

March 14, 1944.

G. S. COLELLA

2,344,458

MANUFACTURE OF FOOTWEAR

Filed March 10, 1943

2 Sheets-Sheet 1

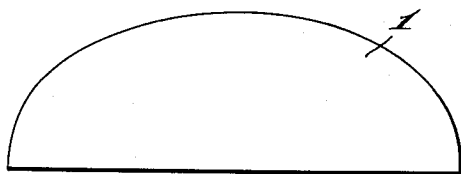


Fig. 1



Fig. 2

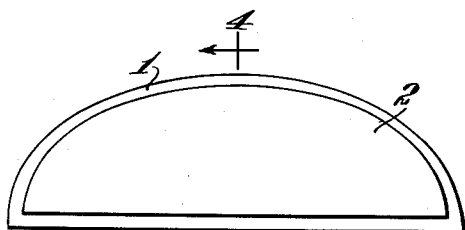


Fig. 3

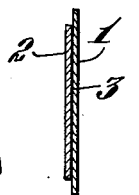


Fig. 4

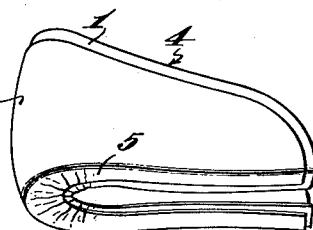


Fig. 5

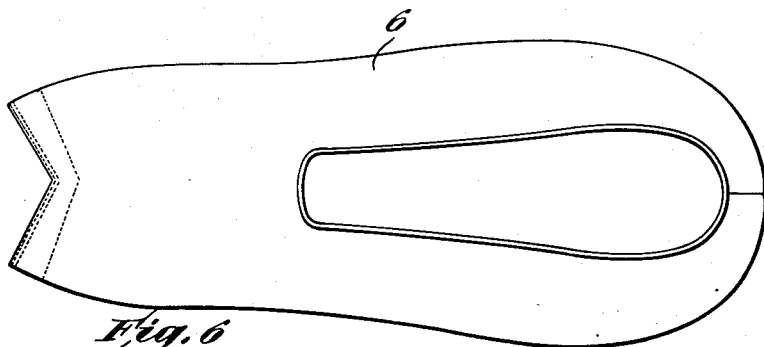


Fig. 6

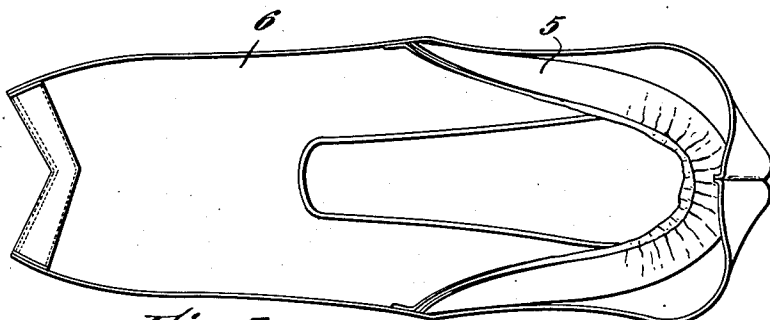


Fig. 7

Inventor
Gerald S. Colella
by Robert Cushman Woodberry
attys.

March 14, 1944.

