Nov. 25, 1952 I. TARLOW 2,618,870

TWO-PLY SHOE FOREPART LINING

Filed Sept. 1, 1950 2 SHEETS—SHEET 1

Fig. 1.

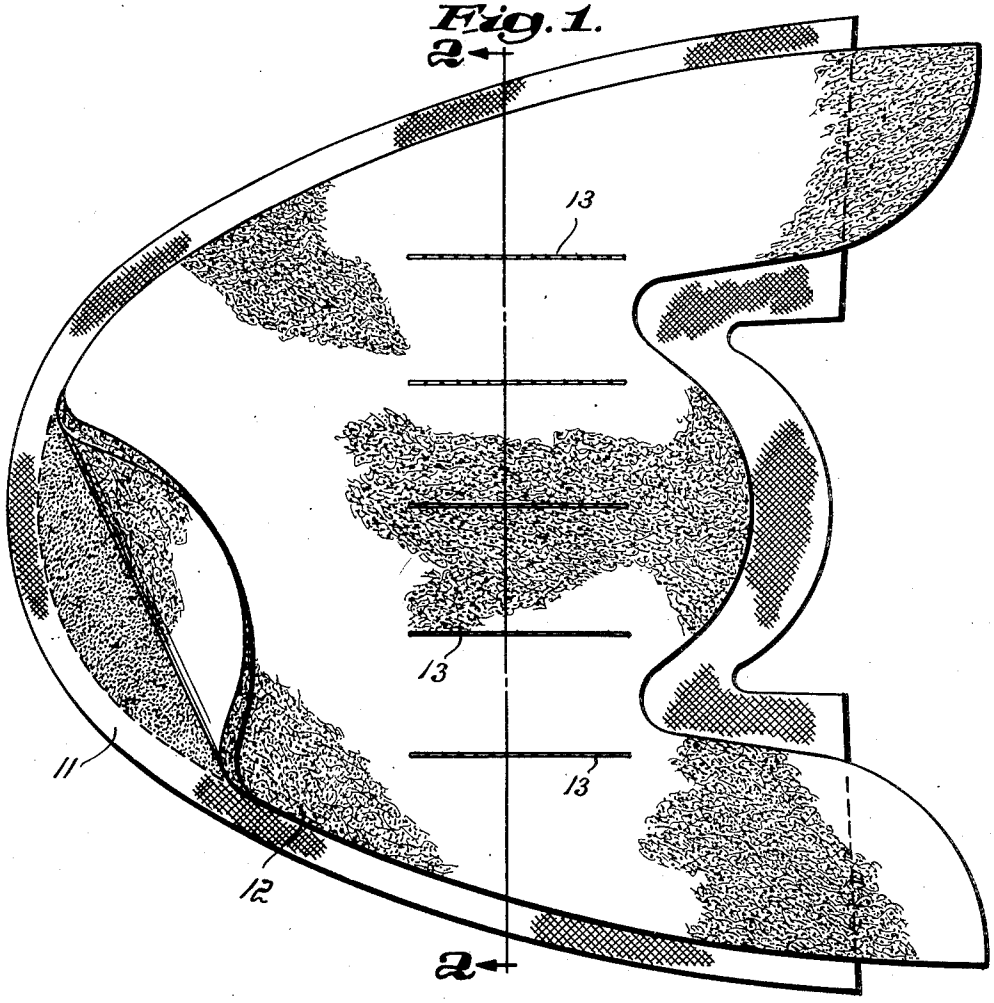


Fig. 2.



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Fig. 3.

