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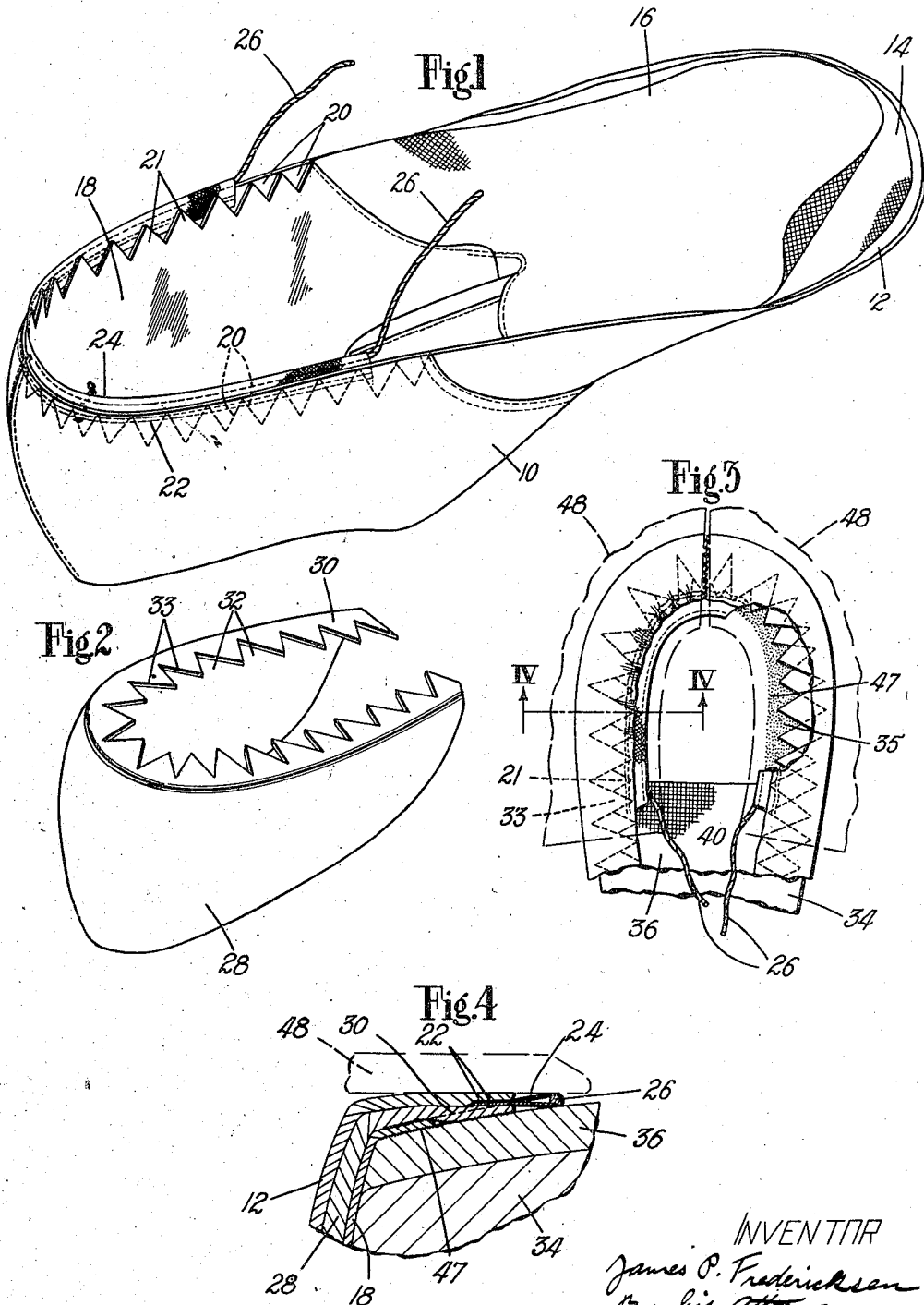
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2,151,020

