

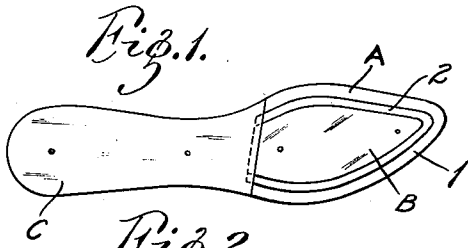
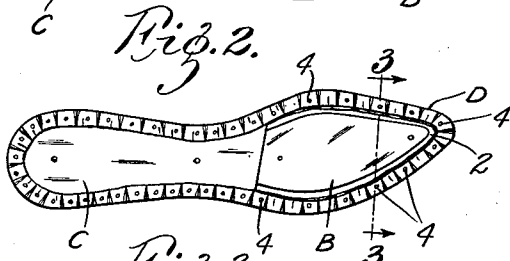
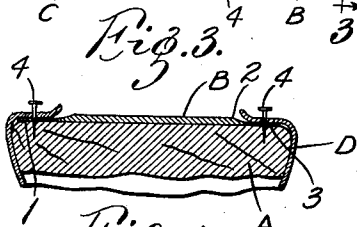
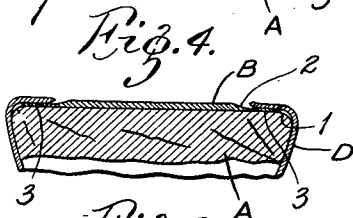
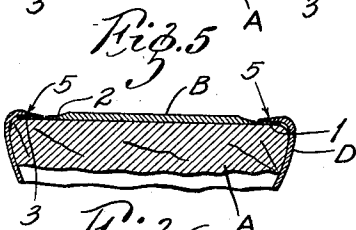
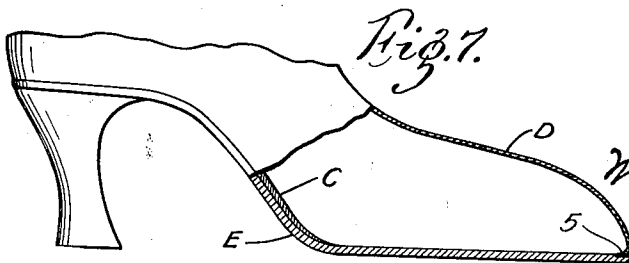
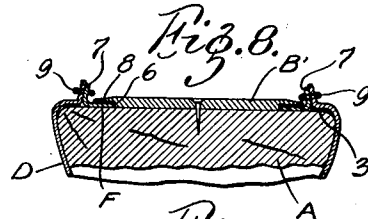
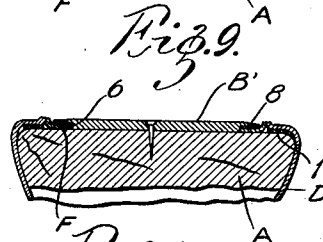
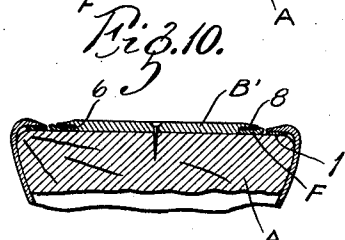
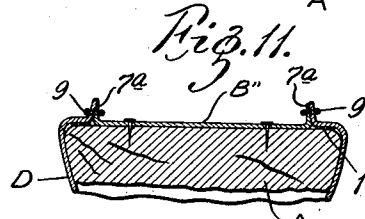
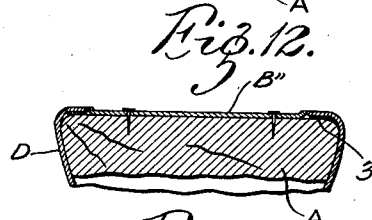
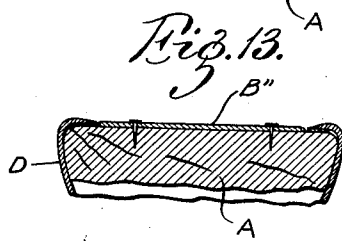
May 25, 1937.

W. H. BAIN

2,081,879

LAST PROTECTOR

Filed Nov. 17, 1934



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UNITED STATES PATENT OFFICE

2,081,879

LAST PROTECTOR

William H. Bain, Westwood, Ohio

Application November 17, 1934, Serial No. 753,425

1 Claim. (Cl. 12-107)

This invention relates to lasts over which shoes are shaped and built up, particularly to lasts for use with the process shown and claimed in my co-pending application Serial No. 750,763 filed October 31, 1934, for making shoes without an insole in the forepart thereof.

In such process, the margin of the forepart of the upper is pulled over and temporarily secured to the last or to a tape secured thereto and the outsole is secured directly to said margin. Such process also includes the step of feathering or beveling the marginal portion of the forepart of the upper to eliminate the ridge which would cause discomfort to the wearer of the shoe; and the beveling or feathering tool is likely to damage the surface of the last. Accordingly, the present invention has for its principal objects to protect the surface of the last against damage by the feathering or beveling tool, to provide the last protecting member with a marginal lasting lip, and to permit removal of the protecting member or replacement of a differently shaped protecting member that adapts the last for use in a different process.

The invention consists in the last having a protecting member removably secured to the forepart thereof and spaced from the margin of the last a distance corresponding substantially to the width of the beveled or feathered outsole engaging margin of the forepart of the upper; it also consists in providing said member with a marginal lasting lip; and it also consists in the parts and in the combinations and arrangements of parts hereinafter described and claimed.

