Aug. 14, 1951 E. DOLAN 2,564,301

FULLY SLIP-LASTED AND MACHINE SEWN MOCCASIN

Filed March 25, 1950 2 Sheets-Sheet 1

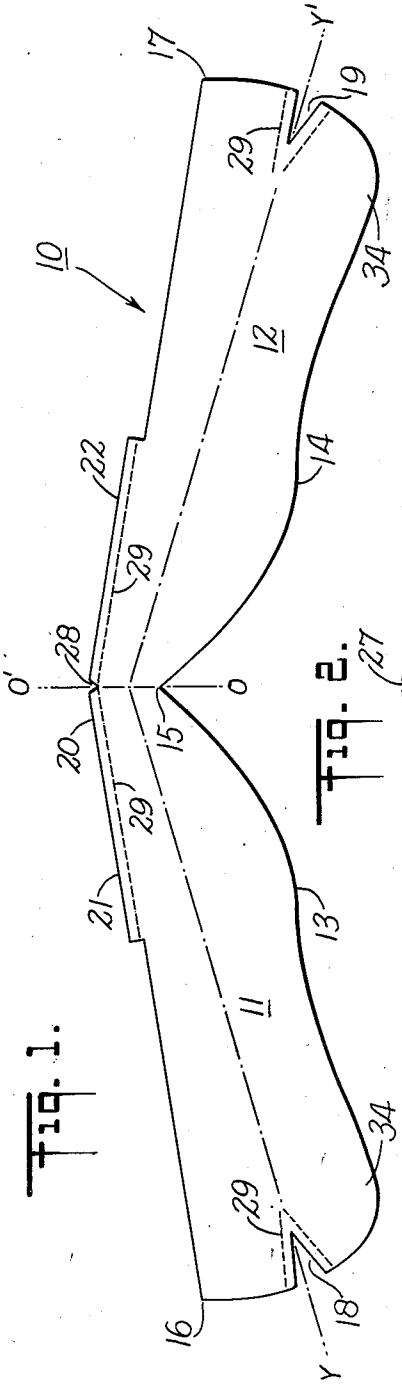


Fig. 1.

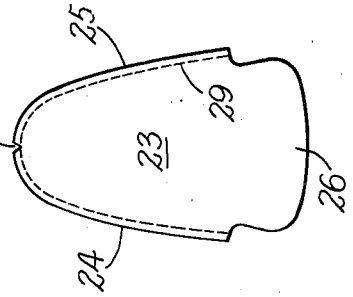


Fig. 2.

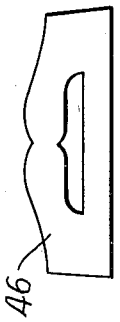


Fig. 3.

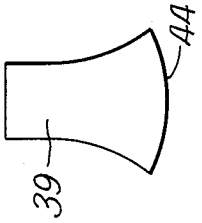


Fig. 4.

Fig. 5.

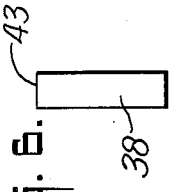


Fig. 6.

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Fig. 7.

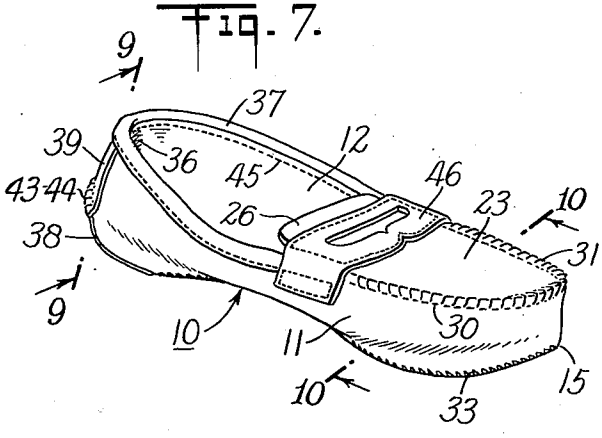


Fig. 9.

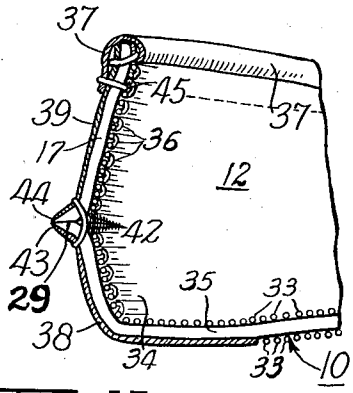


Fig. 8.