SHOE AND METHOD OF MAKING THE SAME

Filed March 28, 1938

2 Sheets-Sheet 1



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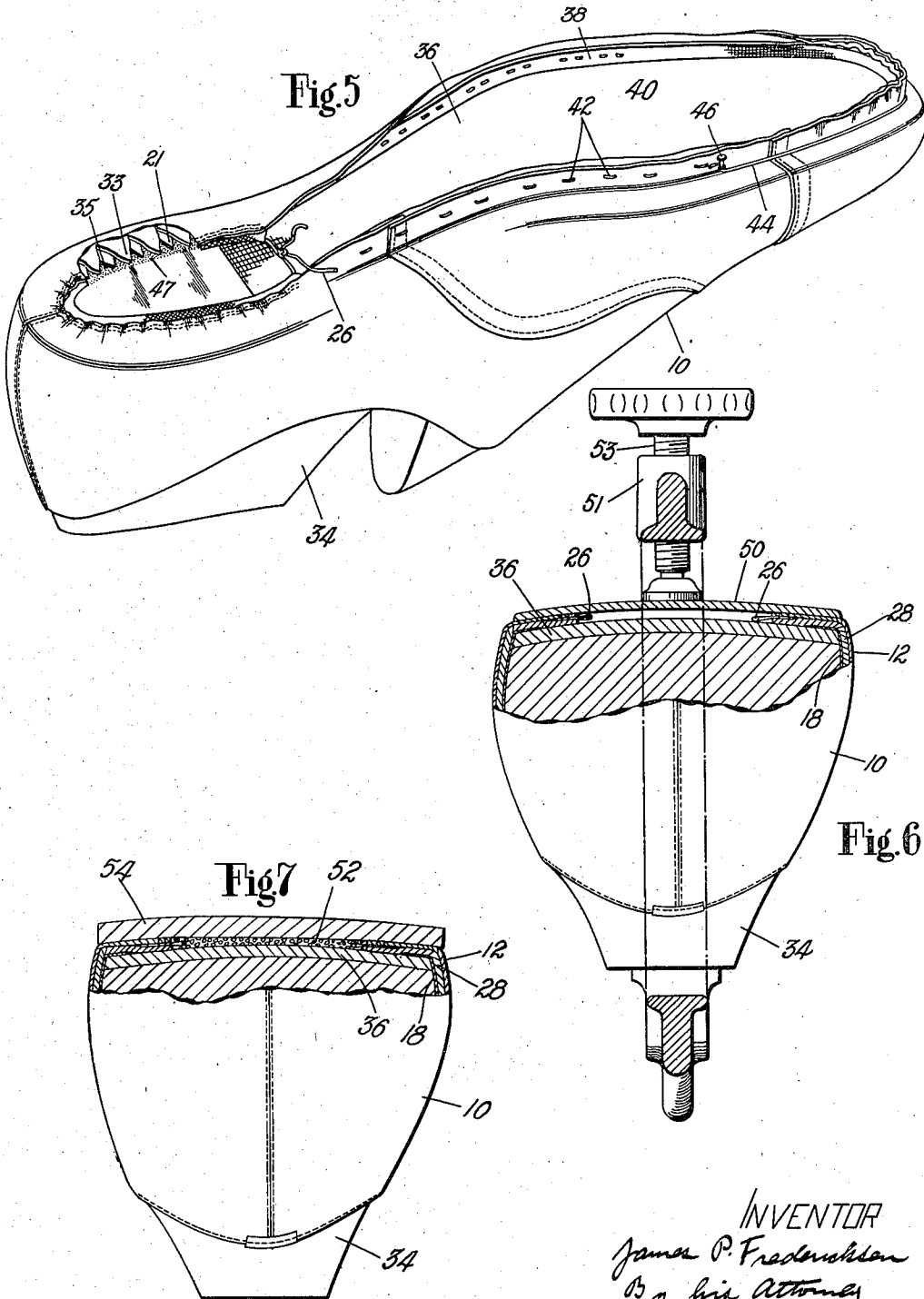
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2 Sheets-Sheet 2



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SHOE AND METHOD OF MAKING THE SAME

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Application March 28, 1938, Serial No. 198,441

10 Claims. (Cl. 12—142)

This invention relates to shoes and to methods of making shoes and is illustrated herein with particular reference to the construction of the heel portions of shoes.

Objects of the invention are to provide a shoe having a relatively smooth heel seat portion for the reception of an outsole, said heel seat containing no metallic fastenings, to provide an improved method of constructing such a shoe, and to provide an improved counter for a shoe.

To the attainment of these objects the invention provides, in accordance with one aspect, an improved method of making a shoe which comprises assembling on a last an insole, an upper and a flanged counter, the lining of the upper at the heel portion thereof and the flange of the counter being serrated or pinked by notches arranged in staggered relation to each other. The upper materials, including the counter, are worked into overlapped relation to the insole and are secured permanently in overlapped position by cement. The serrations or notches on the lining and the flange of the counter permit the counter and the outer layer of the upper as well as the lining to contact with the cement on the insole so that all three elements of the assembled upper are held in close engagement with the insole to produce a relatively smooth bottom on the heel seat of the shoe.