In the accompanying drawing, which forms part of this specification and wherein like symbols refer to like parts wherever they occur,

Fig. 1 is a bottom plan view of a last embodying my invention, showing the shank piece secured thereto,

Fig. 2 is a view similar to Fig. 1, showing the upper pulled over and secured to the shank piece and to the marginal portion of the forepart of the last,

Fig. 3 is a vertical cross-section on the line 3-3 of Fig. 2,

Fig. 4 is a view similar to Fig. 3, showing the lasting tacks removed and the excess lasting allowance of the upper cut away,

Fig. 5 is a view similar to Fig. 4, showing the lasted margin of the upper after the beveling or feathering operation,

Fig. 6 is a bottom plan view, showing the outsole attached to the lasted margin of the upper, the outsole being shown partly broken away,

Fig. 7 is a part side elevation and part vertical longitudinal section through the finished shoe,

Figs. 8, 9, and 10 are views similar to Figs. 3, 4 and 5, respectively, showing a last for use in a different process; and

Figs. 11, 12, and 13 are similar views illustrating another modified last for use in another process.

The last A used with the process shown in Figs. 1 to 6, inclusive, of manufacturing shoes without an insole in the forepart thereof has a protecting member B of metal, fiber or other suitable material tacked or otherwise removably secured flatwise to the forepart of the last. Said member corresponds to the general contour of the forepart of the last, but is smaller than said forepart so as to leave the marginal portion thereof exposed or uncovered. As shown in the drawing, the marginal portion of the protecting member is beveled, as at 2, to a thin edge continuously around the sides and toe portion thereof.

In the process of making shoes with the above last, a shank piece C of leather or other suitable material is tacked or otherwise temporarily secured flatwise to the bottom of the last and extends from the heel end to the ball or break line thereof where it overlaps the rear marginal edge of the last protecting member B. The margin of the shoe upper D is pulled over the last A and secured to the shank piece C and to the exposed marginal portion of the forepart of said last by means of cement 3, and tacks 4, as shown in Fig. 3. After the cement 3 has set, the tacks 4 are removed and the excess lasting allowance of the upper cut away (see Fig. 4). The lasted marginal portion of the upper is then feathered or beveled, as at 5 in Fig. 5, by a suitable rotary tool (not shown); and damage to the last by such tool is prevented by the protecting member B which covers the portion of the forepart not covered by the upper and has its beveled edge 2 shaped to conform substantially to the peripheral cutting edge of said tool. The outsole E is then cemented or otherwise secured to the lasted margin of the upper, after which the last, together with the forepart protecting member B thereof, are withdrawn from the shoe.

The last used with the process illustrated in Figs. 8, 9, and 10 is provided with a protecting member or plate B' whose underside is rabbeted, as at 6, around its sides and toe portion to accommodate the inner marginal portion of a lasting tape F whose outer margin is turned up beyond the edge of the last protecting member to form

an upstanding lasting lip 7. As shown in Figs. 8, 9, and 10, the lasting tape F may be cemented or otherwise secured, as at 8, to the rabbeted marginal portion 6 of the protecting plate B; it may also be clamped between the plate and the last; or it may be cemented or otherwise secured to the last. In making shoes with this form of last protecting member, the upper is pulled over the last with its marginal portion or lasting allowance secured by cement 8 to the exposed margin of the last and by staples 9 to the outer side of the upstanding lip 7 of the lasting tape F. After the cement 8 has set sufficiently to hold an upper to the exposed margin of the last, the lip 7 of the lasting tape and the lasted portion of the upper cooperating therewith are cut away, as shown in Fig. 9, and carry with them the staples 9 used to secure them together. The lasted margin of the upper is then feathered or beveled in the manner hereinbefore described, after which the outsole is laid and the last, together with the protecting member F and the remaining portion of the lasting tape, are withdrawn from the shoe.

The last protecting member B'' used in the process shown in Figs. 11, 12, and 13 comprises a strip of canvas or other suitable material that has its marginal portion bent up to form a lasting lip 7a located inwardly of the edge of the last. With this form of protecting plate, the upper is pulled over and secured to the exposed margin of the last and to the lasting lip, in the manner hereinbefore described. The lasting lip and the portion of the upper secured thereto are then cut away and the lasted margin of the up-

per is then beveled or tapered in the manner hereinbefore described. The outsole is then laid and the last, together with the remaining portion of the protecting member, are then withdrawn from the shoe.

By the arrangement described, the surface of the last is protected against damage by the feathering or beveling tool, thereby prolonging the life of the last, and the protecting member may be used as a means for holding the lasting tape in position on the last or the lasting lip may be formed integral with the protecting member.

Obviously, the hereinbefore described invention admits of considerable modification without departing from the invention. Therefore, I do not wish to be limited to the precise construction shown and described.

Reference is hereby made to my copending applications Serial No. 85,641 filed June 17, 1936 and Serial No. 125,084 filed February 10, 1937, for subject matter divided out of the present application.

What I claim is:

A member for protecting the bottom of the forepart of a last during the operation of feathering the margin of the forepart of an upper lasted directly to the margin of the last bottom, said member being shaped and arranged to cover the portion of said last bottom not covered by the feathered lasted margin of the upper and being provided along its margin with a lip to which the lasted margin of the upper is adapted to be secured prior to the feathering operation.

WILLIAM H. BAIN.