June 5, 1945. E. I. LA CHAPELLE 2,377,635

BOOT AND SHOE

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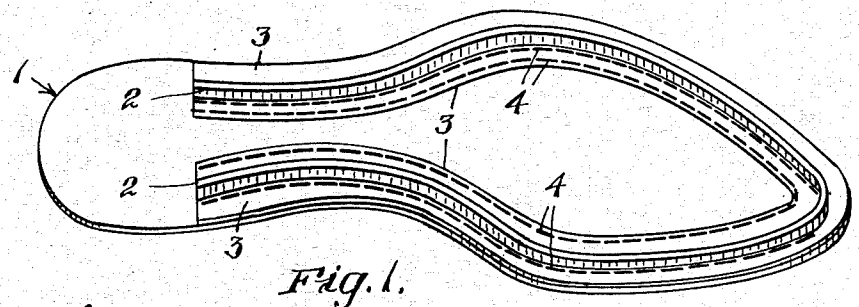


Fig. 1.

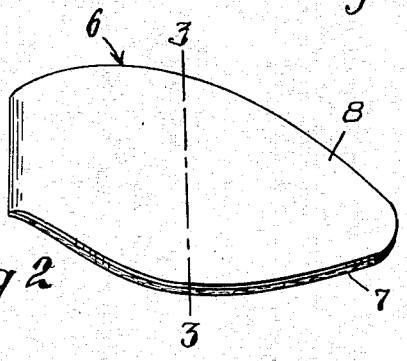


Fig 2

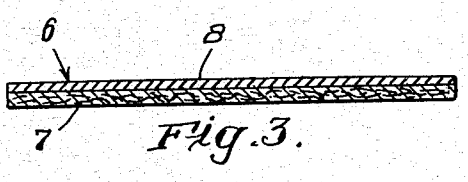


Fig. 3.

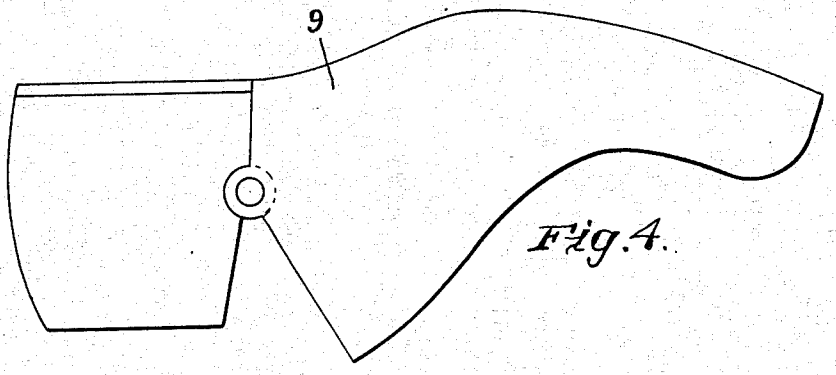


Fig. 4.

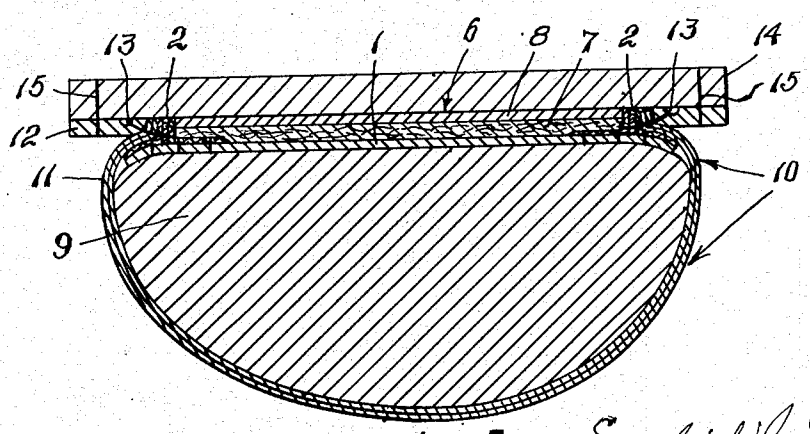


Fig. 5.