As herein illustrated, the heel portion of the insole is smooth. The upper materials may be secured in overlapped position while the cement between the insole and upper materials sets by a string or similar member attached in a suitable manner to the outer layer of the upper. After the upper materials have been secured in overlapped position, pressure may be applied to the heel seat portion of the shoe bottom to insure that the upper materials, including the outer layer, will lie as flat as possible against the surface of the insole. In this way a relatively smooth heel seat is obtained on the shoe bottom without the use of metallic fastenings.

The invention also provides, in accordance with another aspect, an improved shoe having the upper materials at its heel portion lasted flat against the insole, the lining of the upper at said portion and the flange of the counter being serrated or pinked by notches arranged in staggered relation to each other so that cement on the insole will reach the counter and the outer layer of the upper, as well as the lining, and hold them closely against the insole to produce a relatively smooth heel seat on the shoe.

With the above and other objects and aspects in view the invention will now be described in connection with the accompanying drawings and will thereafter be pointed out in the claims.

In the drawings,

Fig. 1 is a perspective view of a shoe upper con-

structed in accordance with the present invention;

Fig. 2 is a perspective view of a counter formed in accordance with the invention;

Fig. 3 is a plan view of the heel portion of a shoe embodying the upper and counter and showing these members located in overlapped position;

Fig. 4 is an enlarged sectional view taken on the line IV—IV of Fig. 3;

Fig. 5 is a perspective view of the shoe after the lasting operation has been completed, a portion of the upper being broken away at the heel end of the shoe;

Fig. 6 is an elevational view partly in section of the heel end of the shoe with pressure being applied thereto; and

Fig. 7 is a view similar to Fig. 6 after an outsole has been attached.

In practising the method illustrated herein a shoe upper 10 is provided comprising a leather outer layer 12, a doubler 14, and a lining 16, the forepart of the lining being composed of fabric material and the rear part or quarter lining being composed of thin, flexible leather indicated by the numeral 18. The lower marginal portion of the quarter lining 18 is serrated or pinked by a plurality of substantially V-shaped notches 20 between which are located V-shaped projections 21, as shown in Fig. 1. The outer layer 12 of the upper has secured to the lower edge of its heel portion by stitches 22 a folded strip or tape of fabric material 24 which extends around said heel portion to points located somewhat forwardly of the heel breast line of the shoe. The folded portion of the fabric strip 24 projects beyond the edge of the outer layer 12 and has embraced in its fold a string or cord 26, the opposite end portions of which extend beyond the strip.

In addition to the upper 10, prepared as described, there is also provided a counter 28 (Fig. 2) which may be composed of any usual material such, for example, as fiber, and which at its bottom edge has the usual inwardly projecting flange 30 arranged to overlap the margin of the lining of the upper at the heel portion of the shoe. In accordance with the present invention, the flange 30 is serrated or pinked by a plurality of V-shaped notches 32 corresponding in size and shape to the notches 20 in the quarter lining 18 but being located in staggered relation to said notches, the notches 32 likewise having a plurality of V-shaped projections 33 located between them which are staggered with respect to the projections 21 on the lining. Accordingly, when the counter 28 is assembled with the upper and an insole on a last, the projections 33 on the counter will overlie the notches 20 in the lining and will thus come directly into contact with the insole. Moreover, the inner portions of the staggered projections 21 and 33 on the lining and counter produce smaller V-

shaped notches or openings 35 on the shoe bottom, as shown in Figs. 3 and 5, through which the margin of the outer layer or ply 12 of the upper can come directly into contact with the surface of the marginal portion of the insole.

The upper 10 and the counter 28 are assembled on a last 34 in the usual manner with an insole 36. The insole 36 is preferably of the type illustrated in Letters Patent of the United States No. 849,245 granted April 2, 1907, on an application filed in the name of Albert E. Johnson, this insole being commonly referred to as an "Economy" insole. As shown in Fig. 5, the insole is provided with a lasting rib 38 which extends around its marginal portion and terminates at the heel breast line of the shoe. The outer surface of the insole, forwardly of the heel breast line, is reinforced with a layer of fabric material 40 which also covers the inner side of the rib 38.

The upper 10 is now side-lasted in the customary manner by working the upper materials over the margin of the insole and securing them by staples 42 or other suitable means to the rib 38 to hold the upper in overlapped position. The toe portion of the upper may be lasted in any usual manner and secured in lasted position. As herein illustrated, the toe portion is lasted on the well-known bed lasting machine and is secured against the rib by a binding wire 44 which is secured at opposite sides of the shoe by anchor tacks 46, as shown in Fig. 5.

