Oct. 16, 1945. A. SANCHIONI 2,386,910

METHOD OF MAKING SHOES AND PRODUCT OF SAID METHOD

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Fig. 1.

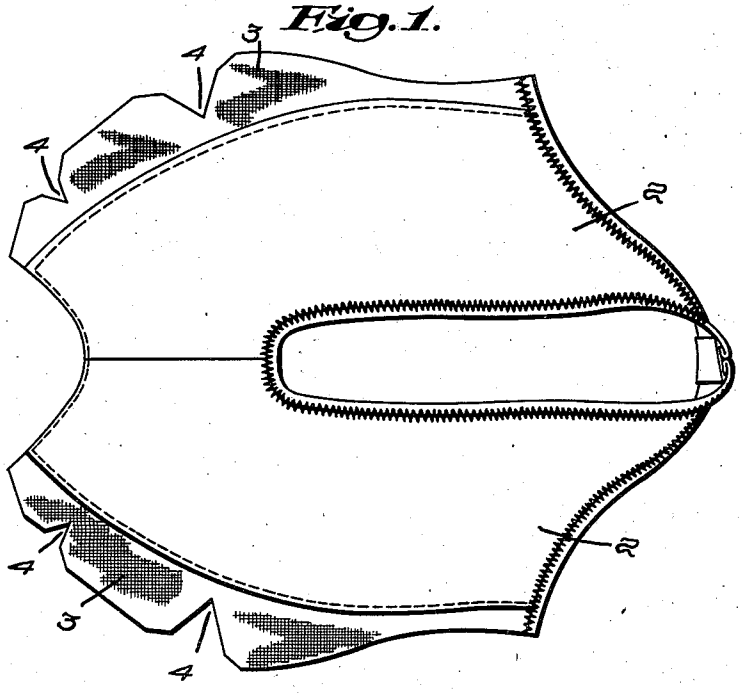


Fig. 2.

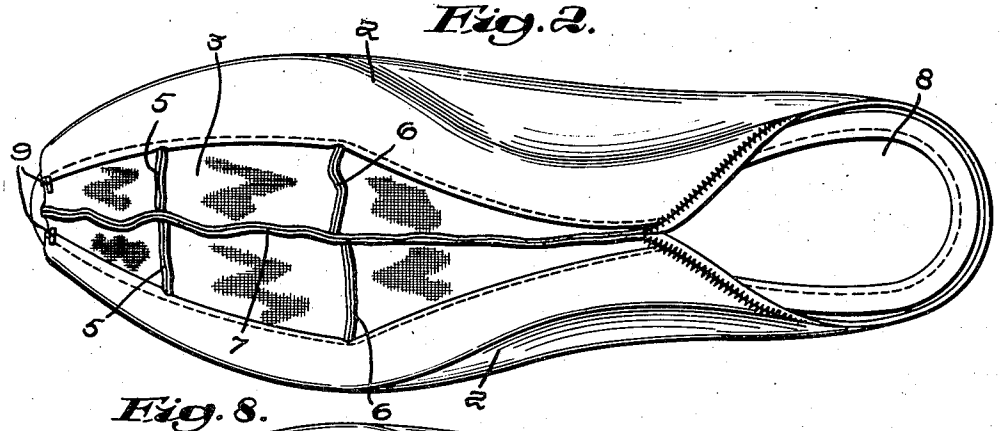
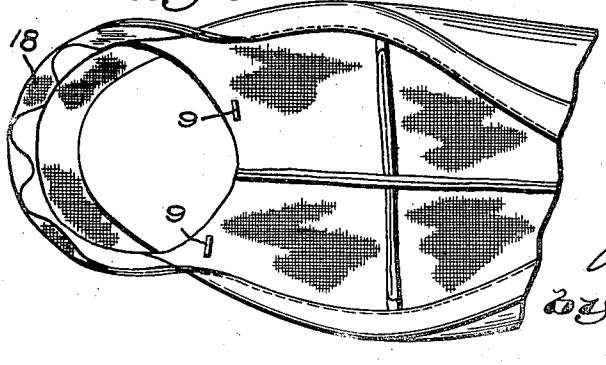


Fig. 8.



