June 19, 1951 H. W. DARRAGH 2,557,535

METHOD FOR MAKING SLIP LASTED SHOES

Filed Jan. 4, 1950 2 Sheets-Sheet 1

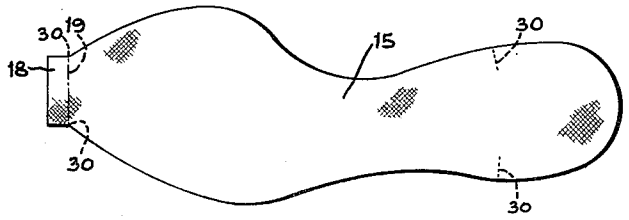


Fig. 1

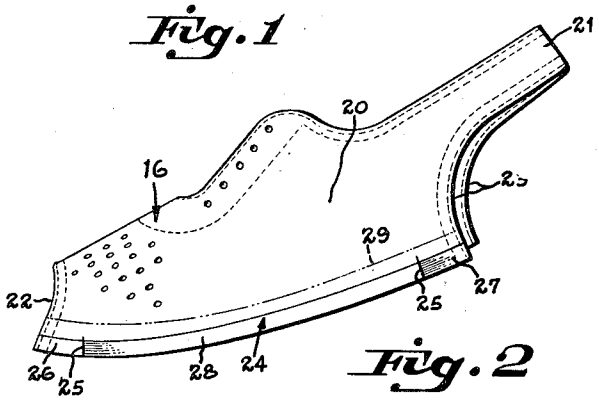


Fig. 2

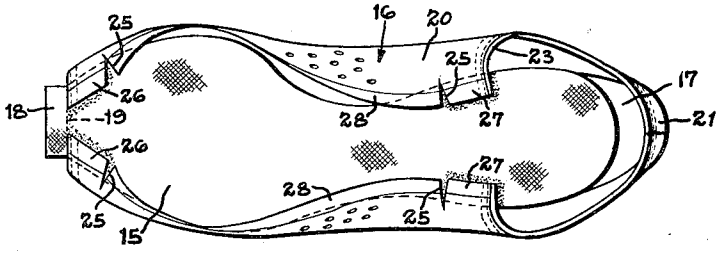


Fig. 3

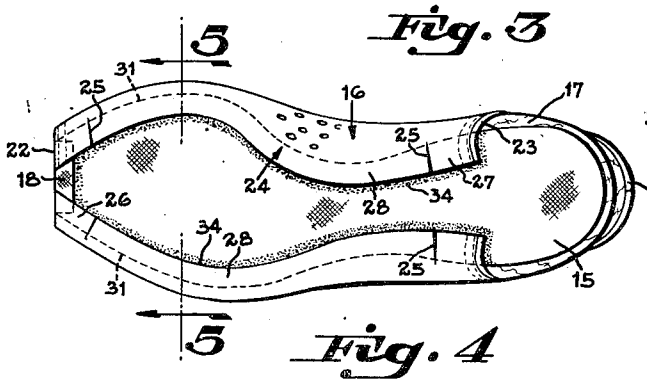


Fig. 4

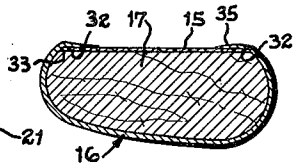


Fig. 5

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METHOD FOR MAKING SLIP LASTED SHOES