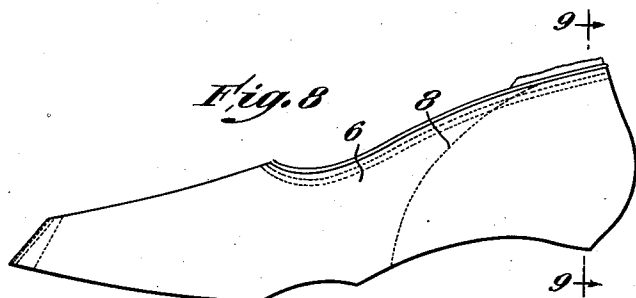
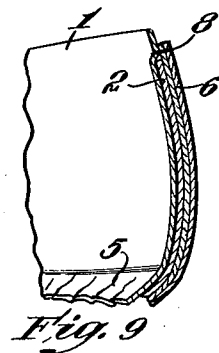
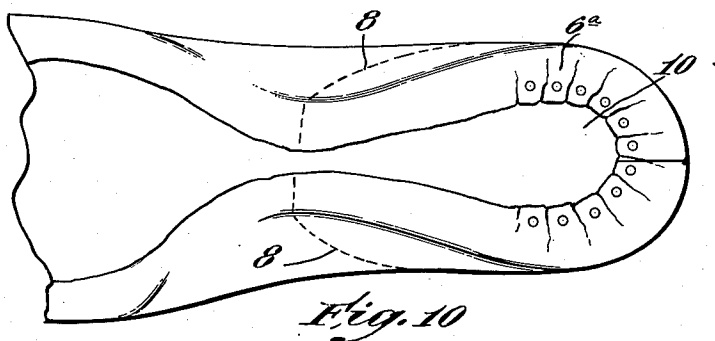
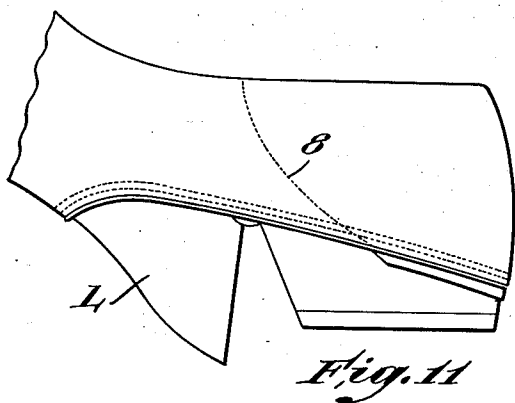
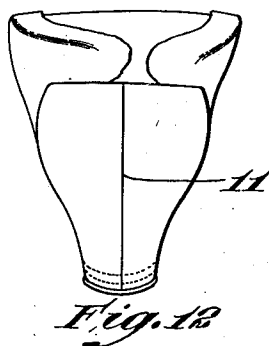
G. S. COLELLA

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2 Sheets-Sheet 2



Inventor
Gerald S. Colella
by Robert Cushman & Woodbury
Att'ys.

UNITED STATES PATENT OFFICE

2,344,458

MANUFACTURE OF FOOTWEAR

Gerald S. Colella, Haverhill, Mass., assignor of
one-half to Samuel Merker, Haverhill, Mass.

Application March 10, 1943, Serial No. 478,622

2 Claims. (Cl. 12—142)

This invention pertains to the manufacture of footwear and relates more particularly to a method of making shoes and to a stage product resulting from the practice of said method.

I am aware that it has heretofore been proposed to make certain types of slipper or sandal by first uniting the quarter lining, counter, and the outer member of the quarter; then moulding the united parts as a unit in a counter-moulding machine; and then attaching the moulded unit, without further lasting, to the rear portion of the insole. However, this prior method is of limited application in respect to the class of footwear in which it is useful. It requires that the shoe maker first unite the quarter lining, counter, and the outer member of the upper, and then send this assembly to the counter moulder for the performance of the moulding operation. Since the quarter material must be in temper when moulded and since, in the moulding operation, the outer member of the quarter comes into contact with the mould, this procedure is not applicable to delicate materials by reason of the danger of staining them. Moreover, when the quarter is integrally joined to the vamp portion of the upper, such moulding of the quarter by the counter manufacturer is not ordinarily feasible.

The principal object of the present invention is to provide an improved method whereby shoes of such usual types as pumps, oxfords, etc., may be made more cheaply and expeditiously than when made in accordance with customary prior practice, but without sacrifice of wearing qualities or appearance. A further object is to provide an improved method of making shoes which permits elimination or simplification of such usual prior operations as assembling, lining-pulling, counter-tacking, lining ironing, etc. A further object is to provide an improved method which results in the production of shoes having uniformly straight back seams, uniform counters and quarters, and which are of uniform back height. Other and further objects and advantages of the invention will be made manifest in the following more detailed description and by reference to the accompanying drawings, wherein

Fig. 1 is a plan view of a quarter lining;

Fig. 2 is a plan view of a stiffener or counter member designed for association with the lining of Fig. 1;

Fig. 3 is a plan view showing the lining and stiffener assembled;

Fig. 4 is a section on the line 4—4 of Fig. 3;

Fig. 5 is a perspective view showing the assem-

bled lining and stiffener at the completion of the moulding operation;

Fig. 6 is a plan view of a shoe upper before lasting and before the counter and quarter lining have been assembled with it;

Fig. 7 is a bottom view of the same upper with the quarter lining and counter disposed within the upper;

Fig. 8 is a side elevation of the upper, having the quarter lining and counter assembled therewith and stitched to the upper;

Fig. 9 is a section on the line 9—9 of Fig. 8, to larger scale;

Fig. 10 is a bottom view of the upper, mounted on a last, as it appears at the completion of the lasting operation;

Fig. 11 is a fragmentary inverted side elevation of the rear portion of the shoe after lasting and with the last in place; and

Fig. 12 is a rear elevation of the shoe showing the back seam.