Inventor:
Adolf Sanchioni,
By J. M. McCready,
Attorney.

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METHOD OF MAKING SHOES AND PRODUCT OF SAID METHOD

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Fig. 5.

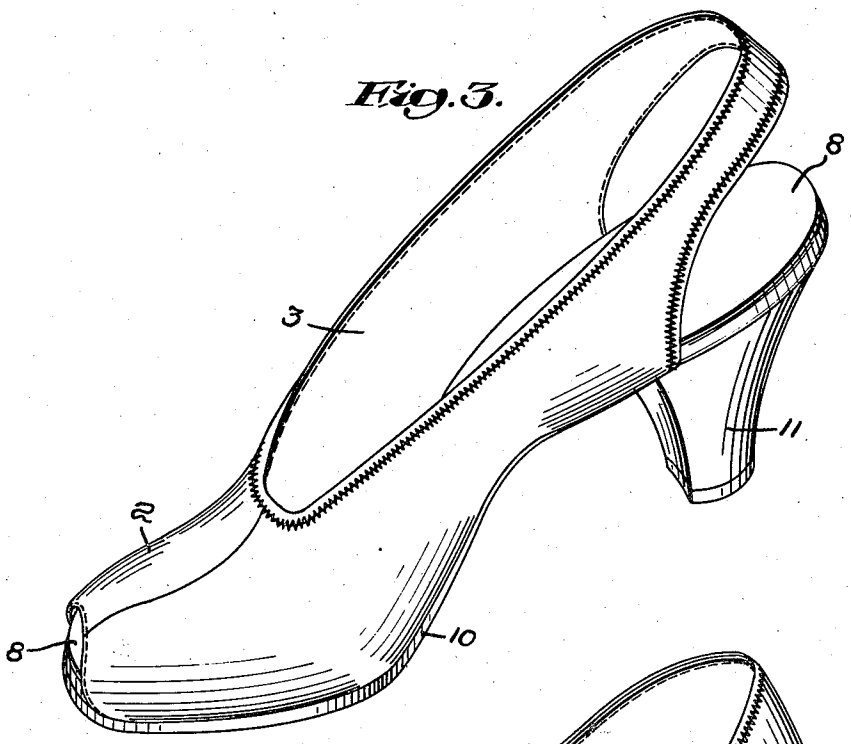
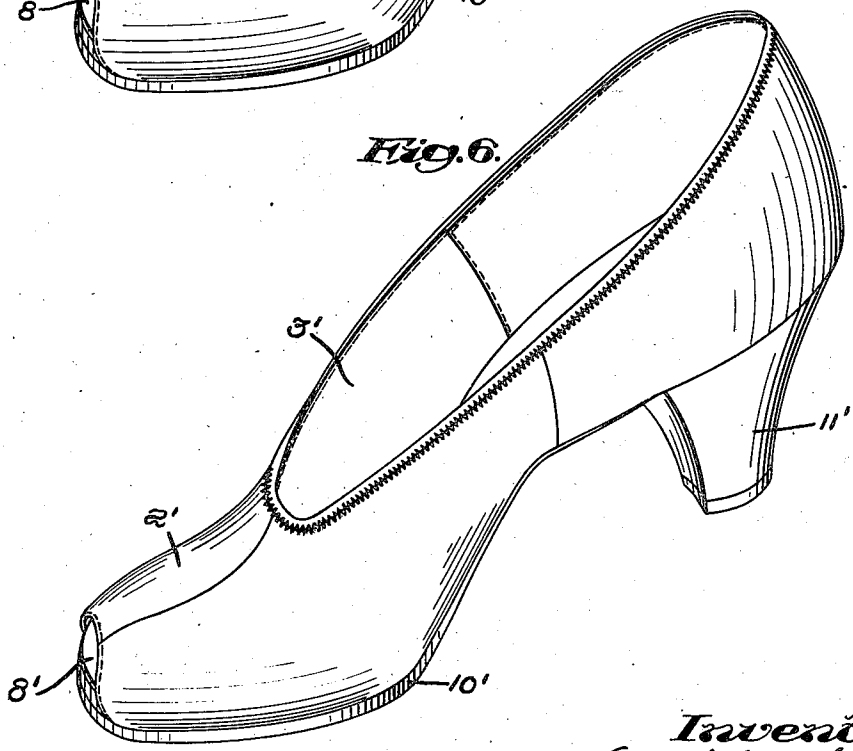