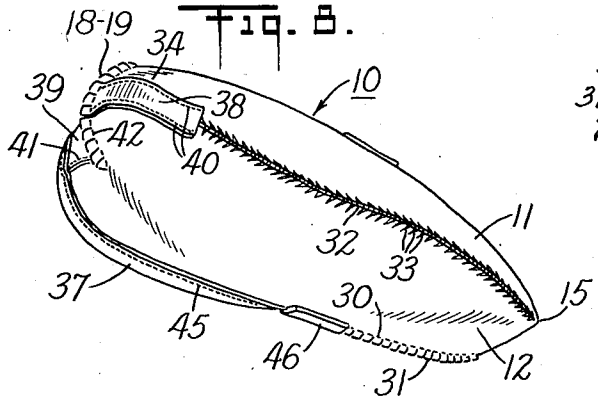


Fig. 10.

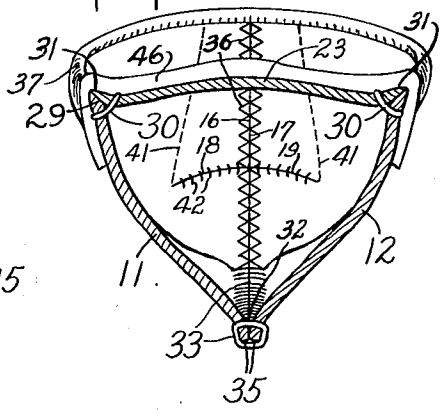


Fig. 11.

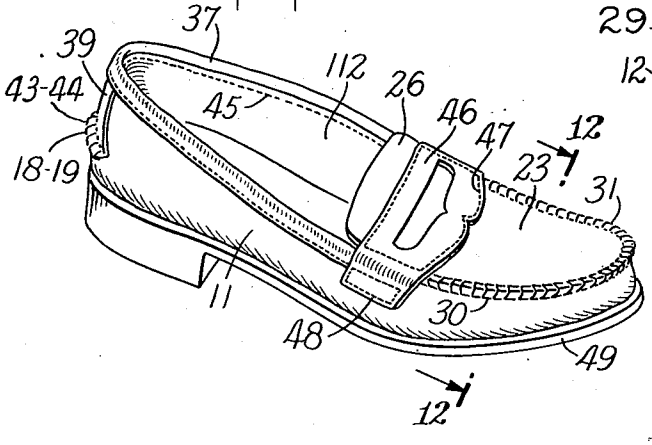
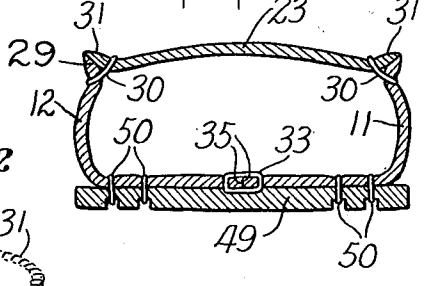


Fig. 12.



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UNITED STATES PATENT OFFICE

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FULLY SLIP-LASTED AND MACHINE SEWN MOCCASIN

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Application March 25, 1950, Serial No. 151,928

4 Claims. (Cl. 36—11)

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This invention relates to the production of shoes and more particularly to the moccasin type of shoe. It is an object of this invention to provide a machine stitch attachment of the component parts comprising the vamp portion and plug portions to a shoe, to have the appearance of a hand-sewn moccasin but which, being effected by machine sewing, results in considerable economies in labor to increase the output, without sacrificing the appearance and comfort found so desirable in genuine hand-sewn moccasins.

In accordance with the production of moccasins by hand sewing, especially in joining a plug part to a vamp, the process of conforming the adjacent edges of the vamp and plug part and the shaping of the heel portion were hand sewing operations which involved considerable latitude in avoiding puckering as the worker reconciles any unevenness of the adjacent edges. Such conformance of the component contiguous edges has not been possible by machine operations as the puckers of uneven distribution would render such stitching procedure inadvisable.

I have found that by the provision of a form of vamp which includes edges which may bring the plug and vamp into close contiguous contact while substantially retaining the plug sheeting in a single plane and by contouring a seam which extends over the length of the sole of yieldable character, to bring the parts in butt-joint contact, machine sewing operations may be employed to provide a moccasin type of shoe having all the advantages and appearance of a hand-sewn moccasin.

I have found and it is an object of my invention to provide shoes having the appearance of a hand-sewn moccasin by the provision of a vamp made from an integral blank having segments which may be brought together to form a seam extending longitudinally of the entire shoe and including the heel portion on one edge of the segments and on the other edge conforming to a plug which may be stitched thereto, to bring the edges into contact by a machine stitching operation, without puckers or the requirement to adjust the peripheral engagement of the vamp to the plug whereby, upon joining the edges along the sole forming portion of the shoe, a shoe assembly is effected by machine in the stitching room of a factory and conforming the completely sewn shoe on a slip-last as the final step in shaping the upper.

Still more particularly it is an object of my invention to provide a shoe blank which permits of full machine sewing, including the plug part

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as well as the heel part, to simulate genuine hand-sewn moccasins, and effect very large economies in producing this type of shoe.