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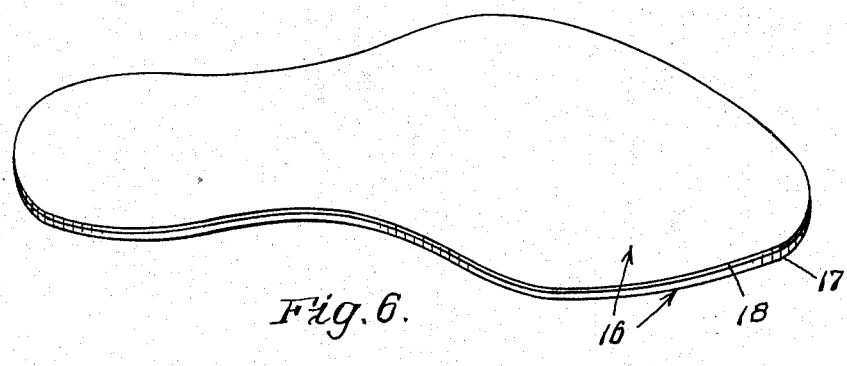


Fig. 6.

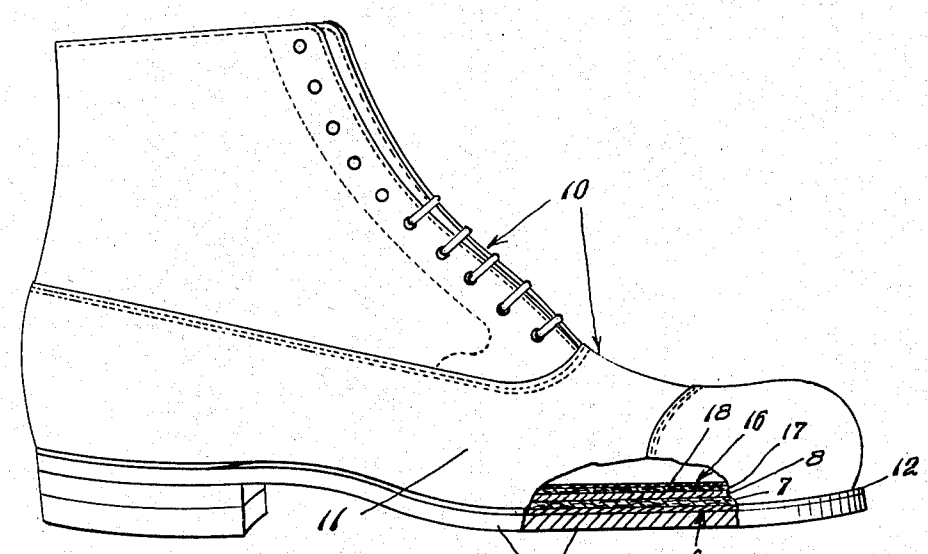


Fig. 7.

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UNITED STATES PATENT OFFICE

2,377,635

BOOT AND SHOE

Euclid I. La Chapelle, Brockton, Mass.

Application November 23, 1944, Serial No. 564,800

1 Claim. (Cl. 36—17)

My invention relates to boots and shoes and more particularly to boots and shoes of the well known Goodyear welt type in men's and boys', and in women's and misses' of the "mannish" or sport makes, incorporating insoles of the unchannelled ribbed type.

The term "shoe" occurring in the specification and in the claim is to be interpreted to include the term "boot."

The great majority of welt shoes in all makes of the aforesaid Goodyear welt type embody channelled insoles which type of insole is unduly depressed under pressure of the foot during the time of wear at their weakened portion along the line of the channel where a "gutter" is thereby formed and the edge of the insole is curled against the wearer's foot.

Moreover a shoe of the Goodyear welt type invariably embodies a depressible bottom filler, at least in its forepart bottom cavity within the line of the inseam securing the welt and the upper to the insole, as there must be co-operation by and between the filler and the insole for bringing about a certain extent of depression of the inner bottom under pressure of the foot during the time of wear and notably so at the great toe portion of the bottom and directly back thereof at the ball portion, so that the foot may be properly supported and may grip the depressed portions of the inner bottom in propelling the body forward in the act of walking.

