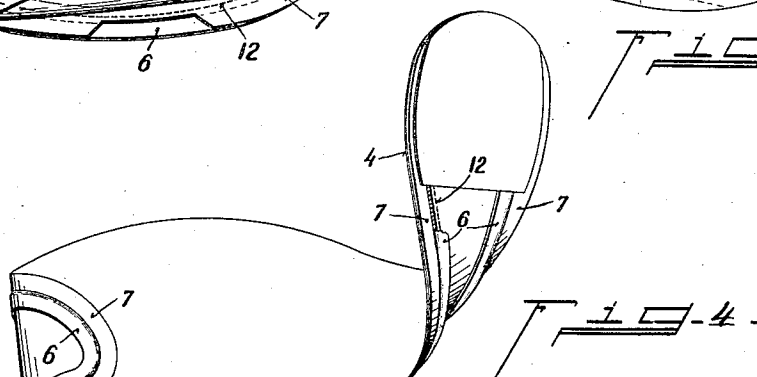
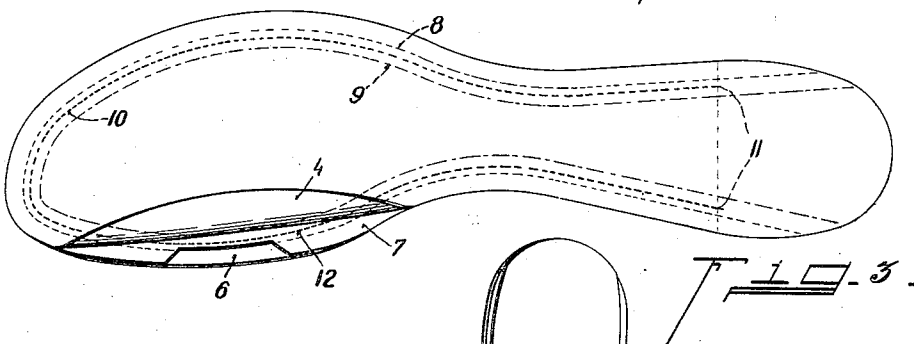
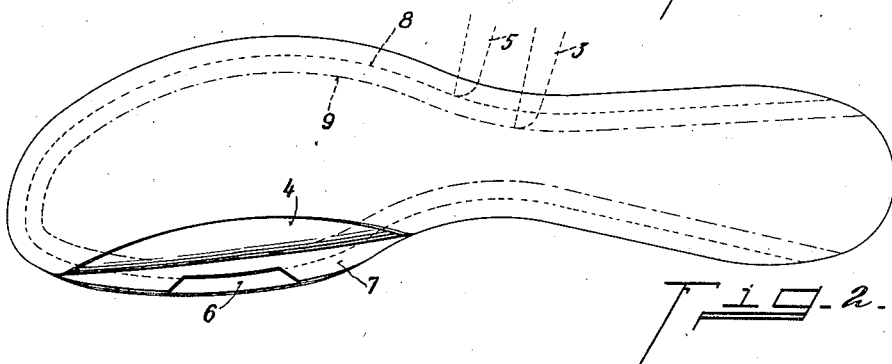
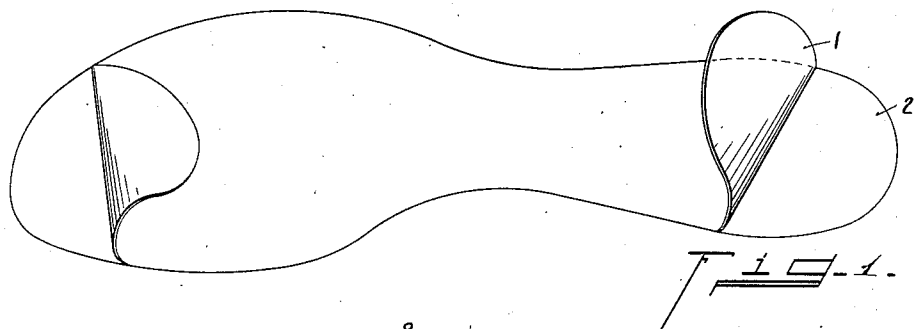


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 INSOLE MAKING ART.
 APPLICATION FILED JAN. 18, 1913.