Filed Jan. 4, 1950 2 Sheets-Sheet 2

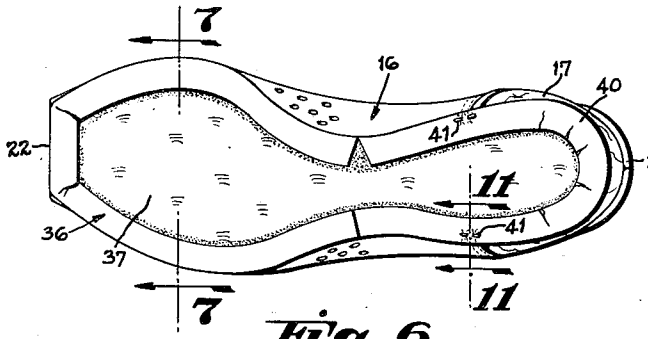


Fig. 6

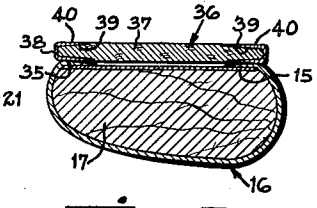


Fig. 7

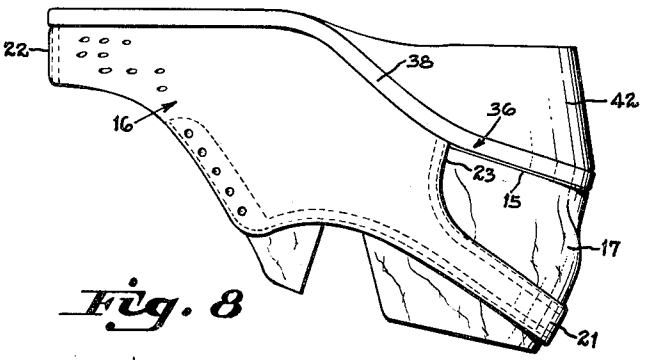


Fig. 8

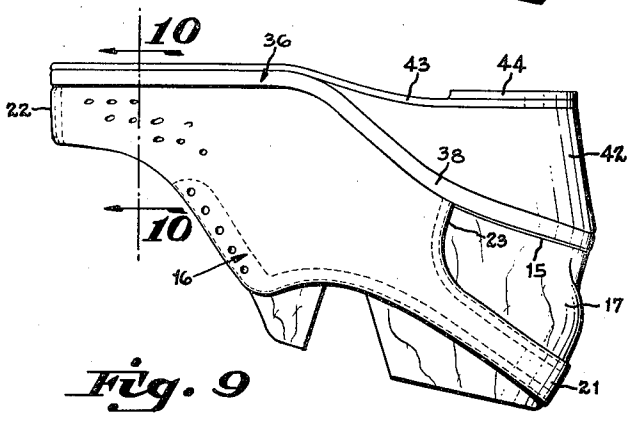


Fig. 9

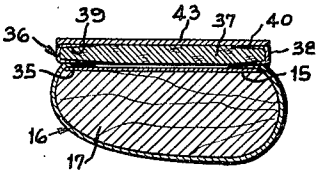


Fig. 10

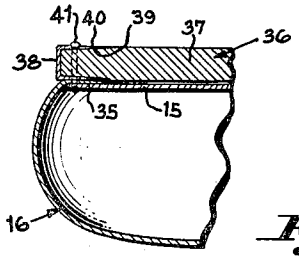


Fig. 11

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METHOD FOR MAKING SLIP LASTED SHOES

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Application January 4, 1950, Serial No. 136,826

5 Claims. (Cl. 12—142)

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This invention relates to a new and improved method for making slip lasted shoes and is particularly directed to an improved method of joining the upper to the sock lining or insole to insure accurate shaping of the upper to the desired style and fit.

According to prior methods of fabricating slip-lasted shoes, the upper is cut and dimensioned in accordance with a standard pattern so that its marginal edge will meet the bottom line of the last. The sock lining is contoured generally in accordance with the bottom line of the last, but also is provided with a lip which extends beyond the last bottom line at those edges which are fastened to the upper and serves as a stitching margin. Prior to the lasting operation, the edges of the upper and the stitching margin of the sock lining are sewed together in a seam. If a platform shoe is being constructed, a platform cover or wrapper made of the same material as the upper is sewed into the seam. This assembly is then slipped onto the last where it is shaped and the platform fastened in position. The platform wrapper is then turned back over the platform, and the heel and outsole attached to complete the fabrication of the shoe.

Shoes constructed in accordance with this method are often poorly shaped and do not fit properly principally because the seam between the upper and the sock lining is firmly fixed prior to the lasting operation, and, as a practical matter, cannot be readjusted after lasting to compensate for unequal and disproportionate stretching in the leather during lasting or variations in the stitching. These faults, which occur with comparative frequency, prevent the upper form conforming to and snugly embracing the last surface. The irregular seams and unequal stitching often hold portions of the upper away from the last while the disproportionate stretching of the upper often results in parts of the upper fitting snugly while other parts do not even contact the last and bulge away from it. Consequently, when the shoe is finished by building in the platform, the heel and the outsole, the mistakes in shaping are built directly into the shoe and can no longer be corrected without rebuilding the shoe entirely. Naturally, such shoes neither fit properly nor present the desired appearance.

