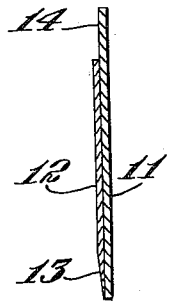


Fig. 3

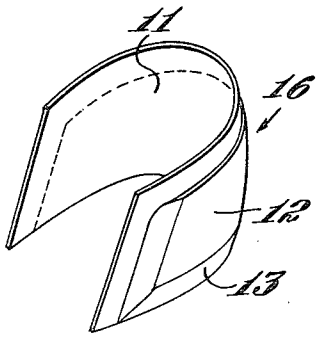


Fig. 4

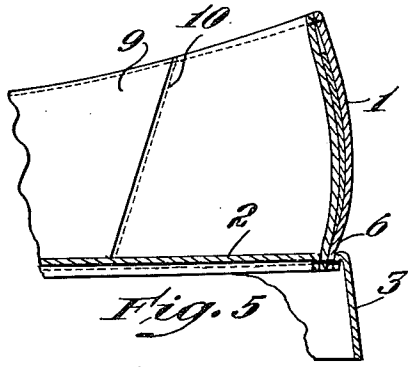


Fig. 5

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METHOD OF MAKING SHOES

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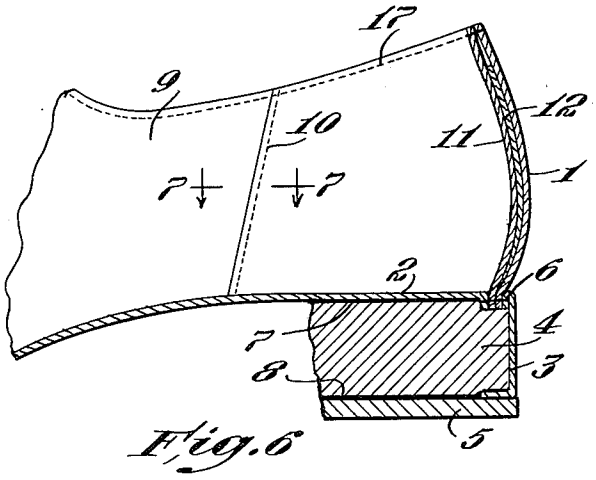


Fig. 6

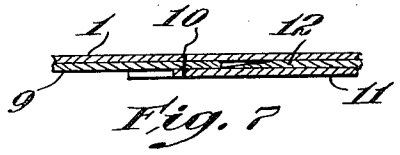


Fig. 7

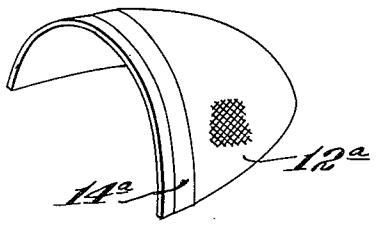


Fig. 8

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UNITED STATES PATENT OFFICE

2,442,239

METHOD OF MAKING SHOES

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4 Claims. (Cl. 12—142)

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This invention pertains to the manufacture of footwear and relates more particularly to a novel method of making shoes of the so-called California type.

In California type shoes the edge of the sock lining is customarily stitched to the lower portion of the upper (including the upper lining) before the last is introduced. The upper is provided with a skirt portion or "wrapper," extending downwardly below the seam which unites it to the sock lining and the lower marginal portion of this wrapper is turned in under and attached to the sock lining or to a cushion sole, middle sole or "platform" adhesively secured to the under surface of the sock lining—the outer sole underlying the turned-in margin of the wrapper and being permanently secured to the bottom structure of the shoe by appropriate means, for example adhesive.

The attachment of the sock lining to the upper (including its lining) before lasting precludes the introduction of a moulded and flanged heel stiffener or toe box of the customary type, since the lower edge of the upper lining is anchored directly to the sock lining prior to lasting.