1,077,634.

Patented Nov. 4, 1913.



Witnesses

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UNITED STATES PATENT OFFICE.

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INSOLE-MAKING ART.

1,077,634.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALBERT C. OPPENHEIMER, a citizen of the United States, residing at Norwood, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in the Insole-Making Art, of which the following is a specification.

This invention deals with the production of shoe insoles and proposes a unique method of building up and forming the same, whereby the cost of production is materially lessened without sacrificing the features and capacities that have been found to be desirable in insoles such as are used in the making of shoes.

One object within the contemplation of this invention is to formulate a sequence of manipulative steps orderly related to one another as well as individually simple and easily accomplished, to the end that the manufacture of insoles may be cheapened.

Another object is to render available a manufacturing process enabling an insole characterized by certain novel features and superior capacities to be made at a cost less than that prevailing as to insoles as constructed under what is now regarded as good practice.

A further object is to create a coördinated progression of simple manipulations enabling a limited amount of a cheaper grade of stock material to be used by building up the insole of cemented layers, while yet resulting in a well finished and durable product adapted to be used in quality shoes.

Other objects and advantages will be in part obvious from the annexed drawings and in part indicated in the following description thereof.

In order that this method may be so fully revealed as to enable others to practise the same, drawings indicating the steps in the preferred sequence have been appended as a part of this disclosure, and in such drawings, like characters of reference denote corresponding parts throughout the several views of which:—

Figure 1 portrays a step for obtaining a composite insole blank composed of a thin leather layer and a thick layer each preferably of a different quality of leather cemented together to form a unitary piece. Fig. 2 indicates the step preferably first carried out on the previously obtained composite cemented insole whereby upper and lower marginal flaps are formed by slitting

into the edge parallel with the plane of the insole. Fig. 3 shows the next step of turning back the top marginal flap and sewing a line of stitching through the underlying portions of the insole along the internal border line of the marginal flaps. Fig. 4 shows the next step of turning the under flap over the line of stitching to form a lip to which the upper may be attached.

Continuing now by way of a more detailed description it is to be noted that this invention is aimed more especially at the production of improved insoles of the Good-year type.

Obtaining a built-up blank, is in the nature of an initial or preparatory step of this method and it contemplates the partial utilization of relatively inexpensive raw material. Thus, a thick piece 1 of high-grade leather (such as is suitable for supporting the foot inside the shoe) is used as the top facing of the blank shown by Fig. 1 and it is superimposed upon one or more other thin pieces 2 of leather of a quality suitable for the body of the insole, and these pieces are cemented firmly together to form a composite grade unitary blank. The leather pieces may be cemented together before or after being cut to pattern, and preferably all contacting faces are securely cemented together throughout their areas.

Forming top and bottom margin flaps.— This is a succeeding step of this process and aims at preparing the blank for a two-fold purpose, *i. e.* particularly providing a bottom marginal flap adapted to be turned over to form a beading or lip to which the upper may subsequently be sewed, and preferably providing a top marginal flap temporarily free to permit sewing a line of lip reinforcing stitching and adapted thereafter to be cemented down to cover and conceal such stitching. These flaps most advantageously may be formed from a solidly cemented blank, especially as to the lower flap, by cutting deeply into the edge of the blank parallel with the plane thereof. Thus the knife blade 3 in Fig. 2 is shown in the act of cutting out the upper or stitch-hiding marginal flap 4, and the knife blade 5 indicates the cutting out of the lip-forming flap 6, thereby leaving the tongue or intermediate marginal flap 7. The cut for forming the lip-flap 6 will ordinarily enter the thick high-grade leather so that the lip-flap will be composite in grade and derive strength from the high-grade material. It is note-

