June 10, 1941. C. A. THURSTON 2,245,235

METHOD OF MAKING SHOE PARTS

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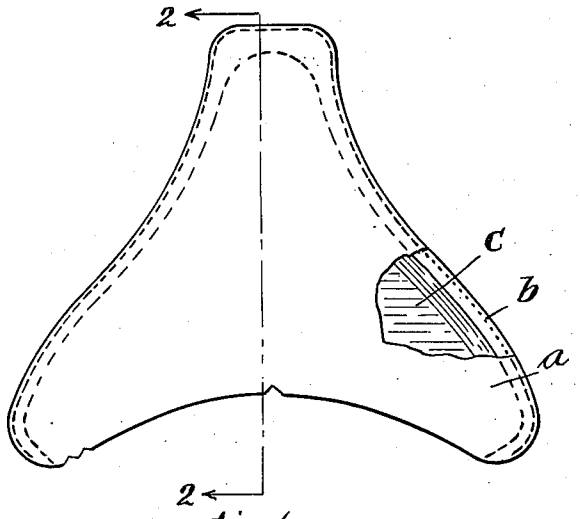


Fig. 1.

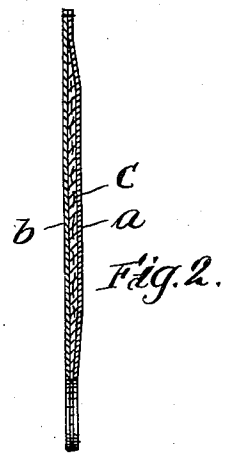


Fig. 2.

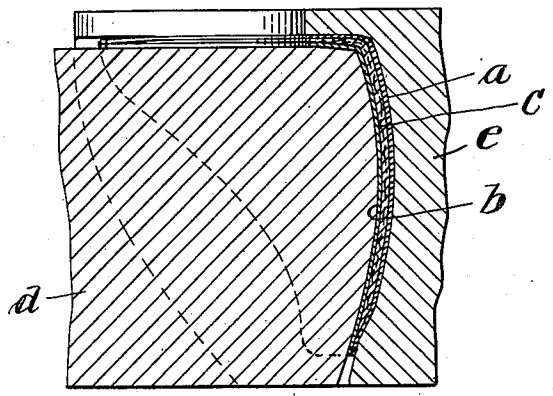


Fig. 3.

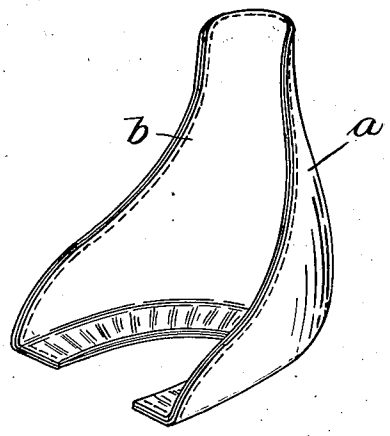


Fig. 4.

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METHOD OF MAKING SHOE PARTS

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3 Claims. (Cl. 12—146)

This invention relates to an improved method of producing the heel portion of the upper of a shoe, primarily for a shoe of the sandal or slipper type, in which the heel portion is not attached to the forepart portion of the upper except through the sole, although the method may be employed in the production of shoes in which the heel portion is also directly attached to the forepart portion.

Prior to my invention it has been customary to stitch the lining and upper of the heel part, together by a line of stitches at the side edges thereof, the bottom edges being disconnected, then to insert a molded counter therebetween to the sides of which an adhesive is usually applied, and then to place the parts, as thus assembled, on the last and perform the lasting operation.

The results secured in this manner are often unsatisfactory, for the reason that the counter is not correctly positioned between the upper and lining and the lasting operation is otherwise not satisfactorily performed.

The object of my invention is to improve previously employed methods, by producing a combined counter and heel part upper portion, which may be placed on the last and secured to the sole without the necessity of performing the ordinary lasting operation, whereby the counter may be correctly positioned between the upper and lining and other defects of the ordinary lasting operation may be avoided.

I accomplish this object by placing an adhesively coated, unmolded counter, or in some instances a counter which has been rolled, or "clam shelled", in the correct position between the upper and lining and by then performing the counter molding operation, so that the upper and lining are pressed smoothly against the opposite sides of the counter and all wrinkles are removed, or effectively flattened, and at the same time the counter is molded, so that the resulting combined counter and heel part upper portions may then be placed in position on the last and attached to the sole without the necessity of performing the usual lasting operation.

For a more complete disclosure of my invention reference is now made to the following specification, in connection with the accompanying drawing in which:

Fig. 1 is a plan view illustrating an initial step in the method.