Fig. 6.



Inventor:
Adolf Sanchioni,
by J. H. McCrady,
Attorney.

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METHOD OF MAKING SHOES AND PRODUCT OF SAID METHOD

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Fig. 4.

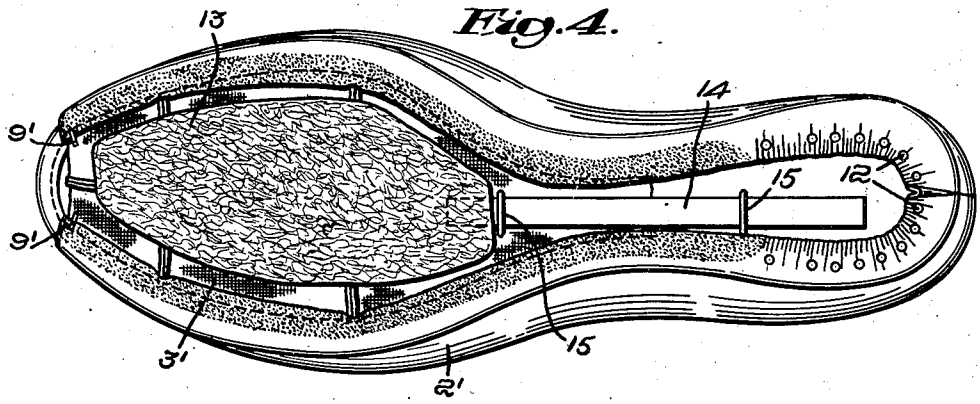


Fig. 5.

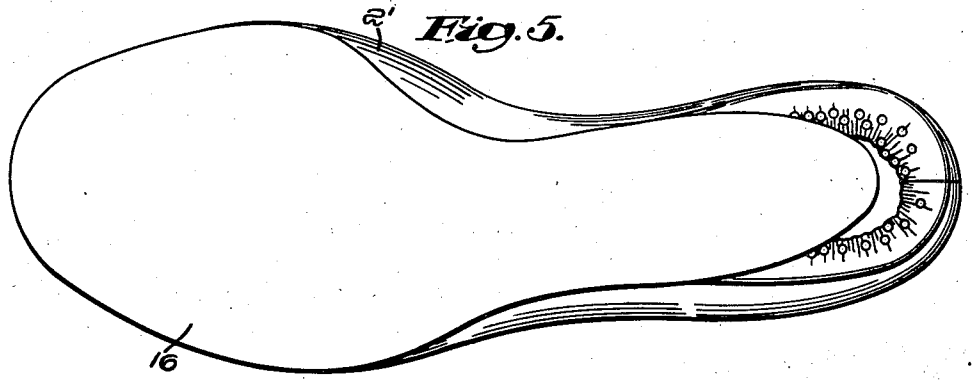
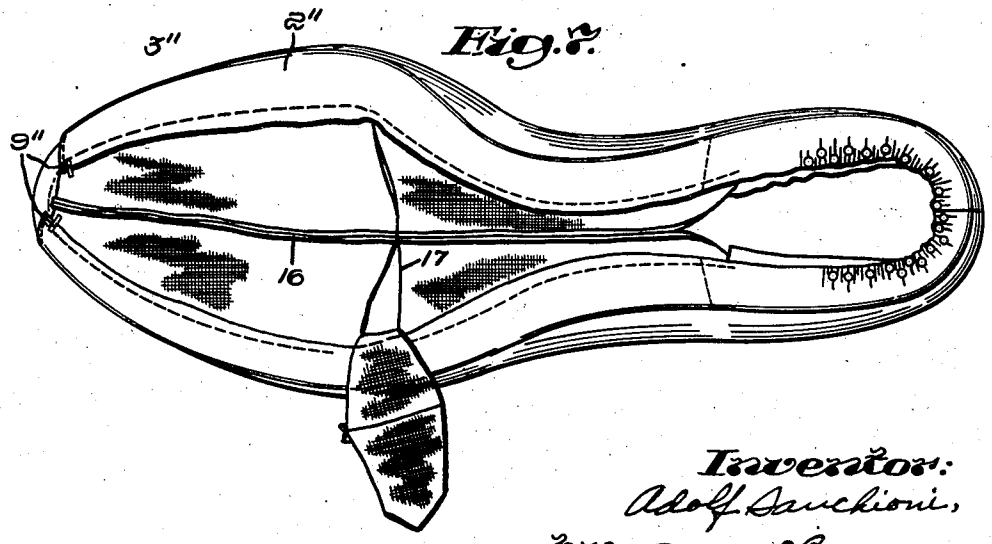


