March 22, 1938. F. J. TOBACCO 2,111,705

SHOE MANUFACTURE

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Fig. 1.

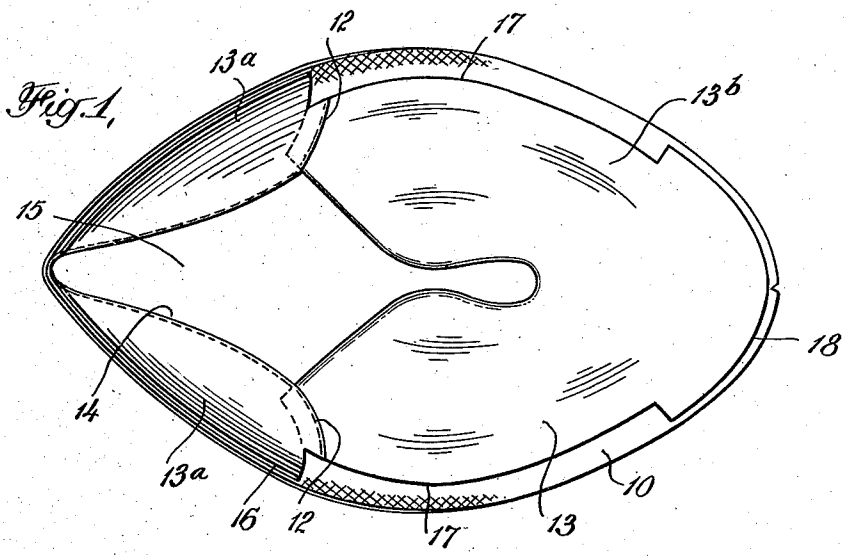


Fig. 2.

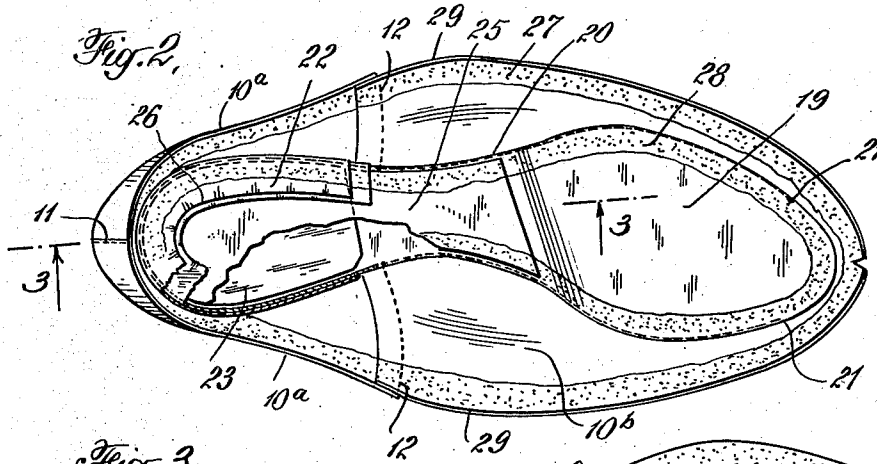
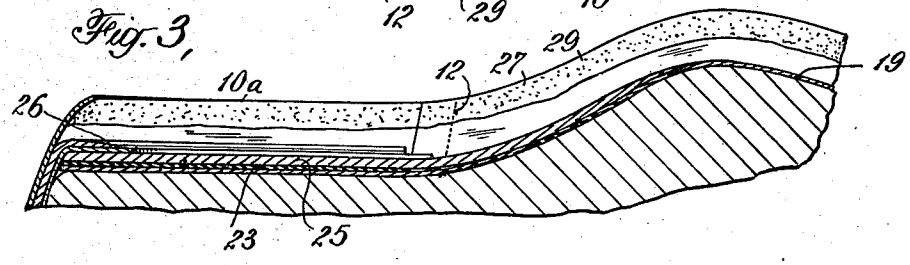


Fig. 3.