The principal object of the present invention is to provide a novel method of making California shoes having stiffened end portions. Other objects and advantages of the invention will be pointed out in the following more detailed description and by reference to the accompanying drawings wherein

Fig. 1 is a diagrammatic side elevation of a conventional California type shoe embodying the present invention;

Fig. 2 is a plan view of a stiffener assembly for use in stiffening one end of the shoe upper and before it is moulded;

Fig. 3 is a section on the line 3—3 of Fig. 2;

Fig. 4 is a perspective view showing the stiffener assembly as it appears after moulding;

Fig. 5 is a fragmentary diagrammatic longitudinal section through the heel end of a shoe of the California type showing the assembled upper and sock lining and moulded stiffener assembly prior to the introduction of the last;

Fig. 6 is a view similar to Fig. 5, showing the rear part of the shoe, including the stiffener assembly of the present invention after completion;

Fig. 7 is a fragmentary section to large scale on the line 7—7 of Fig. 6; and

Fig. 8 is a diagrammatic perspective view of a moulded toe stiffener assembly useful in the practice of the present invention.

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Referring to the drawings, the numeral 1 designates the outer element of the shoe upper, the shoe comprising the sock lining 2 (Fig. 5) the wrapper 3, the cushion sole or platform 4 (Fig. 6) and the outer sole 5. The margin of the sock lining 2 is secured to the outer member 1 of the upper by means of stitches 6. In accordance with conventional practice the seam comprised of the stitches 6 extends all of the way around the sock lining, including both end portions of the latter. In accordance with customary practice the cushion sole or platform 4 is united by adhesive at 7 to the under surface of the sock lining 2 and by adhesive at 8 to the outer sole 5. The shoe upper may or may not have a lining, but as illustrated in Figs. 5 and 6, it does have a lining 9, but this lining terminates at the rear end of the shank portion of the shoe at the line 10 (Fig. 5), the part 9 of the lining corresponding to the main portion of the lining of a shoe of the kind in which the quarter lining is made as a separate part and stitched to the main body of the lining.

In accordance with the present invention, one or both ends of the shoe upper are stiffened so as to impart the same effect as obtained in shoes of more conventional types by the use of a moulded counter and toe box.

Preferably the heel end stiffener assembly, in accordance with the present invention, is of lamellar construction, including a lining element 11 (Figs. 2 and 3) of appropriate flexible material, for example textile fabric, soft leather, or the like, and a stiffener element 12. This stiffener element 12 may be of any appropriate material such as is customarily used for making a moulded shoe counter or toe box, for example it may be leather, textile fabric impregnated with a suitable stiffening substance, for instance, a resinous material or a cellulose product, or felt material impregnated with a thermoplastic substance such as an asphalt compound. On the other hand, instead of forming the element 12 from sheet material (separate from the lining element 11) it may be applied directly to the part 11 in the form of a coating of appropriate stiffening material, for instance one of the synthetic resins, or the like. If the stiffener element 12 be of sheet material, it will be adhesively united to the lining element 11, and if the stiffener element 12 be of sheet material it is likewise preferable to bevel its side and lower margins as indicated at 13. The stiffener element 12 is of lesser area than the lining element 11, its lower margin being substantially in registry with

the lower edge of the lining element. The margins of the lining element are soft and pliable. This end stiffening assembly, comprising the lining element 11 and the stiffener element 12, is subjected to a moulding operation in a moulding press, as is commonly done in moulding shoe counters, the lining element with its stiffener element thus being moulded substantially to the shape of the heel portion of the last. After this lamellar stiffener assembly has thus been premoulded, it is introduced into the upper (Fig. 5) before the latter has been secured to the sock lining 2 (with the stiffener element 12 in contact with the inner surface of the upper member 1 and with adhesive interposed between the stiffening element and upper, if desired), the side and top margins of the lining element 11 are permanently secured to the member 1 by a sewed seam 17, and its lower margin is united to the upper and sock lining by penetrating fastening elements such as the stitches 6. If, as here illustrated, the upper includes a main liner member 9, the edge of the lining element 11 may be arranged to lap the rear edge 10 of the main part of the lining and the stitches of the seam 17 may pass through both lining elements and through the outer member 1 of the upper. If no other lining other than the lining element 11 be employed, the stitches of the seam 17 will pass only through the lining element 11 and outer member 1 of the upper.

After the premoulded stiffener assembly has thus been secured to the upper and sock lining, the last will be introduced into the upper and the shoe completed in accordance with any desired usual practice.