An additional difficulty encountered with this method occurs when the platform wrapper is turned back from the seam and placed over the platform. This exposes the stitches at the seam presenting an unsightly appearance. Moreover, on open heel shoes the exposed stitches often break and the upper pulls loose at the platform.

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This invention is predicated upon the concept of spot-joining the upper to the socket lining in correctly matched relationship prior to the lasting operation without forming a permanent fixed seam between the parts. Hence, when this assembly is slipped on the last, the upper is free to conform snugly to the last during the shaping operation without being restrained by the sock lining or held from the last surface by a thick seam. After the upper has been stretched to the desired shape and fit, it is lapped over the sock lining and joined thereto in a permanent seam by means of stitching or adhesive. Finally the platform, which has been pre-wrapped, the outsole and the heel are firmly attached to the sock lining concealing and protecting the seam and permanently fixing and supporting the upper in the correct shape.

In fulfillment of this concept, the process of this invention contemplates the preparation of a matching sock lining and upper. The upper is provided with comparatively wide marginal attachment flanges and flanking spot tabs adapted to overlap the marginal areas of the insole at the areas of attachment with the insole. The tabs as well as the attachment flanges are preferably formed from a marginal lip integral with the upper and co-extensively with the zone of attachment with the sock lining. In preparation for the slip lasting operation, the upper and sock lining are joined together by means of the spot tabs which are fastened, preferably by adhesive, into overlapping relationship with the sock lining. In open toe and open heel shoes, it is proposed to locate the tabs so that they flank and define the respective toe and heel openings. Prior to fastening, these tabs are matched with locating marks on the sock lining placed in accordance with a marking pattern so that uniform toe and heel openings are obtained. The attachment between the upper tabs and the sock lining is sufficiently strong to hold the parts in correct assembly relationship and withstand the forces incident to stretching the assembly on the last. However, these tabs are so located and arranged that they do not prevent the upper from being drawn tautly into snug fitting relationship with the last during the shaping operation.

Hence, after the sock lining-upper assembly is lasted, the upper is drawn tightly over the last until it fits snugly over and hugs the last contour. During this process the marginal attachment flanges are drawn into overlapping relationship with the marginal areas of the sock lining until the entire upper is taut on the last whereupon it is secured in position by adhesive or stitching.

If necessary, the locating tab may then be readjusted on the sock lining by peeling them from their adhesive attachment and forcing them inwardly on the sock lining until they are taut. The shoe is completed by building in the platform, heel and outsole.

Other advantages of this invention will be apparent from the following specification and drawings in which:

Figure 1 is a bottom plan view of a sock lining prepared for assembly into a shoe constructed in accordance with the process of this invention.

Figure 2 is a side view of a shoe upper adapted to be used in the process of this invention.

Figure 3 is a bottom view of the upper and sock lining of Figures 1 and 2 fitted to a shoe last in which the upper and sock lining are shown in partially assembled condition.

Figure 4 is a view similar to Figure 3 in which the upper and sock lining are permanently joined together.

Figure 5 is a cross-sectional view taken along line 5—5 of Figure 4.

Figure 6 is a bottom view of the lasted shoe of Figure 4, showing the platform fitted in position.

Figure 7 is a cross-sectional view taken along line 7—7 of Figure 6.

Figure 8 is a side view of the lasted shoe shown in Figure 6, showing the addition of the pitched heel.

Figure 9 is a side view of the lasted shoe of Figure 8 showing the addition of the outsole and heel.

Figure 10 is a cross-sectional view taken along line 10—10 of Figure 9.

Figure 11 is a fragmentary cross-sectional view taken along line 11—11 of Figure 6.

The process of making slip lasted shoes in accordance with this invention is begun by the preparation of a sock lining 15 and a matching upper 16, shown in Figures 1 and 2 respectively. The sock lining is shaped to conform generally to the sole of the human foot and the bottom of a suitable last 17, but in the case of open toe shoes is provided with a projecting integral tab 18 joined at the toe portion of the sock lining along line 19. The upper may be configurated and shaped in any one of a variety of different styles. However, for the purposes of convenience of disclosure, the fabrication of a woman's heelless, toeless shoe is described herein and consequently, in the embodiment shown in Figure 2, the upper comprises a body portion 20 provided with a heel strap 21 and cut-out toe and heel openings 22 and 23. In this type of shoe the upper is secured to the sock lining 15 along the edges 24 which extend on opposite sides of the shoe upper from the toe opening to the heel opening.