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Fig. 4,

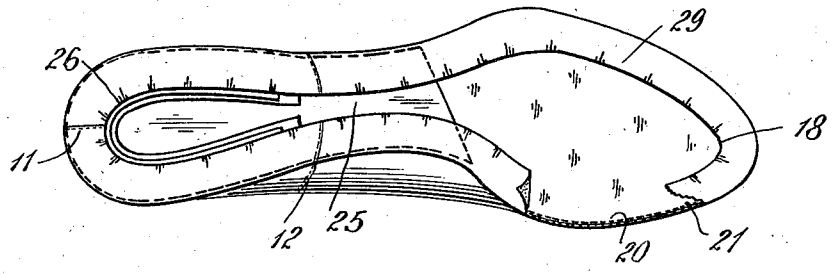


Fig. 5,

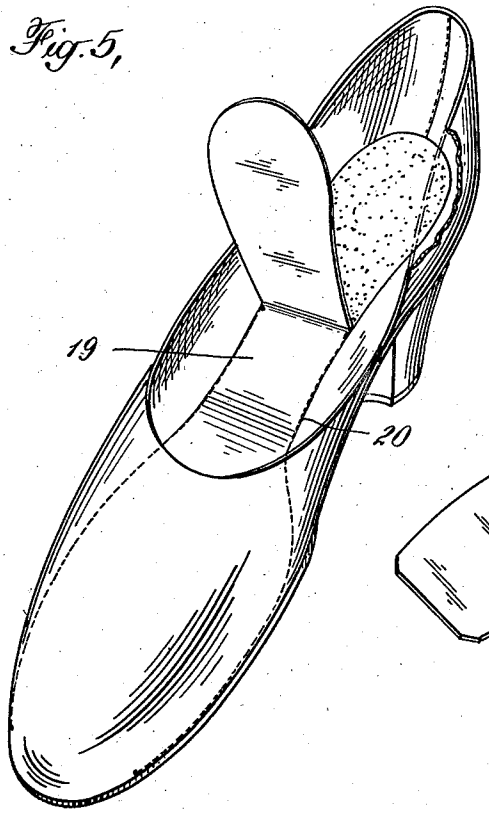
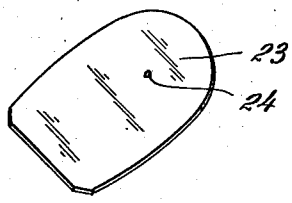


Fig. 6.



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2,111,705

SHOE MANUFACTURE

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Application January 9, 1937, Serial No. 119,717

7 Claims. (Cl. 12—142)

This invention relates to the manufacture of articles of foot wear, generally referred to as shoes, but including shoes, slippers, and the like, and is concerned more particularly with a shoe of novel construction and a method by which such shoes can be produced rapidly and at low cost. The shoe of the invention is of the flexible type although not made by the turning method, and it is superior to similar prior shoes in that it has a more attractive, better fitting appearance, and can be made with substantial savings in both labor and materials.

The new shoe, which includes an upper assembly, outer sole, and heel, differs from prior shoes in that it does not have both an insole and a sock lining, but the sock lining of thin flexible material is employed for the ordinary purposes of both such a lining and an insole. The sock lining, which extends substantially to the sole and heel lines of the shoe, has its lateral edges forward of the heel seat secured by stitching to the lower edges of the upper lining, and the upper is secured to the sock lining by having its lower edges overlapping the latter and cemented thereto. The operation of affixing the edges of the upper to the sock lining is performed after the assembled parts are mounted on a last and the method of attachment referred to permits the upper to be drafted in snugly against the last so that the shoe has a neat close fitting form and wrinkles and bulging are avoided.

The upper assembly includes the usual box toe, counter, and shank piece, and the edges of the upper, upper lining, and counter extend in beneath the heel seat portion of the shank piece and may be secured thereto by tacks. By the practice of the new method, the tacks so used are prevented from marring the sock lining and forming projections on the upper surface of the shank piece. The outer sole and heel are attached to the upper unit in accordance with standard practice, and thereafter, the heel seat portion of the sock lining is affixed to the upper surface of the shank piece and provides a smooth interior surface covering for the sole and the shank piece throughout its length.

For a better understanding of the invention, reference may be had to the accompanying drawings in which

Figure 1 is a plan view of the interior of the upper with the upper lining in place;

Figure 2 is a plan view, with portions broken away, of the upper unit mounted on the last;

Figure 3 is a sectional view on the line 3—3 of Figure 2;

Figure 4 is a view similar to Figure 2, showing the parts at a later stage in the operation;

Figure 5 is a view in perspective of the new shoe at another stage in its manufacture, parts being broken away and displaced; and

Figure 6 is a perspective view of a plate employed in the manufacture of the new shoe.