By this procedure it is possible to provide a California type shoe with a stiffened counter portion and with the stiffening element 12 disposed in a pocket between the lining element 11 and the outer element of the upper, similarly to the arrangement of the counter in shoes of other types. However, it will be noted that in accordance with the present invention the lower edge of the counter is not provided with a flange.

The above procedure has been specifically set forth with respect to the stiffening of the heel end of the shoe, but it is obvious that a similar procedure may be employed in stiffening the toe portion of the shoe. For this purpose, as illustrated in Fig. 8, there may be provided a toe stiffener assembly comprising a lining element and an associated stiffener element 12a, the marginal portion 14a of the lining element being unstiffened, and after this assembly has been moulded substantially to the contour of the toe end of the last, it is introduced into the upper before lasting and the marginal portion 14a of this lamellar stiffener assembly will be secured to the upper and sock lining by means of the stitches 6 and the stitches 17a (Fig. 1).

I claim:

1. That method of making a California style shoe wherein a sock lining is stitched all of the way around its margin to the upper after which a last is introduced preparatory to the completion of the bottom structure of the shoe, said method comprising as steps providing a quarter stiffener assembly comprising a lining element of suitable flexible material and a permanently stiff stiffening element of lesser dimensions than the lining element and which is adhesively bonded to the inner surface of the lining element, the assembly having soft, pliable margins and the permanently stiff stiffening element substantially

conforming in contour to the contour of the heel end of the last, disposing the stiffener assembly within the rear portion of the unlasted upper with the stiffening element of the assembly between the upper and lining element of the assembly, stitching the top and side margins of the lining element of the assembly to the upper, uniting the lower margin of the lining element of the assembly to the margin of the sock lining and to the upper, and thereafter, without impairing the stiffness of the stiffening element, introducing the last.

2. That method of making a California style shoe wherein a sock lining is united by penetrating fastening elements all of the way around its margin to the upper after which a last is introduced preparatory to the completion of the bottom structure of the shoe, said method comprising as steps providing a pre-moulded toe stiffener assembly comprising a lining element of suitable, pliable material and a permanently stiff stiffening element of lesser dimensions than the lining element and which is adhesively bonded to the inner surface of the lining element, the permanently stiff stiffening element of the assembly substantially conforming in contour to the contour of the toe end of the last, disposing the assembly within the toe portion of the unlasted upper with the stiffening element of the assembly between the upper and the lining element of the assembly, stitching the top and side margins of the lining element of the assembly to the upper, uniting the lower margin of the lining element only of the assembly to the upper by the same penetrating fastening elements which unite the upper and sock lining and thereafter, without impairing the stiffness of the said stiffening element, introducing the last.

3. That method of making a California style shoe wherein a sock lining is permanently united all of the way around its margin to the upper after which a last is introduced preparatory to the completion of the bottom structure of the shoe, said method comprising as steps providing a pre-moulded end stiffener including a lining element of flexible sheet material and a permanently stiff stiffening element adhesively bonded to the inner surface of the lining element, the permanently stiff stiffening element of the assembly having substantially the contour of an end portion of the last, disposing the stiffener assembly within the corresponding end of the unlasted upper with the stiffening element interposed between the upper and the lining element of the assembly, stitching the top and side margins of the lining element of the assembly to the upper, permanently uniting the lower margin of the lining element only of the assembly to the upper and to the sock lining by penetrating fastener elements and, without impairing the stiffness of the stiffening element, introducing the last.

4. That method of making a California style shoe wherein a sock lining is permanently united all of the way around its margin to the upper after which a last is introduced preparatory to the completion of the bottom structure of the shoe, said method comprising as steps providing a pre-moulded, shape-retaining quarter stiffener assembly including a lining element of flexible sheet material and a layer of permanently stiff stiffening material adherent to the inner surface of the lining element, the assembly substantially conforming to the contour of the heel end of the last and having a soft pliable margin, disposing the assembly within the heel end

of the unlasted upper with the layer of permanently stiff stiffening material interposed between the upper and the lining element of the assembly, uniting the top and side margins of the lining element of the assembly to the upper, securing the lower margin of the lower element only of the assembly to the upper and to the margin of the sock lining by penetrating fastener elements and, without softening the stiffening element, introducing the last.

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