The next operation in practicing the present method is to last the heel seat portion of the shoe. This is accomplished, as herein illustrated, by first applying a coating of cement 47 (Figs. 3 to 5, inclusive) to the margin of the heel portion of the insole 36 and working the upper materials, including the flange of the counter 28, over the edge of the insole preferably with the aid of the bed lasting machine referred to, this machine being provided with wipers 48 (Figs. 3 and 4) arranged not only to wipe the lasting margins of the upper materials over the insole but to maintain them in overlapped position under pressure until the materials have been secured in some manner to the insole. It will be seen from the drawings that when the upper materials at the heel portion of the shoe are wiped inwardly over the cemented portion of the insole, the serrations or notches on the lining and counter remain open or at substantially their original width. Accordingly, the various layers or plies of the upper materials, including the outer layer 12, will all be brought directly into contact with the cement on the insole by reason of the staggered arrangement of the notches and projections on the lining and the counter. All three layers of the upper materials, therefore, at the heel seat portion of the shoe will be cement attached directly to the insole 36.

After the upper materials at the heel seat portion of the shoe have been lasted as described above, the wipers 48 are permitted to remain for a short period in their inwiped or operative position, as shown in Figs. 3 and 4, and the opposite end portions of the string or cord 26 are tied firmly together in the manner shown in Fig. 5 to hold the upper materials in their overlapped position without the aid of metallic fastenings, such as tacks or staples, while the cement on the insole is setting. In order, however, that the several layers of the upper at the heel portion of the shoe will lie as flat as possible against the insole, the heel seat portion of the shoe may now be subjected to pressure by means of a pressing member

or plate 50 (Fig. 6) which may be forced against the shoe bottom in any usual or convenient manner as, for example, by an ordinary C-clamp 51 provided with a screw 53 for pressing the plate against the shoe. Pressure of the member 50 is maintained while the cement is setting so that all layers of the upper materials are pressed closely against the surface of the insole to produce a relatively smooth heel seat on the shoe bottom. After the lasting operation has been completed, the string 26 may be left in the shoe or removed, as desired, although it is preferable to leave it in since an attempt to remove it might weaken the cement bond between the upper materials and the insole. It will be seen from Figs. 6 and 7 that very little filler material will be needed at the heel seat portion of the shoe bottom to fill in the space between the inner edges of the overlapped upper materials.

If the shoe is a welt shoe, such as that illustrated herein by way of example, a welt may be attached forwardly of the heel breast line by in-seam stitches which pass below the staples 42, the binding wire 44 being removed prior to the in-seaming operation. The shoe bottom forwardly of the heel breast line may now be trimmed to remove the excess material and to prepare the shoe for receiving an outsole. The overlapped portion of the upper at the heel seat portion of the shoe bottom is next roughened for receiving cement and cement, such for example as pyroxylin, is applied and allowed to dry. If the entire outsole is to be cement attached to the shoe, the outer surface of the welt may also be roughened and coated with cement. Irrespective of the method of attaching the outsole forwardly of the heel breast line of the shoe, it is attached at the heel seat portion by cement, as shown in Fig. 7, filler material 52 being used to fill in the space between the opposite edges of the upper at this portion. Fig. 7 shows the shoe with an outsole 54 cement attached to its heel seat portion.

If it is desired to complete the construction of the heel seat portion of the shoe without the use of metallic fastenings such as tacks, staples or nails, the further operations of attaching a heel, comprising a usual heel base and top lift, may be carried out in the manner disclosed in a copending application Serial No. 188,102, filed February 1, 1938, in the name of Leroy W. Rollins, in which these members are attached to the heel seat portion of the outsole by cement and non-metallic fastenings such, for example, as fiber fastenings which do not penetrate the insole. It is to be understood, however, that the invention is not limited to the method disclosed in the application referred to for completing the heel portion of the shoe since the heel members may, if desired, be attached by nails or other metallic fastenings.

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

1. That improvement in methods of making shoes which comprises assembling on a last an insole, an upper and a counter, the lining of the upper and the flange of the counter being serrated by notches arranged in staggered relation to each other, applying cement to the margin of the outer surface of the insole, working the upper materials into overlapped relation to the insole, thereby causing the cement on the insole to reach the counter and the outer layer of the upper by reason of the notches in the lining and the flange of the counter, and maintaining the upper mate-

rials in overlapped position until the cement has set to hold them permanently in such position.