The marginal edges or skirts 24 of the upper are skived or feathered to prevent the formation of an abrupt shoulder between the overlapping upper edge and the outside of the sock lining when the two pieces are assembled (see Figure 5) and transverse slits 25, which may be either wedge-shaped or straight are cut into the feathered edge at points spaced from the toe and heel edges of the upper respectively. Thus, each side of the upper has an edgewise skirt formed into three sections, two spot tabs 26 and 27 and a central attachment flange 28, each of which can be flexed independently of the other.

Prior to assembly of the sock lining 15 and the upper 16, the upper is laid out flat and a marking pattern placed on the inside of the upper. By following the pattern, appropriate pencil or scribe marks 29 are made on the inside of the upper to indicate the line on the upper which should meet the edge of the sock lining after the lasting operation. This line is only intended as a guide for the aid of the assembler and merely assists him in determining the extent to which the edge of the sock lining should overlap the spot tabs of the upper in the preliminary assembly operation. A marking pattern is also laid on the sock lining and appropriate marks 30 are made to indicate where the lateral edges of the spot tabs 26 and 27 should be placed to define uniform toe and heel openings.

In assembling the shoe, the upper and sock lining are placed together so that the tabs on the upper overlie the bottom of the sock lining and the edge 31 of the sock lining meets the limit line 29 on the upper. At the same time, the lateral edges of the tabs are placed in registry with the toe and heel locating marks 30 on the sock lining so that the toe openings and heel openings are predefined prior to lasting. The tabs 26 and 27 are then secured in position by means of adhesive while the central flap 28 between the slots is left free. The partially assembled upper and sock lining are then slipped onto the last 17 and assume the position shown in Figure 3. At this time the front spot tabs 26 may be loosened and turned back to permit the tab 18 at the toe of the sock lining to be folded back along the line 19 underneath the sock lining. The upper tabs are then pressed back into position and thereafter hold the sock lining tab firmly in place. It will be observed that the curved portion of the sock lining tab at the line 19 thus presents an attractive rounded appearance and raw edges are not exposed at the open portion of the toe which would be the case if the tab were not provided and the sock lining were cut off at the toe portion. Moreover, the adhesive on the underside of the upper flaps cooperates with the flap to hold the tab firmly in position and cemented to the underside of the sock lining so that it does not work loose.

The sides of the upper are then pulled over the bottom of the last by a cover lasting machine until the leather of the upper fits snugly over the wood and conforms to the shape of the last 17. It will be observed that even if the leather stretches slightly during the cover lasting operation, the stretching will be compensated for, by the extension of the marginal flap over the bottom of the sock lining. In other words, in accordance with this process, the upper may be stretched snugly and tightly over both the last and the sock lining without being restricted by prefixed joints or seams. In fact, the seam made with the sock lining is not absolutely determined until after the upper has been carefully fitted to the last. Moreover, it will be observed from an inspection of Figure 5, that the sock lining is dimensioned in contour so that its edges 32 are spaced from the bottom line 33 of the last, thus permitting the upper to be drawn over the bottom line without interference from the sock lining. After the cover lasting operation is performed and the leather is taut and shaped in confirmation with the last, the central flap is secured to the underside of the sock lining by means of previously applied adhesive 34 thereby forming a permanent seam 35.

It should be observed that the slots 25 which separate the central flap 28 and endwise tabs 26

and 27 compensate for wrinkling and other surface irregularities which may occur as the leather stretches under the lasting operation. Thus, if the shape of the last or character of the leather is such that the force of the cover lasting operation stretches the leather out of the desired shape, the slits permit the central flap to expand without wrinkling, lapping or bulging.

To complete the process, the platform assembly 36, which comprises the platform 37 and a platform cover 38 fastened in lapped relation over the platform edges by adhesive, is placed in position over the seam 35 and cemented (as shown) or stitched to the sock lining. As best seen in Figure 7, the edgewise portions 39 of the platform are tapered to receive the feathered edges 40 of the cover thereby forming a platform assembly which is substantially rectangular in cross section and presents flat surfaces which seat evenly on the upper edges 35 and on the sock lining. It will be apparent that the platform assembly protects and conceals the seam 35. Consequently, if stitching is used to secure seam 35, there is little danger of stitches grinning or breaking.