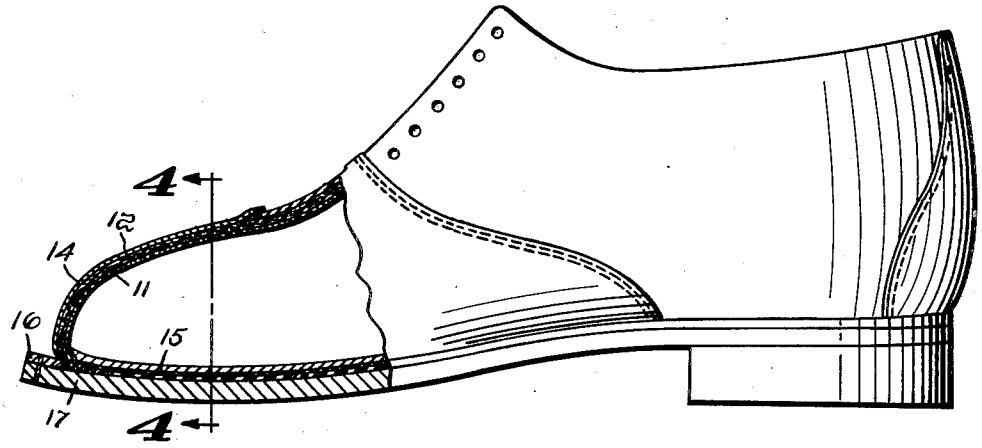
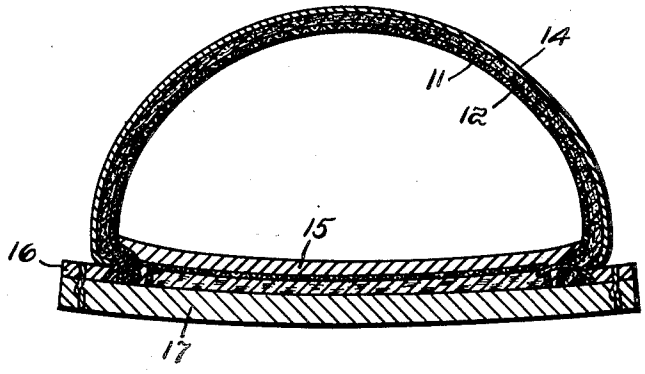


Fig. 4.



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Patented Nov. 25, 1952

2,618,870

UNITED STATES PATENT OFFICE

2,618,870

TWO-PLY SHOE FOREPART LINING

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Application September 1, 1950, Serial No. 182,713

1 Claim. (Cl. 36—55)

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This invention relates to shoe manufacture and pertains more particularly to improvements in linings used in the forepart construction of shoes.

The principal purpose of the invention is to construct a shoe forepart with a composite liner consisting of a conventional lining of woven textile fabric or leather, and a cushioning layer or doubler of a porous, resilient, and non-wrinkling sheet material; the lining layer and cushioning layer being stitched together, preferaby by parallel longitudinal rows of stitching, in such a manner as to permit a box toe to be inserted between the layers if desired, while preventing relative movement between the central portions of the layers and holding the cushioning layer and the fabric lining against relative displacement and wrinkling during the manufacture or use of the shoe.

My Patent No. 2,411,479, dated November 19, 1946, discloses a shoe construction in which the forepart is provided with a composite liner consisting of a conventional fabric layer and a cushion layer of perforated sponge rubber or the like, the two layers being connected together only by the shoe lasting and toe stitching of the upper to the composite lining. Such shoes afford a substantial degree of comfort and shape holding qualities, but are more troublesome to manufacture and less advantageous and efficacious in use than a shoe made in accordance with the present invention.

The particular objects of this invention are, thus, to ensure maximum comfort to the wearer of shoes made with the improved composite liner, to increase the shape-holding qualities and smooth fitting appearance of the forepart of the shoe, and to simplify the assembly of the improved, duplex liner for easy incorporation in the forepart during manufacture of the shoe. The attainment of these distinct and desirable advantages is due not only to the provision of a cushioning layer of the character hereinafter described, but also to the manner in which that layer is pre-assembled with the fabric or leather lining layer by parallel, longitudinal rows of stitching in the body of the composite liner, remote from the margins thereof and in a region which extends across the flex lines of the vamp of the finished shoe.

The resilient cushioning action of the non-wrinkling cushion layer of the liner protects the foot from irritation and chafing caused by deep wrinkles or creases in the upper leather during normal flexing of the shoe in walking, and also obviates rubbing or chafing of the foot caused by

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conventional or special seams in the upper leather of the vamp, thereby decreasing the likelihood of callouses or blisters, especially when the shoe is new. The porosity of the cushion layer reduces excessive heating of the foot and resulting perspiration, and allows for the absorption of such perspiration as normally occurs; for air circulation through the liner is substantially increased by the stitching of the cushion layer to the lining layer, thus eliminating the necessity of applying a cement coating between the layers. This longitudinal stitching also ensures the non-wrinkling characteristics of the improved liner, and avoids the wrinkling or folding which is a common source of discomfort in shoes made with conventional linings.