To attain these objects and such further objects as may appear herein or be hereinafter pointed out, I make reference to the accompanying drawing forming a part hereof, in which—

Figure 1 illustrates a blank for making the moccasin upper;

Figure 2 is a plan view of the plug to be used therewith;

Figure 3 is a plan view of the blank to form the saddle; Figure 4 is a plan view of the blank to form the kick plate; Figure 5 is a plan view of the blank to form the binding; Figure 6 is a plan view of the blank to form the back stay; Figure 7 is a perspective view of the moccasin top after machine stitching and before slip-lasting; Figure 8 is a reverse view thereof; Figure 9 is a magnified section taken on the line 9—9 of Figure 7; Figure 10 is a magnified section taken on the line 10—10 of Figure 7; Figure 11 is a perspective view of the complete moccasin shoe; Figure 12 is a section taken on the line 12—12 of Figure 11.

Summarizing my invention, it involves the provision of a blank to form the upper of a moccasin type shoe in which one edge of symmetrical segments includes angularly directed edges which may be brought together to form a seam along the full length of the shoe to be formed and the opposite edge, at portions thereof, is contoured to conform to the perimeter of a plug, the edges being of a contour to permit machine sewing without puckers or the formation of shirring and to complete all sewing operations by machine before lasting of the shoe is effected before shaping, whereby a slip-lasted moccasin simulating hand-sewn moccasins is achieved.

Making reference to the drawing, I show a blank 10 made of an integral sheet of leather including segments 11 and 12 symmetrical about the axis O—O'. The mean transverse axes Y—Y' of the segments are related to each other by an obtuse angle of about 150°. The lower edges 13 and 14 extend from an axial point 15 to the heel ends 16 and 17 along gentle curves convexly from the ball to the concave curve of the arch and sharply curved at the heel. Shaping darts 18 and 19 are interposed adjacent the heel portions for purposes which will appear as this description proceeds.

The blank has its upper edge 20 outlined by plug engaging edges 21 and 22, which are to be brought together with the plug 23 at the perim-

eter edges 24 and 25 thereof, spaced from the tongue 26. The plug blank 23 has a marking dart 27 for aligning this part with the marking dart 28 of the blank 10.

It will be observed, with a blank as thus provided, that the material above the axes Y—Y' when folded at the center has the upstanding edges 21, 22 substantially rectilinear and in parallelism with the edges of a plane surface piece comprising the plug before shaping of any kind, and the material below the axes Y—Y' beginning with the point of intersection 15 of the sides 13 and 14 extending for the full length of the shoe to the heel has edges formed by gradual curves.

For assembly the edges 21 and 22 are skived as shown in dotted lines 29, as are the edges 24 and 25 of the plug 23. Likewise, skiving is effected of the edges of the shaping darts 18 and 19. In each instance the skiving is toward the rough side of the leather.

With a blank thus provided, the plug 23 is sewn to the blank 10 by bringing the contiguous edges 21 and 22 and the edges 24 and 25 together by sewing. The skived edges are brought into contiguous contact after coating with a cement, such as rubber cement. The row 30 of stitches has each loop thereof piercing from the plug to the vamp immediately behind the skived sections, to have a raised ridge exteriorly and a smooth interior joint. The stitching machine may include a moulding die to extend an embossing marking 31 from adjacent the point of perforation to the edge and thereby simulate the hand-sewn overcast stitch employed in making hand-sewn moccasins. The combined effect is to provide a raised ridge exteriorly, of pleasing ornamental effect, and a smooth interior.

The substantially rectillinear edges 21 and 22 retain the plug 23 substantially in a single plane, eliminating any puckers. At this stage the seam 32 may be formed by a row 33 of looped stitches extending from the point of intersection 15 to adjacent the curved portion of the heel 34. The edges 35 are trimmed square and are retained within the loop stitches 33 to permit turning from a congruent sewing position to an abutting final position.

After performing this operation, the heel ends 16 and 17 from adjacent to the said curved portion at the point of stoppage of the loop stitches 33 are brought together by a row of zigzag stitches 36 of finer thread to the top of heel ends 16 and 17, after which the binding strip 37 is sewn in position. Thereupon the back stay 38 and kick plate 39 are sewn in position by the rows of stitches 40 and 41 to cover the zigzag stitches 36 previously applied.

The slits left open by the shaping darts 18 and 19 are then closed by bringing the side edges together by rows of stitches 42, the skived adjacent edges whereof having been first covered with cement and the stitching 42 being accompanied by a hot-die marking which simulates hand sewing as in the step described in connection with the attachment of the plug 23.