Referring to the drawings, the shoe as there illustrated includes an upper generally designated 10, and, in the form shown, the upper consists of a pair of heel blanks 10*a* and a toe blank 10*b*. The heel blanks are secured together by a line of stitching 11 extending vertically of the heel and are secured at their forward ends by curved lines of stitching 12 to the rear edges of the toe blank. The upper is provided with a lining 13 which, in the construction shown, includes a heel blank 13*a* and a toe blank 13*b*, and these parts of the lining are secured to one another and to the upper by the lines of stitching 12. The upper lining is also secured to the upper by stitching 14 along the edge of the top opening 15. It will be noted that along the sides of the heel seat portion of the upper, the edge 16 of the upper lining is substantially coincident with the edge of the upper. Forward of the heel seat, the lateral edges 17 of the upper lining are spaced inwardly from the lateral edges of the upper a substantial distance, while at the toe, the edge 18 of the upper lining lies close to but is spaced inwardly a slight distance from the toe edge of the upper.

The upper lining may be of any suitable material, such as thin leather, cloth, etc., and to its lateral edges is secured a sock lining 19 made of suitable material and usually of the same material as the upper lining. The sock lining is of substantially the same size and shape as the face of the last on which the shoe is to be made and it is secured to the lateral edges 17 of the upper lining by stitching 20, which begins forward of the heel seat and extends along the edges of the sock lining to points 21 at either side of the toe end, although if desired, the stitching may extend entirely around the toe end of the sock lining and upper lining. When the upper lining and sock lining are made of leather, they are stitched together with the grain side inward or toward the interior of the shoe, and after this operation, a counter 22 of the usual material is inserted between the upper and upper lining at the heel seat, and the assembled parts are mounted on a last in the usual way.

A metal plate 23, having a tack opening 24 therethrough, is then secured by means of a

tack to the under surface of a shank piece 25 to cover the heel seat end of the latter, and the shank piece is laid upon the sock lining with the metal plate in contact therewith. The forward end of the shank piece back to the edge of the metal plate is then secured to the sock lining by cement; thereafter, the exposed edge 26 of the counter and the shank piece are pressed down against the heel of the last, and the back of the upper is secured in position relative to the last by a tack passed through the upper and into the last near the top edge of the upper at the back.

The next operation is that of securing the side edges of the upper in position, and, for this purpose, a coating of cement 27 is applied to the inner surface of the upper along its lower edge and a similar coating 28 is applied to the sock lining along the edge thereof. The sides 29 of the upper are then drawn in over the sock lining and shank piece and secured thereto from points forward of the heel seat to the points 21 on either side of the toe. A box toe in soft condition is then inserted between the upper and the upper lining at the toe, and the lower edges of the box and of the upper lining are trimmed to the edge of the last. The toe and heel are next lasted either by hand or on a bed lasting machine in the ordinary manner, and the inturned portions of the upper, upper lining, and counter are held in place by suitable cement. If desired, those overlapping portions may be tacked to the shank piece at the heel seat, and the tacks, as they are driven through the shank piece, are clinched by contact with the plate 23.

The upper unit thus assembled is now ready for the application of the sole, and, for this purpose, the outer surface of the inturned portions of the upper are roughened and coated with cement. A metal shank stiffener is then laid against the shank piece, a filler of any suitable type is applied, if desired, to the lower surface of the sock lining, and the outer sole is then attached by cement by the usual machines employed for the purpose. Thereafter, the sole is trimmed and finished in the usual way and the last removed. The heel seat portion of the sock lining, which is not attached to the top surface of the heel seat portion of the shank piece, is then folded back, the steel plate 23 is removed, and a heel attached to the heel seat in the ordinary manner by nails driven through the shank piece. The upper face of the shank piece at the heel seat is then coated with cement and the heel seat portion of the sock lining is folded back into place and secured to the shank piece.

With the construction described, it will be apparent that the sock lining serves the usual purpose of a sock lining and also that of an insole. Also, while the sock lining is stitched to the upper lining, the stitching lies along the edge of the face of the last, and the seams, therefore, do not form projections on the inner surface of the shoe which would cause discomfort to the wearer. Since the tacks, by which the overlapping portions of the upper, upper lining, and counter at the heel seat have been secured to the shank piece, have been clinched by the temporary metal plate 23, the upper surface of the shank piece is smooth and without projections, and the sock lining at the heel seat is likewise smooth and unmarred.