In contrast to the ordinary starched cotton flannel doubler or liner, the cushion layer of the improved liner retains for the life of the shoe a resilience which restores the vamp to its original shape after each flexation of the forepart, and the aforesaid parallel rows of longitudinal stitching contribute to this result by acting as guides in controlling the resilient action of the cushioning material. Such stitching further assists in maintaining the shape-retaining qualities of the shoe upper by holding the cushioning and lining layers in proper position for resisting the twisting or bending of the vamp; for the rows of stitches extend longitudinally of the shoe and at right angles to the normal flexing lines of the vamp.

By preventing permanent wrinkles or creases across the vamp of the shoe, the improved liner also enhances the lasting appearance of the shoe by reducing if not eliminating the cracking or checking of the upper leather and finish, otherwise caused by the breaking of the fibres and displacement of the surface finish when the vamps of conventional shoes become wrinkled and creased.

These advantages are achieved by the recommended embodiment of this invention as shown in the accompanying drawings, in which:

Fig. 1 is a plan view of the composite liner, a portion of the cushioning layer being turned upwardly to indicate its separation from the fabric layer at the toe part of the liner;

Fig. 2 is a section on line 2—2 of Fig. 1;

Fig. 3 is a side elevation of a shoe equipped with the improved composite liner, the forepart of the shoe being broken away and illustrated in section; and

Fig. 4 is a transverse section on line 4—4 of Fig. 3.

In accordance with this invention, the composite liner shown in Figs. 1 and 2 consists of a relatively thin layer 11 of conventional textile fabric such as canvas, and a cushioning layer 12 made of wool felt having its fibers coated with a resilient, cementitious compound, such as latex or the like, as a binder and strengthening agent, as by spraying the liquid thereon. The sprayed felt sheet is preferably pressed between rolls after the latex coating has dried on the fibers, to provide a relatively thick doubler layer having substantial tensile strength yet being highly porous and resilient, to afford adequate cushioning action in the shoe and to permit air circulation therethrough.

The respective liner layers are died or cut to the desired size and shape for assembly in the forepart of a shoe, the margin of the fabric liner 11 preferably extending beyond the peripheral edge of the cushion layer 12. The two layers are connected together by spaced, parallel rows of stitching 13 extending longitudinally of the liner across the central portion thereof remote from the margins of the liner, so that the toe and side portions of the layers are disconnected from each other to permit proper lasting of the lined upper and to admit a box toe between the layers when desired. The rearward wing portions of the superposed layers may be lightly cemented together, prior to stitching, to assist the operator in applying the stitches.

The improved composite liner is assembled with the vamp of the shoe by conventional methods, the liner being secured in the shoe as shown in Figs. 3 and 4 which illustrate a welt shoe having the usual insole 15, welt 16, outsole 17. If a box toe is used, it is inserted between the separated front portions of the duplex liner in accordance with common practice.

A shoe made with a composite liner constructed as above described possesses the several desirable advantages heretofore explained, which contribute to the user's foot comfort and also to his personal satisfaction in having a long-wearing shoe which retains its shape, finish and general appearance.

I claim:

A two-ply, preformed liner for assembly in the forepart of a shoe, comprising a relatively thin lining layer, a relatively thick layer of porous, resilient, fibrous cushioning material superposed on the first layer, and spaced parallel rows of stitching extending longitudinally of the body of the liner and traversing substantially the entire region corresponding to the normal flex lines of the vamp of the shoe in which said liner is to be assembled, said stitching interconnecting and two layers and terminating at their forward ends remote from the front margins thereof, so that the layers may be separated at the front of the liner to admit a box toe therebetween.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,777,544	Beckwith	Oct. 7, 1930
1,931,612	Kahlmeyer	Oct. 24, 1933
2,050,751	Enos	Aug. 11, 1936
2,130,794	Enos	Sept. 20, 1938

FOREIGN PATENTS

Number	Country	Date
1,896	Great Britain	Dec. 3, 1892
450,577	Great Britain	July 21, 1936