The edge of the back stay 43 and the arcuate edge 44 of the kick plate are brought together at the same time that the edges of the shaping darts 18 and 19 are brought together. Thereupon the binding 37 is turned and held against the face by the row of stitches 45. Finally the saddle 46 is sewn in position by the rows of stitches 47 and 48. The series of steps just described completes the upper by machine stitching. In this condition, the upper is slip-lasted while wet. By

the terms "transverse axial line" or "axial line transversely through the segments" as used in the claims I mean to include the section through the axis Y—Y' which corresponds substantially to the plane of reference passing through the approximate centers of the toe and heel ends of the blank.

The darts 18 and 19 are positioned on the heel ends of the axis.

The slip-lasting operation is carried out to shape the moccasin top and to bring the edges 35 into butt-joint engagement, as more clearly shown in Figure 12. The gradually curved edges 13 and 14 provide a seam extending over the complete length of the shoe from the toe to the heel, permitting the omission of an in-sole, and further permitting the attachment of the out sole 49 by rows of stitches 50 in a recognized manner before marking and applying the heel.

By the sequence of steps which I have described, a vamp made from a single blank having symmetrical segments may have the edges 21 and 22 brought into conforming relationship to the edges 24 and 25 of the plug by machine stitching. The sole which is stitched from the intersecting point 15 adjacent the toe portion to the heel portion may then be shifted into butt-edge relationship upon slip-lasting and shaping after the stitching operations described. Both the plug and the kicker strip simulate closely hand-sewn moccasins. All of the sewing operations may be performed before slip-lasting and without preliminary heel seat-lasting or toe-lasting.

Economies are thereby effected, permitting the production by machine operations of moccasin type shoes employing quantity production methods, not heretofore attainable in making products of this character. In all other ways the moccasin so made gives the comfort and appearance of a hand-sewn moccasin and in other respects is superior thereto in providing a foot conforming contour, particularly by reason of the yieldability of the seams both at the periphery of the plug and that extended along the length of the sole.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent is:

1. A moccasin blank comprising a pair of connected elongated segments, each constituting its portion of the upper and sole, each segment being of a full length of the moccasin to be formed from the toe portion to the heel portion, the transverse axial lines through each of which segments being positioned to each other at an obtuse angle, one edge of each segment being substantially straight throughout its length from the toe end to the heel end and positioned with relation to each other to form a larger angle than that of the said obtuse angle but appreciably less than 180°, the other edge of each segment beginning with the point of intersection of the segments having continuously therefrom and adjacent the point of demarkation between the upper and the sole portion of the blank an appreciable convex curve gradually extending and merging gently at the ball portion with a concave curve at the shank portion and terminating in a sharply convex curve at the heel portion running up to the aforesaid first edge, the blank when folded substantially along the center positioning each segment congruently and aligning the curved edges whereby said edges may be stitched together throughout their length without puckering and so that when turned into a common plane within looped

stitches, said curved edges will lie in abutting relation throughout their lengths in a single, substantially rectilinear seam without side seams.

2. A moccasin blank comprising a pair of integrally connected elongated segments, each integrally constituting its portion of the upper and sole, each segment being of a full length of the moccasin to be formed from the toe portion to the heel portion, the transverse axial lines through each of which segments being positioned to each other at an obtuse angle, one edge of each segment being substantially straight throughout its length from the toe end to the heel end and positioned with relation to each other to form a larger angle than that of the said obtuse angle but appreciably less than 180°, the other edge of each segment beginning with the point of intersection of the segments having continuously therefrom and adjacent the point of demarkation between the upper and the sole portion of the blank an appreciable convex curve gradually extending and merging gently at the ball portion with a concave curve at the shank portion and terminating in a sharply convex curve at the heel portion running up to the aforesaid first edge, the blank when folded substantially along the center positioning each segment congruently and aligning the curved edges whereby said edges may be stitched together throughout their length without puckering and so that when turned into a common plane, said curved edges will lie in abutting relation throughout their lengths in a single, substantially rectilinear seam without side seams.

3. A moccasin blank in accordance with claim 2 wherein the said obtuse angle of said axial lines is approximately 150°.

4. A moccasin comprising a sole, a vamp including the lower part of the quarter composed of a single sheet of leather having integrally connected elongated segments and having a kick plate at the heel, each segment being a full length of the moccasin from the toe portion to the heel portion, the sole having the bottom edges of the segments stitched in abutting relation running from the top edge of the quarter down the heel and ending in the sole at a point substantially coincident with the point of upturning at the toe in a single, substantially straight line seam without side seams, a pair of shaping darts in each segment comprising a slit coincident with the transverse axial line through each segment at the heel, the side edges of which slit are stitched transversely of the said seam to each other and to the lower edge of the kick plate to exteriorly overlap the said first seam, the top edges of each segment being substantially in a plane and to which edges the top edge of a plug is stitched to complete the vamp in contiguous contact of the periphery of the plug and the said top edges of the segment, to provide a raised ridge from the edge of the segment and the periphery of the plug.

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