Such a bottom filler necessarily must extend in thickness from the plane face of the insole to the upstanding trimmed edge faces of the surplus welt and upper above the inseam stitches to firmly contact with the outsole at the sole laying operation and during the time of wear. When embodied in a men's or a boy's, or in a women's or a misses' welt shoe of the "mannish" or sport makes incorporating an unchannelled ribbed insole, such as of the type herein shown, then the filler necessarily is of a thickness adapted to allow for its undue depression under pressure of the foot during the time of wear with its resultant well known undue disturbance and sequential bunching up against the wearer's foot, as the cavity then to be filled is of greater depth than that of the cavity to be filled in a welt shoe embodying a channelled insole.

Obviously, such defective conditions, or any of them, are greatly detrimental to the wearer's comfort and, moreover, render impractical the renewal of a comfortable cushion upon the inner bottom of the shoe from time to time during wear, as herein proposed, because of the then undue depression of the inner bottom of the shoe bringing about undue distortion and wrinkling of the renewed comfortable cushion within a short time of wear.

An objective of my invention resides in the elimination of the herein stated defective conditions in welt shoes of the aforesaid makes to the end that their inner bottoms may be depressed only to a limited predetermined slight extent during the entire time of wear for the wearer's permanent comfort.

A further objective of my invention resides in the elimination of the herein stated defective conditions in shoes of the aforesaid makes to the end that their inner bottoms may be depressed only to a limited predetermined slight extent during the entire time of wear for the wearer's permanent comfort and for making possible thereby proper support during the entire time of wear of a comfortable cushion renewable from time to time during wear.

As shown in the accompanying drawings:

Figure 1 shows a perspective view of an unchannelled ribbed insole adapted to a men's welt shoe;

Figure 2 shows a prospective view of a shoe bottom filler;

Figure 3 shows a full size cross-sectional detail view of the bottom filler, taken on line 3—3 Fig. 2;

Figure 4 shows a conventional men's welt shoe last;

Figure 5 shows a cross-sectional view of the forepart of my improved welt shoe on the said last;

Figure 6 shows a comfortable cushion adapted to be superposed upon the plane face of the insole within the foot receiving portion of the shoe; and

Figure 7 shows my improved welt shoe, with the comfortable cushion superposed upon the plane face of its insole, and is broken away to show the shoe elements provided.

Referring further to the drawings:

I have provided an unchannelled ribbed welt shoe insole 1, which is of the commercially well known Poole process type because an unchannelled welt shoe ribbed insole eliminates the aforesaid well known objectionable "gutter" common along the line of the channel of a channelled welt shoe insole and which is formed by pressure of the foot during the time of wear upon the weakened channelled portion, and its sewing rib 2, has the outwardly extended flanges 3, situated at both sides of the sewing rib proper and

through which pass three rows of stitches 4, securing the sewing rib to the insole, and its body 5, preferably, is of leather and of a nature adaptable to depression for co-operation with the depressible portion 7, of the herein shown and described bottom filler during the time of wear.

It is to be noted that unchannelled ribbed welt shoe insoles are more flexible and more economical due to their adaptation to insole material lower in cost than leather and to their speedy mode of construction than are channelled welt shoe insoles and I, preferably, have adopted the commercially well known Poole unchannelled ribbed welt shoe insole, herein shown and described, because, insofar as I am aware, its sewing rib is stronger than the sewing rib of any other known unchannelled ribbed welt shoe insole and of the between-substance of any channelled welt shoe insole adapted to be incorporated in a shoe welted by machine.

I have provided a depressible bottom filler 6, best shown in Fig. 3 which comprises upper and lower portions preferably secured together by a thin coating of cementitious material, and, the upper portion, preferably, is formed of felt of medium density adapted to be depressed under pressure of the foot during the time of wear, and the lower portion 8, preferably, is formed of fibre insole material of such density as to be substantially non-depressible during the entire time of wear. As shown in Fig. 3, the upper portion 7, is three thirty seconds of an inch in thickness and the lower portion 8, is one eighth of an inch in thickness but it is to be appreciated that such dimensions have been herein adopted for convenience only and that the upper portion 7, may be of any suitable thickness adapted to contribute in bringing about the objectives of my invention, and that the lower portion 8, may be of any suitable thickness adapted to the requirements of the particular depth of the bottom cavity to be filled and, whenever of sufficient thickness to so allow for, it may be slashed for flexibility.

It is a notable fact that the upper portion 7, which is of felt, the best known material for the purpose, never need be of such thickness as to allow for undue expansion thereof against the insole under the effect of dampness caused by water passing through the welt inseam.