2. That improvement in methods of making shoes which comprises assembling on a last an insole, an upper and a counter, the insole having cement on the margin of its heel portion and the flange of the counter and the lining of the upper being pinked by notches arranged in staggered relation to each other, working the upper materials at said heel portion into overlapped relation to the insole and thereby causing the cement to reach all the layers of the upper materials by reason of the staggered notches in the lining and the counter, and maintaining the overlapped upper materials firmly against the insole while the cement is setting to produce a smooth heel seat on the shoe bottom.

3. That improvement in methods of making shoes which comprises assembling on a last an insole having a smooth heel seat portion, a two-ply upper having its lining pinked by notches at the margin of its heel portion, and a counter the flange of which is pinked by notches that are staggered with respect to the notches in said lining, applying cement to the margin of the heel portion of the insole, working the upper materials at said portion into overlapped position against the insole and thereby causing the cement thereon to reach both plies of the upper by reason of the aforesaid notches in the lining and counter, and pressing the overlapped upper materials flat against the heel seat portion of the insole until the cement has set, thereby producing on the shoe a heel seat portion which is relatively smooth and which contains no metallic fastenings.

4. That improvement in methods of making shoes which comprises assembling on a last an insole, an upper and a counter, the lining of the upper at its heel portion and the flange of the counter being serrated by V-shaped notches arranged in staggered relation to each other, applying cement to the heel portion of the insole, working the upper materials including the counter over said heel portion and securing them in overlapped relation to the insole, thereby permitting the cement on the insole to reach the plies of the upper materials and the counter by reason of the aforesaid notches to cause said plies and counter to adhere directly to the insole, and pressing the overlapped portions of the upper materials and counter flat against the insole to produce a relatively smooth heel seat on the shoe bottom.

5. That improvement in methods of making shoes which comprises assembling on a last an insole, a counter, and an upper including a lining, the heel portion of the margin of said lining and the flange of said counter being serrated by notches which are staggered with respect to each other, applying cement to the heel portion of the insole, working the upper materials and counter over the edge of the insole and into overlapped position relatively thereto, thereby causing the cement on the insole to engage the lining, counter and upper by reason of the notches on the lining and counter, and securing the upper materials in said overlapped position by a string attached to the lower edge of the upper.

6. That improvement in methods of making shoes which comprises assembling on a last an insole, a counter, and an upper including a lining,

the heel portion of the margin of said lining and the flange of said counter being serrated by notches which are staggered with respect to each other, applying cement to the heel portion of the insole, working the upper materials and counter over the edge of the insole and into overlapped position relatively thereto, thereby causing the cement on the insole to engage the lining, counter and upper by reason of the notches on the lining and counter, securing the upper materials in said overlapped position by a string attached to the lower edge of the upper, and pressing the upper materials flat against the surface of the insole while the cement is setting to produce a smooth bottom on the heel seat portion of the shoe.

7. That improvement in methods of making shoes which comprises assembling on a last an insole, a counter and an upper including a lining, said insole having a lasting rib forwardly of the heel breast line of the shoe, and said counter and the heel portion of said lining being serrated by notches arranged in staggered relation to each other, working the opposite sides of the upper materials into overlapped relation to the insole and securing them to said rib, working the toe end of the upper into overlapped position against said rib and securing it in such position, applying cement to the margin of the heel seat portion of the insole, working the heel portion of the upper into overlapped relation to said heel seat portion and securing the upper in such position by a string passing around the heel portion of the upper, thereby causing the cement on the insole to engage the lining, counter and upper by reason of the aforesaid notches, and applying pressure to the heel portion of the shoe while the cement is setting to cause the upper materials to lie relatively flat and thereby to produce a smooth heel seat having no metallic fastenings therein.

8. In a shoe, an insole, a flanged counter and an upper including a lining, the lining and the flange of the counter being pinked by notches arranged in staggered relation to each other, and cement securing the lining, counter and upper directly to the insole, said cement engaging all of said members by reason of the aforesaid notches.

9. In a shoe, an insole, a flanged counter and an upper comprising an outer layer and a lining, the counter flange and the heel portion of the lining being serrated by V-shaped notches staggered with respect to each other, cement on the heel portion of the insole securing the lining, counter and outer layer permanently to the insole, said cement engaging all of said members by reason of said notches and thereby producing a relatively smooth heel seat portion on the shoe, and an outsole attached to said heel seat portion.

10. In a shoe, an insole, a flanged counter and an upper including a lining and a leather outer layer, the flange of said counter and the heel portion of said lining having a plurality of notches therein arranged in staggered relation to each other, the material of the counter flange between the notches in the lining directly engaging the insole and the material of the outer layer overlapping the notches in the counter and lining also directly engaging the insole, and cement between the insole and the lining and those portions of the counter and outer layer which directly engage the insole.

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