In order to reinforce the attachment of the upper to the sock lining and platform near the heel opening, brads 41 may be driven through the platform assembly, the upper flaps and the sock lining on opposite sides of the shoe near the heel opening (see Figure 11).

The remainder of the shoe may be completed in accordance with the well known techniques. As seen in Figures 8, 9, and 10, a covered pitched heel 42 may be glued or nailed in place on the platform. Thereafter, the outer sole 43 and outer heel 44 may be fastened in position.

Having described my invention, I claim:

1. In a method of making slip-lasted shoes the steps of, providing a sock lining, providing a matching upper for said sock lining, said upper having marginal attachment skirts adapted to overlap the sock lining at the areas of attachment thereto, said skirts comprising narrow spot tabs and an intermediate comparatively wide attachment flange, fastening the spot tabs into pre-located overlapping relationship with the sock lining, slip lasting the upper and sock lining, stretching the attachment flanges into overlapping relationship with the sock lining, and securely fastening the attachment flanges to the sock lining.

2. In a method of making open toed, open heeled slip-lasted shoes, the steps of, providing an upper having toe and heel openings and marginal attachment skirts extending between said openings on the opposite sides of the upper, each of said skirts comprising a comparatively wide attachment flange and comparatively narrow spot tabs adapted to flank the respective openings, providing a sock lining, marking said sock lining to indicate the correct location of the spot tabs of the upper to define predetermined toe and heel openings, matching the upper to the sock lining, placing the spot tabs thereof in overlapping relationship to the sock lining and in registry with the location marks on the sock lining, fastening the spot tabs to the sock lining in matched relationship, slip lasting the upper and sock lining, stretching the upper tautly over the last and simultaneously stretching the attachment flanges into overlapping relationship with the sock lining, and securely fastening the attachment flanges to the sock lining.

3. In the process of manufacturing slip-lasted shoes, the steps of, providing an upper having lower edgewise attachment skirts dimensioned to project beyond the bottom line of the last when said upper is lasted, each of said skirts comprising at least one spot tab and an attachment flange, providing a sock lining, said sock lining being contoured to correspond substantially with the contour of the last bottom but being narrower than the last bottom, matching said upper to said sock lining and securing said upper to said sock lining in correctly matched relationship by fastening said tabs in overlapping relationship with said sock lining, slip lasting the upper and sock lining, stretching the upper tautly over the last and simultaneously stretching the attachment flanges into overlapping relationship with the sock lining, and securely fastening the attachment flanges to the sock lining.

4. In a method of making slip-lasted shoes, the steps of, providing a sock lining, providing a matching upper for said sock lining, said upper having marginal attachment skirts adapted to overlap the sock lining at the areas of attachment thereto, said skirts comprising narrow spot tabs and an intermediate comparatively wide attachment flange, said tabs and flange being separated by wedge-shaped expansion slits, fastening the spot tabs into pre-located overlapping relationship with the sock lining, slip lasting the upper and sock lining, stretching the upper tautly over the last and simultaneously stretching the attachment flanges into overlapping relationship with the sock lining, and securely fastening the attachment flanges to the sock lining.

5. In a method of making open toed, slip-lasted shoes, the steps of, providing an upper having a toe opening and marginal attachment skirts extending from said opening on the opposite sides of the upper, each of said skirts comprising a comparatively wide attachment flange and comparatively narrow spot tabs adapted to flank the opening, providing a sock lining having an integral tab projecting from the toe portion thereof, matching the upper to the sock lining, placing the spot tabs thereof in overlapping relationship to the sock lining, fastening the spot tabs to the sock lining in matched relationship by means of adhesive, slip lasting the upper and sock lining, stretching the upper tautly over the last and simultaneously stretching the attachment flanges into overlapping relationship with the sock lining, securely fastening the attachment flanges to the sock lining, temporarily peeling back the spot tabs from the adhesive fastening, folding the toe tab back and over the underside of the sock lining, and securing the toe tab in place by refastening the spot tabs in place over the folded toe tab.

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No references cited.