Fig. 6.



Inventor:
Adolf Sanchioni,
By J. A. McQuade,
Attorney.

Patented Oct. 16, 1945

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UNITED STATES PATENT OFFICE

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METHOD OF MAKING SHOES AND PRODUCT OF SAID METHOD

Adolf Sanchioni, Needham, Mass.

Application June 29, 1943, Serial No. 492,707

2 Claims. (Cl. 36—19.5)

This invention relates to footwear and to methods of making the same. It is the chief object of the invention to devise a method of manufacturing shoes which will reduce very materially the labor involved in that process while still producing a product of good quality. More particularly, the invention aims to eliminate the customary forepart lasting operation, so that in some shoes no lasting operation whatever will be required, while in others the only lasting operation necessary will be that of heel seat lasting. The invention also produces a novel shoe structure.

The nature of the invention will be readily understood from the following description when read in connection with the accompanying drawings, and the novel features will be particularly pointed out in the appended claims.

In the drawings:

Fig. 1 is a plan view of an assembled upper and lining made in accordance with this invention;

Fig. 2 shows the upper and lining illustrated in Fig. 1 after being closed and an insole inserted in the closed assembly;

Fig. 3 is a perspective view of a finished shoe including the parts illustrated in Figs. 1 and 2;

Fig. 4 is a bottom view illustrating a step in applicant's process when used in connection with the manufacture of a shoe having full shank and heel sections, the shoe at this time being ready for the application of the cement for securing the outsole thereto;

Fig. 5 is a bottom view of the shoe after the insole has been cemented thereto;

Fig. 6 is a perspective view of a completed shoe, including the parts shown in Figs. 4 and 5;

Fig. 7 is a bottom view illustrating a modification in the method of securing the opposite lower edges of the upper together and taking out the slack in the lining; and

Fig. 8 is a bottom view of the forepart portion of a shoe made in accordance with this invention and embodying a modification of the construction shown in Figs. 1 and 2.

Referring first to Fig. 1, an upper for an open-toe and open-heel shoe is there illustrated. This upper comprises two vamp sections 2—2 stitched together along a center seam and also stitched to a full lining 3, the margins of which project substantially beyond the lower edges of the vamp. According to the preferred method of manufacture, the projecting edge of the lining is notched at several places, as shown at 4. After completing the usual stitching-room operations on the upper, the next step of the process is to fold the lining upon itself so as to bring the opposite edges into register, and then to stitch these edges together, preferably by first stitching the notches to produce the seams 5 and 6, Fig. 2, and then stitching the longitudinal edge to produce the seam 7. The marginal surfaces are held flat, one against the other, by the stitches with both cut edges at the same side of the seam, as illustrated in said figure. These stitching operations are performed while the upper is off the last and is in a collapsed or flat condition. The final stitching operation closes the upper, leaving it in the form of a bag-like member without any special shape.