worthy that a deeper cut is resorted to in forming the top flap 4 than in cutting out the bottom flap 6, so as to enable the top flap to be turned up sufficiently to permit the stitching needle to pierce the material inside of the boundary line of the lower cut, thus giving greater anchorage to the lip, as will later appear. This is shown most clearly by Fig. 2 in which the dotted line 8 indicates the bottom or inside boundary of the lower cut, and 9 shows the corresponding boundary of the upper cut to be spaced within the line 8. These lines may extend from one side of the heel area so as to circumscribe the blank save for the end of the heel area, or otherwise as preference may dictate. The blank is now finished to the stage suitable for the next step, *i. e.* the stitching.

Marginal stitching.—This step next follows in practising this method and it consists in holding up the top flap 4 to give access to a line 10, (see Fig. 3) preferably just within the cut bottom line 8, outlining the juncture of the bottom flap with the body of the blank, and then in stitching, as indicated by 12, through the underlying material along such a line, preferably starting and ending at points 11. This stitching has a dual function; first, it binds together all layers of leather and it reinforces the cement where it is most strained, and second, it constitutes a line of definition determining the folding-over of the lower flap to form the lip to which the shoe "upper" is sewed. By locating the stitch line just within the juncture line of the lower flap, the pull on the latter is resisted by the cementing reinforced by the stitching.

Cementing down top flap.—Either now, or subsequently, the free top flap may be cemented down over the stitching, thus effectively covering the same and giving a smooth evenly contoured upper surface to the insole.

Folding over bottom flap.—If the foregoing steps have been already carried out, this may be the concluding operation of this process, this step merely consists in throwing the bottom flap over the exposed line of stitching, in the manner shown by Fig. 4, thereby forming a lip of conventional proportions to which the "upper" may be sewed.

It will thus be seen that this invention is well adapted to achieve the ends aforesaid in a very simple yet expeditious manner and as this method may be practised quite independently of any new special types of machines, and is not a mere function of any given machine, its successful utilization need not await the production of newly designed machines. This method also insures the production of a product not only at a cost lower than that now obtaining for insoles, but

also of a quality enabling it to be satisfactorily substituted therefor.

Without further elaboration, the foregoing will so fully reveal the gist of this invention that others can readily apply current knowledge in adapting it for various applications and preferences, without omitting features that, from the aspect of the prior art, fairly constitute essential characteristics thereof, and, therefore, such adaptations should and are intended to be comprehended within the range of equivalency of the following method claims, it being understood that claims to the novel product are reserved for another application.

Having thus revealed my invention, I claim as new and desire to secure by Letters Patent of the United States:—

1. A method of the nature disclosed consisting in obtaining an insole-blank composed of cemented layers of material, forming upper and lower marginal flaps by slitting said blank edgewise leaving an intervening tongue of material, turning up one flap and stitching through the remaining material alongside its juncture with said upturned flap, cementing said upturned flap down on said tongue to cover one side of said stitching, and turning the other marginal flap over the exposed side of said stitching to form a lip to which a shoe upper may be sewed.

2. A method of the nature disclosed consisting in obtaining an insole-blank composed of cemented layers of material, forming a lower marginal flap by slitting said blank edgewise and also forming an upper marginal flap having its juncture line within that of the lower flap by similarly slitting said blank edgewise more deeply, turning up the upper flap and stitching between said juncture lines, turning down the upper flap, and turning the lower flap over the stitch line to form a lip to which a shoe upper may be sewed.

3. A method of the nature disclosed consisting in cementing together a thin leather layer and a thick leather layer to form a two-piece unitary insole-blank, forming a continuous marginal flap by slitting said two-piece blank edgewise into the thick layer, stitching alongside the juncture line between the flap and the body of the blank, and turning said flap over said stitching to form a lip to which a shoe upper may be sewed.

In testimony whereof, I have hereunto set my hand.

ALBERT C. OPPENHEIMER.

Witnesses:

CLARENCE BERTRAND FOSTER,
OLIVER B. KAISER.