Referring to the drawings, the numeral 1 designates the quarter lining blank. This quarter lining may be of any suitable material but is commonly made of soft leather, frequently a suede finished leather, in order to prevent slipping of the heel within the shoe. The numeral 2 designates a stiffener or counter blank which likewise may be of any appropriate material commonly employed for the purpose, for example fiberboard, or felt containing a suitable stiffening impregnant. The stiffener 2 is somewhat smaller than the quarter lining so that when the parts are placed in assembled relation and in proper registry, the marginal portion of the quarter lining extends outwardly beyond the stiffener, particularly at the curved margin of the latter. Before assembling the parts 1 and 2, it is preferred to coat one or both of them with an adhesive material 3, for example latex, rubber cement or the like, so that when the parts are assembled they become adhesively joined thereby to form a unitary structure, hereafter referred to as the "quarter unit." It will be noted that this quarter unit consists merely of the quarter lining and the stiffener together with the adhesive which joins them, and that it does not include the outer element of the shoe quarter.

Having prepared this unitary structure, it is subjected to a counter-moulding operation, for example in the usual counter-moulding machine, the unit first being moistened and placed in temper and then moulded and permitted to dry, thereby to retain the moulded shape. During the moulding of this quarter unit it is shaped to

provide the usual attaching flange 5 as is customary in moulding counters, and it is moulded substantially to the shape of the quarter portion of the shoe which is to be made, that is to say, to the shape of the quarter portion of the last upon which the shoe will be lasted.

The shoe upper 6 (Fig. 6) is prepared in the usual way, being here shown as provided with a rear seam which may be reinforced by a tape at the inside of the quarter if desired. Having prepared this upper, the moulded quarter unit 4 is placed within the rear portion of the upper, as shown in Fig. 7, and then the quarter unit is permanently united to the upper by means of a sewed seam 8 (Fig. 8) whose stitches pass through the margin of the quarter lining (but preferably not through the stiffener element 2), the seam beginning at one side of the shoe upper, extending along the margin of the quarter unit around the back of the upper, and then down to the lower edge of the upper at its opposite side.

The upper with its moulded quarter unit is now mounted upon a last L (Fig. 11) and is pulled over and lasted in accordance with usual methods, the marginal portion 6a (Fig. 10) of the upper being lasted in over the flange 5 of the quarter unit and secured to the inner sole 10 by means of staples, tacks or the like.

In thus assembling the upper upon the last and in pulling it over in completing the lasting operation, it is unnecessary to apply any lasting stress to the material forming the moulded quarter unit since this material has already been shaped to conform to the shape of the rear end of the last. Thus, the lasting stress may be confined wholly to the outer material of the quarter of the shoe, and thus it is readily possible to obtain uniformity in the lasted upper at its rear part, in particular to keep the back seam 11 straight and properly centered. Since the quarter unit has already been moulded to predetermined shape and dimensions it is readily possible to obtain uniformity in the shape of the completed shoe.

Furthermore, as the outer member of the quarter of the shoe is not subjected to moulding pressure, there is no danger of discoloring it or otherwise injuring its external finish and in lasting it

may be drawn as snugly about the last as may be desired since it is not adhesively secured to the moulded quarter unit. Moreover, it is unnecessary for the shoe manufacturer to send the quarter material out of the factory (as is requisite when the quarter, stiffener and quarter lining are all premoulded as a unit) and the procedure in manufacturing the shoe is thus substantially as usual, except that certain steps commonly thought necessary may be omitted by reason of the premoulding of the quarter unit.

After lasting the shoe is finished in accordance with the usual procedure.

While one desirable embodiment of the invention has been described and illustrated by way of example, it is to be understood that the invention is broadly inclusive of any and all modifications which fall within the scope of the appended claims.

I claim:

1. Method of making shoes which comprises as steps providing a quarter lining and a flat counter blank, the counter blank being of less superficial area than the lining, so assembling the lining and blank that the curved margin of the lining projects beyond that of the counter blank, uniting the lining and blank, moulding the unit thus formed to the shape of the rear end of the shoe which is to be made, inserting the moulded unit within the rear end portion of the upper, stitching the exposed margin of the quarter lining to the upper, and thereafter lasting the upper.

2. Method of making shoes which comprises as steps providing a quarter lining, applying to said lining stiffening means thereby to make the lining retentive of the shape thereby imparted thereto, the stiffening means being so applied that the curved margin of the quarter lining remains soft and flexible, moulding said lining together with the stiffening means to the shape of the quarter portion of the shoe which is to be made, disposing said moulded and stiffened lining in the rear portion of the shoe upper, and uniting it to the latter by stitches passing through the flexible margin of the quarter lining, and thereafter lasting the upper.

GERALD S. COLELLA.