Next, an insole 8, Fig. 2, is inserted in this closed upper and it is secured thereto at the toe portion only, as for example, by means of staples 9. The manufacturing operations on the insole should be completed before it is assembled with the upper, and these operations usually include the stitching of a binding around the edge, as shown in Fig. 2.

A last now is forced into this upper. the insole is placed accurately on the last bottom, and the upper material is properly adjusted on the last. The patterns from which the upper material and the insole are cut have been made from the last so that the upper should fit snugly on it with very little manipulation. Next, a filler-piece, which may be cut from some rather spongy material, such as hair felt, or which may be of a plastic nature, is cemented or spread over the exposed bottom surfaces of the lining where it fills in the depressions between the upstanding seams 5, 6 and 7, so as to make a reasonably smooth surface for the reception of the outsole. Those margins of the vamp 2, which are usually made of leather, and which overlie the bottom of the last, next are roughened so as to break the grain of the leather and enable cement to stick to it. If a plastic filler has been used, it is allowed to set, after which the outsole is applied by the usual cementing process. This customarily consists in coating both the roughened surfaces of the vamp with cement and also the upper surfaces of the outsole; then placing the outsole 10 accurately on the bottom of the lasted assembly and holding it there under pressure until the cement has set.

After this operation has been completed, a heel N is attached to both the heel-seat end of the outsole and the insole, thus completing the shoe, except for such finishing operations as may be desired. At this time the shoe made with the parts shown in Figs. 1 and 2 will appear substantially as illustrated in Fig. 3.

In making an oxford shoe of the orthodox form, except that it may have an open toe, essentially the same procedure above described is followed, but the pieces of the upper naturally are cut to different shapes, as will readily be understood by any one skilled in this art. The same operations above described in closing the upper are performed in this type of shoe as in the open-heel type, and the insole is inserted after the upper is closed. If, however, the shoe is to include a molded counter, then either a molded counter may be slipped into the heel section of the upper between the outer leather and the lining before the insole is inserted, or if an unmolded counter is to be used, then it is inserted in the same location instead of the molded counter, and in the latter event it is preferable to mold the entire heel-end of the shoe. This operation usually is performed before inserting the insole. It is secured in place at the toe as by staples 9', Fig. 4, after which the heel seat is lasted, as shown at 12. At this stage of the process, also, the filler piece 13 or a plastic filler, if that is to be used, is placed over the bottom of the forepart section of the lining material. Also, a shank stiffener, if one is to be used, is secured in place, as shown at 14. It may be fastened to the insole by means of staples 15.

Next, the marginal surfaces of the upper, where they overlie the bottom of the last, are roughened, as indicated by the stippling in Fig. 4, and the outsole 16 then is cemented to the upper. At this time the bottom of the shoe appears approximately as shown in Fig. 5, and from this point on, the shoe may be finished in any desired manner. Usually these operations simply call for the attachment of a heel, such as that shown at 11' in Fig. 6, and such buffing, scouring, edge finishing, and similar operations as may be prescribed to suit the requirements of the trade or the preferences of individual manufacturers.

It should be observed, however, that this construction and the method above described reduces very substantially the amount of labor required in manufacturing a pair of shoes. In the shoe shown in Fig. 3 no lasting operation whatever is performed, while in that illustrated in Fig. 6 the heel-seat lasting operation only is necessary. That can be performed very quickly with the aid of machinery now in common use, but even here the forepart lasting operation is eliminated. Because the lining material extends entirely across the bottom of the insole, most of the function of the latter in holding the opposite sides of the shoe together is assumed by the upper material itself, and it is therefore not necessary to fasten the upper to the insole except at its toe and heel-ends, although this can be done if desired.

It should also be understood that while two styles of shoes only have been illustrated in the drawings, the invention is applicable to shoes of other styles and constructions and even to closed-toe shoes, if desired. In making the latter, however, it will be necessary to perform a toe-lasting operation.