By securing the lateral margin of the upper lining to the sock lining by stitching as described, there is a substantial saving in material, since the upper lining does not have to be cut with the usual lasting allowance which represents a considerable quantity of material for a pair of shoes. Another feature of saving is the elimination of the insole and the cost of cutting it. Moreover, since the sock lining is stitched to the upper lining during the manufacture of the shoe, the operation of inserting a sock lining is eliminated. The lasting operation is also simpler and can be done more rapidly and easily, because only the upper is lasted by the shoemaker instead of both the upper and upper lining. The drafting in of the upper along the sides insures that the upper will fit the last snugly and thus give the shoe an attractive close fitting appearance without wrinkles or bulges. The new shoe can be made with an upper lining and sock lining either of leather or of any other desired material, such as satin, and in either case, the interior of the shoe is smooth, unwrinkled, and without projections.

I claim:

1. A shoe which comprises a sock lining, an upper, an upper lining having its lower lateral edges secured to the lateral edges of the sock lining forward of the heel seat by stitching lying along the inner edges of the bottom of the shoe, a shank piece lying against the under surface of the sock lining and secured thereto by cement at the heel seat, a counter between the upper and upper lining at the back of the shoe, the upper, upper lining, and counter having lower inturned edges overlapping and secured to the under surface of the shank piece at the heel seat by nails clinched against the shank piece, and the upper having lower inturned edges secured to the sock lining and shank piece forward of the heel seat, and an outer sole secured to the upper assembly.

2. A shoe which comprises a sock lining, an upper having a lining with portions of the lower edges of the upper lining stitched to the sock lining along the lateral edges only of the latter between the heel seat and toe, a shank piece lying against the under surface of the sock lining, a counter between the upper and upper lining at the back of the shoe, the upper, upper lining, and counter having inturned edges overlapping and secured to the under surface of the shank piece at the heel seat, and the upper having inturned edges overlapping and secured to the shank piece and sock lining forward of the heel seat, and an outer sole secured to the upper assembly.

3. A shoe which comprises a sock lining, an upper, an upper lining stitched to the upper along the top edges thereof and having the lateral portions of its lower edges secured to the lateral edges of the sock lining between the forward end of the heel seat and the toe, a shank piece lying against the under surface of the sock lining, a counter between the upper and upper lining at the back of the shoe, the upper, upper lining, and counter having inturned edges overlying and secured to the under surface of the shank piece at the heel seat by tacks, the upper having inturned lower edges overlapping and cemented to the shank piece and sock lining forward of the heel seat, an outer sole secured to the upper assembly, and a heel secured to the shank piece by nails passing through the shank piece and concealed by the heel seat portion of the sock lining.

4. A method of making shoes which comprises securing together the top edges of an upper and an upper lining, securing a sock lining to the lower edge of the upper lining by stitching extending along the lateral edges of the sock lin-

ing forward of the heel seat, inserting a counter between the upper and upper lining at the back of the shoe, mounting the assembled parts upon a last, securing a metal plate to the upper surface of a shank piece, applying the shank piece to the outer surface of the sock lining with the metal plate in contact with the sock lining, drawing in the edges of the upper forward of the heel seat and securing said edges to the shank piece and sock lining, drawing in the edges of the upper, upper lining, and counter over the shank piece at the heel seat, passing nails through the drawn in edges of the upper, counter, and upper lining and the shank piece; said nails impinging against the metal plate, cementing an outer sole to the upper assembly, removing the last, removing the metal plate from the shank piece, attaching a heel to the shank piece, and securing the heel seat portion of the sock lining to the upper surface of the shank piece.

5. In a method of making shoes which include an upper, an upper lining, a counter between the upper and upper lining at the back of the shoe, and a shank piece, the steps of attaching the lower edges of the upper lining to the lateral edges of a sock lining, mounting the assembled parts on a last, applying the shank piece and a metal plate to the outer surface of the sock lining with the metal plate between the sock lining and shank piece, turning in the lower edges of the upper, upper lining, and counter over the shank piece at the heel seat portion of the latter, and securing said edges to the shank piece by tacks driven through the edges and shank piece and impinged upon the plate.

6. A shoe comprising an upper lining, a sock lining, stitches connecting said upper lining and sock lining, an upper, the lower edge of said upper being inwardly bent and forming a marginal portion secured to said sock lining by cement, said marginal portion completely covering and protecting said stitches, the lower surface of said marginal portion being abraded substantially over its entire surface, and an outer sole secured to said abraded surface by cement.

7. The method of making shoes which consists in connecting an upper lining and sock lining by stitches, lasting an upper over said stitching so as to form a marginal portion upon the lower edge of said upper, securing the inner surface of said marginal portion by cement to said sock lining, roughening substantially the entire lower surface of said marginal portion, and securing an outer sole by cement to said roughened surface.

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