Moreover, I want it well understood that the upper and lower portions of the filler may be of any suitable material adapted to contribute in bringing about the objectives of my invention.

I have provided a conventional welt shoe last 9, and although such a last may have been provided with additional last material at its bottom portion to make for extra space within the shoe for proper reception of the comfortable cushion 16, I have chosen to provide a conventional last upon which to construct my improved welt shoe and to advise prospective wearers, that in the event the comfortable cushion 16, were adopted instead of the conventional sock-lining, my improved welt shoe then should be adopted of one half size larger than of the size of a conventional welt shoe of the same make and style made on a conventional last. Of course, it would be optional with manufacturers of my improved welt shoe to adopt the procedure herein explained as to increasing the size of the shoe by the prospective wearer or to adopt a conventional last with additional last material at its bottom portion to make for extra space within the shoe, both procedures being old in the art.

As shown in Fig. 5, my improved welt shoe 10, is on the last 9, and comprises, the upper 11, as having been lasted on the said last and over the marginal portion of the unchannelled ribbed insole 1, and, with the welt 12, as having been secured to the sewing rib of the insole by the inseam stitches 13, formed by a welt sewing machine and the surplus portions of the welt and upper, extending above the inseam, as having been trimmed after the welt sewing machine operation, but somewhat away from the inseam stitches so as to retain the strength of the sewing rib and of the inseam itself under the stress of wear, and the bottom filler 6, as having been positioned and secured to the insole by a thin coating of cementitious material in the forepart bottom cavity of the shoe after the inseam trimming operation, and the outsole 14, as having been secured to the welt 12, and to the bottom filler 6, by cementitious material and then as having been permanently secured to the welt by the stitches 15, formed by the outsole stitching machine.

Once the last 9, has been removed from the improved shoe 10, then the comfortable cushion 16, which, preferably, is composed of the felt 17, which material is best adapted to insulate the shoe in receiving and retaining the natural perspiration of the foot during the time of wear, and of the sheepskin cover 18, which is secured to the felt by a thin coating of cementitious material, and which kind of leather is well recognized to be the best known material for such purpose, it being porous and possessing a natural lubricant making its surface smooth and glossy during the time of wear, and which comfortable cushion, preferably, is one eighth of an inch or thereabouts in thickness, and is inserted, at any suitable time, within my improved welt shoe, as shown in Fig. 7, and, preferably, is secured to the toe and heel portions of the insole by a cementitious material of a nature allowing for its removal and renewal from time to time during wear. I want it well understood, however, that although I have herein shown the comfortable cushion removable and renewable from time to time during wear, it may be permanently secured to the insole under any one of the old procedures in the art. Moreover, whenever the comfortable cushion 16, is omitted from my improved welt shoe, then the conventional sock-lining may be availed of to cover the three rows of stitches securing the sewing rib to the insole, and the sock-lining in a men's or a boy's welt shoe incorporating this particular type of unchannelled ribbed insole oftentimes is in the form of a thin slip sole of sole leather secured to the insole by cementitious material.

As shown, I have brought forth an improved welt shoe, making possible, for the entire time of wear, renewal of its inner bottom by means of a renewable comfortable cushion 16, and which, in addition of possessing the advantageous features herein already noted, is doubly comfortably cushioned and doubly insulated against heat, cold and dampness by means of the bottom filler 6, and of the comfortable cushion 16, and therefore, which is highly hygienic and conducive to the wearer's health and comfort during the entire time of wear.

The appended claim is to be interpreted broadly and is to be limited by the requirements of the prior art only to give to my invention and

to this patent all the protection to which I am entitled under the statutes.

Having thus explained the nature and objectives of my invention and having indicated its scope and shown the best form of embodiment now to me known, what I claim as new and desire to secure by Letters Patent of the United States is:

A welt shoe having an unchannelled ribbed insole, a welt and an upper inseamed to the said rib of the insole, an outsole permanently secured to the welt, and a filler disposed between the outsole and the insole within the cavity formed by the inseamed portion of the shoe, the said filler comprising upper and lower portions, one of which being formed of depressible material during the time of wear and the other of which being formed of substantially non-depressible material during the entire time of wear.

EUCLID I. LA CHAPELLE.