Fig. 7 illustrates a slight modification of the construction shown in Figs. 4 and 5 in which the lining 3'' is not initially notched transversely, but instead the longitudinal edges are brought together, one upon the other, while the upper is in the flat, and they are stitched together, forming a longitudinal seam 16 extending substantially along the median line of the insole bottom, as illustrated in said figure. After the insole has been placed in the shoe and fastened by the staples 9'' and by the heel-seat nails, then the lining 3'' may be pinched up lengthwise, initially by the fingers, or by the use of pliers, this pincing operation serving to gather up any slack. Then this slack material, while it is pinched up into a ridge, can be nipped off with a pair of shears, producing a cut shown at 17 in Fig. 7. There is still ample strength in the fabric extending across the bottom of the insole to hold the shoe in shape, even if the cut is left open, but the cut edges can be fastened in any manner, if desired, as for example, by staples, tacks, or cement. Thereafter the shoe-making operations above described in connection with Figs. 4 and 5 may be performed and the shoe completed. This modification of the process makes a little smoother disposition of the lining under the insole and it may be preferred by some shoe manufacturers for that reason, although the process as described in connection with Figs. 2 and 4 has proved very satisfactory.

In making a closed toe shoe by this method, essentially the same operations above described are performed but the pattern, of course, is cut differently and usually to accommodate a toe stiffener. In these shoes the lining does not extend quite as far forward as shown in Figs. 2 and 4, but stops at about the region indicated in Fig. 8. The shoe there illustrated is completed up to approximately the same point as those shown in Figs. 2 and 4. The toe stiffener 18, as illustrated in Fig. 8, has not yet been lasted in, but is in the normal position which it occupies up to the toe lasting operation. That operation customarily is performed after the insole has been inserted and secured to the lining, as by the staples 9, and the last also has been inserted in the closed upper, as above described. This toe lasting operation can be performed with the usual equipment provided for this purpose.

An important advantage of the method of making shoes provided by this invention is that the lasting allowance of the upper leather can be made exceptionally narrow and still give ample area for the attachment of the outsole. In fact, the outsole can be secured directly to the lining where it overlies the bottom of the last. In either event a saving in upper leather can be realized.

A further advantage is that because the insole is not secured to the upper throughout the forepart, except at the toe, a much more flexible shoe is produced, thus contributing to the comfort of the wearer.

Having thus described my invention, what I desire to claim as new is:

1. That improvement in methods of making shoes which consists in providing a toeless lined upper, the lining having an extended margin the edges of which are adapted to be secured together upon the bottom of an insole, folding said upper to substantially register the longitudinal edges of said lining with each other, stitching said edges together and thereby producing a seam extending lengthwise of the bottom of the upper and closing the upper but leaving an opening at the toe, inserting an insole in the closed upper so formed, stapling the toe end of said insole to the underlying part of the upper at said toe opening, thereafter inserting a last in the assembly so produced, securing the edges of said notches together and thereby producing seams extending transversely of said bottom, applying a filler to the bottom of said assembly where it covers said seams and the greater portion of the lining exposed on the fore-

part of said bottom, and securing an outsole to said insole and to the margins of the upper overlying the bottom of the insole.

2. A shoe comprising an insole; an upper including a vamp having an open toe portion and a lining secured to said vamp and having marginal portions extending beyond the lower edges of the vamp and meeting upon the bottom of the insole; said edges being stitched directly together with their marginal faces abutting each other at the seam so formed, portions of said lining being notched laterally where they overlie the bottom of the insole to take out the slack stock in the lining, independent through and through means fastening the toe end only of said insole securely to the underlying portion of said upper at said toe opening, the seams securing the edges of said lining in place at the bottom of the insole extending both longitudinally and transversely of said insole, a resilient filler covering said seams and the greater part of the lining exposed at the bottom surface of the assembly formed by the aforesaid parts, an outsole secured to the marginal portions of said vamp where they overlie the insole, and a heel secured to the rearward end of said assembly.

ADOLF SANCHIONI.