Fig. 2 is a sectional view at line 2—2 of Fig. 1.

Fig. 3 is a sectional view illustrating a subsequent step.

Fig. 4 is a perspective view of the finished article.

According to my invention two pieces of sheet material *a* and *b*, one of upper leather or textile stock and one of lining stock, are died out from similar dies, so that they are of similar shape and a stiffener piece *c*, of sheet material usually employed for counters, is died out in a similar, but slightly smalled shape, and its entire edge portion is skived to a thin edge. The stiffener *c* is tempered and an adhesive is applied to both sides and then it is laid onto the upper in approximately the position indicated in Fig. 1, in which the side edges of the stiffener are located at a short distance within the side edges of the upper, and the lining is then laid on the stiffener in coincidence with the upper. The upper and lining are then stitched together by a row of stitches which are placed as closely as practical to the edge of the stiffener, as indicated in Figs. 1 and 2. In practice the lining, if cut out slightly larger than the upper, is trimmed during the sewing operation, so that their edges are even. The bottom edges are not sewed and usually the bottom edges of all three pieces are located in approximate coincidence.

As thus assembled, the upper, lining and stiffener are then molded in an ordinary counter molding machine, as indicated in Fig. 3, with the result that the stiffener is not only molded in counter form, but the lining and upper are pressed closely against the sides of the counter, and adhesively connected thereto, and the flange portion which extends over the sole is wiped in and pressed down to a level surface, so that all wrinkles are practically removed, or pressed flat.

As a result, when the shoe is lasted, the combined molded counter, upper and lining is merely placed in position on the last and its flange is attached to the heel part of the sole by tacks, or staples, and no lasting operation is necessary, so that a substantial saving in labor costs is made and results in the production of a shoe which is in several respects superior to shoes made by previously employed methods.

While in the manufacture of some shoes the upper and lining may be sewed together at their side edges and then the stiffener may be inserted therebetween and the molding operation then performed, by placing the stiffener in position between the upper and lining before stitching, the stiffener will be correctly positioned, with its edge in close proximity to the line of stitches, which is a very desirable feature.

I claim:

1. That method of making the upper portion of the heel part of a shoe of the sandal or slipper

type which consists in providing similarly shaped upper and lining pieces of flexible sheet material and a similarly shaped piece of stiffening sheet material of less surface area than said pieces and having its edge portions skived to a thin edge, placing the stiffening piece, while in temper, between coincidently disposed upper and lining pieces, with its side edges disposed within the side edges of the upper and lining pieces and its bottom edge in proximity to the bottom edges thereof, thereupon uniting said pieces with adhesive while flat, then simultaneously stitching and trimming the top edge portions of said upper and lining pieces while still flat, and then, by a single molding operation, forming a bottom flange on all of said pieces and shaping them to conform to the desired heel part shape, to produce a finished heel part adapted for incorporation in a shoe without lasting.

2. That improvement in the art of pre-molding a plurality of shoe upper materials into final finished form, with a finished edge along the top and an attaching flange along the bottom, independently of lasting operations, which consists in cutting the outer shoe upper layer, a lining layer, and an intermediate stiffening layer into substantially uniform contour and area, thereupon uniting said layers with adhesive while flat, then simultaneously stitching and trimming the top edge portions of said plurality of united shoe upper layers while still flat, and thereupon pre-molding the united and trimmed plurality of layers into final finished form, with an attaching flange inturned on the unstitched bottom edge, said flange incorporating all three of said layers.

3. As an article of manufacture and sale, a complete shape-retaining, finished shoe quarter ready for assembly as a unit with other portions of an open-shank shoe after the lasting operation has been completed, said quarter comprising side and end walls, the side walls merging smoothly with the end wall, the side walls having free downwardly extending edges of such a finish as to be acceptable to constitute exposed free edges in a completed shoe, the side and end walls having substantially the exact curved contour, in vertical planes at least, of the quarter of a completed shoe, and consisting of adhesively integrated layers of material, one of which is of a nature appropriate to constitute the outer finished surface of the quarter, one of which is of a nature appropriate to constitute the exposed inner or lining surface of the quarter, and one of which is of moldable material normally stiff and which is capable of permanently retaining a contour imparted thereto by molding pressure, said layers being substantially uniform in contour, the layer of moldable material being slightly smaller in area than the outer and inner layers, the marginal edges of the inner and outer layers of material being flat and unfolded, and a line of stitching securing together the exposed free edges of said inner and outer layers, the upper marginal edge of the layer of moldable material having a thin skived edge terminating inside of and adjacent to the line of stitching.

CHARLES A. THURSTON.