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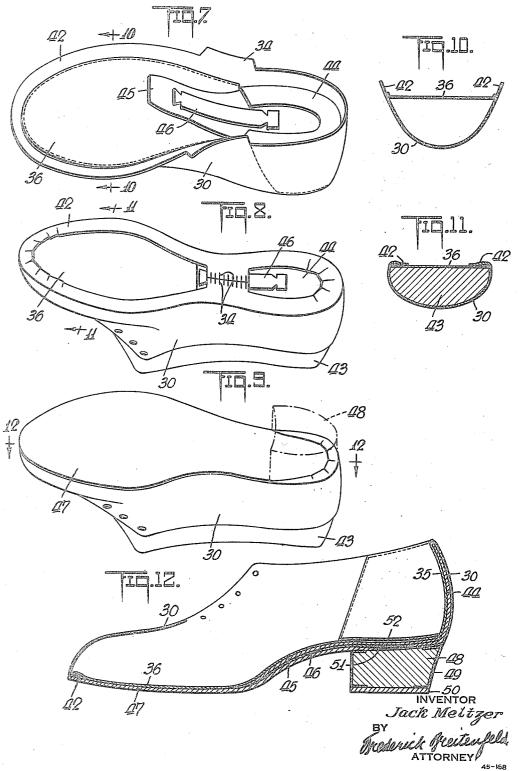
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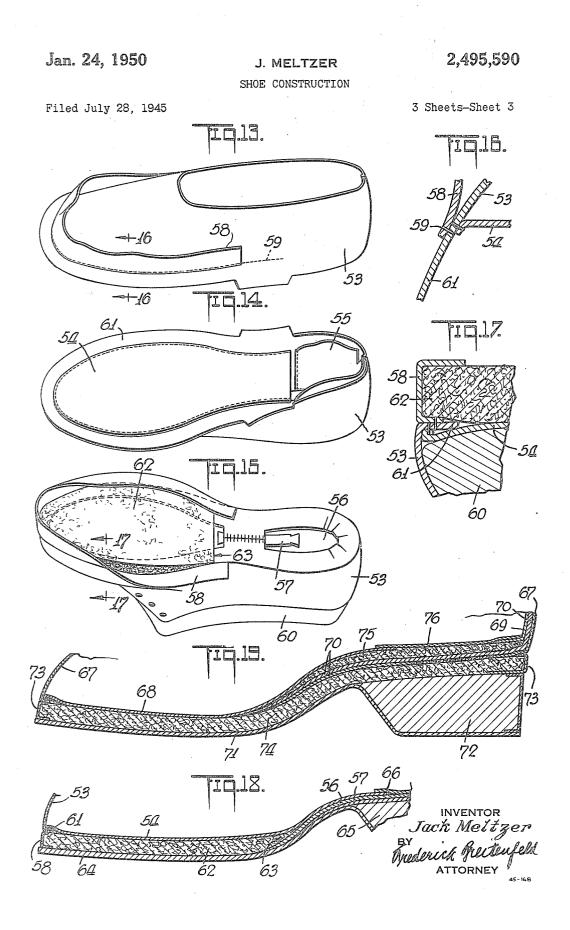
J. MELTZER SHOE CONSTRUCTION 2,495,590

3 Sheets-Sheet 2

Filed July 28, 1945



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# UNITED STATES PATENT OFFICE

### 2,495,590

SHOE CONSTRUCTION

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Application July 28, 1945, Serial No. 607,624

2 Claims. (Cl. 36-19.5)

My present invention relates generally to shoes, and has particular reference to certain improvements in the type of shoe in which the outer sole is adhesively secured in place.

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A general object of the invention is to provide an improved footwear construction which is simple and inexpensive, which is suitable for the creation of shoes, slippers, sandals and similar items intended for either street wear or for indoor use, which is adapted to form an article 10 may be employed. of unusually staunch yet comfortable wearing qualities, and which lends itself readily to the employment of various ornamental materials and to numerous variations in style.

desirable qualities to an article of footwear in which there is an insole of stitched-in type. An insole of this kind is highly desirable because it is not susceptible to displacement, and is devoid of edges which may curl and thereby cause discomfort or which may impair the attractiveness of shoes having openings at the toe or elsewhere. However, the methods heretofore employed to incorporate such an insole with a shoe have not been satisfactory; attempts to achieve neatness and comfort have unavoidably entailed a sacrifice in strength and wearing qualities; and severe limitations as to style have been encountered and are, in fact, inherent in the manufacturing procedures heretofore practiced.

In accordance with my present invention, these and other disadvantages have been successively overcome, and I am enabled in a simple and workmanlike manner, and without any sacrifice in strength, to produce shoes in which a stitchedin insole is employed, and having all the advantages inherent in such a construction, these bencfits being coupled with the possibility of wide variations in style arising from the use, as may be desired, of open-work uppers, of shank stiffeners, heel counters and the like, of heels of various shapes and kinds, of so-called platform soles, and of selected combinations of these and other features of utilitarian or ornamental value.

A characterizing feature of my invention resides in the stitching of an insole to the upper with the edge of the insole disposed along a line parallel to but offset inwardly from the edge of the upper, the resultant margin of the upper which the upper may be securely held in place between the insole and an outer sole. The insole may be coextensive with the bottom of the shoe, or it may extend only part way from the toe region to the heel region. In either case, the 55 the heel region; 2

heel region of the upper may be reinforced, if desired, by a stiff counter mounted in a pocket formed by a lining or inner ply secured to the upper along its top edge. Where the insole ter-minates short of the heel, the insertion of this counter is relatively simple; but even where the insole is caused to extend for the full length of the shoe, the elements of the present construction are so associated that a stiff heel counter

Another feature of the invention resides in the possibility of achieving these advantages, whether or not it be desired that the shoe be provided with a so-called platform sole. In one embodi-A more particular object is to impart these 15 ment of the invention, a platform-covering strip or platform wrapper is secured to the external face of the upper, by stitches substantially aligned with those securing the insole to the upper, whereby the anchoring extension of the 20 upper may continue to lie directly in contact with the insole, between the latter and the platform sole, to hold the upper in secure position. In another embodiment, the anchoring exten-sion of the upper is caused to be engaged between 25 the platform sole and the outer sole, and a special ornamental strip is secured to the upper to simulate a platform wrapper and to conceal the

stitches by means of which the insole is fastened to the upper.

The invention is of such a character that the formation and assembly of the various parts may be accomplished by relatively unskilled workers; and, as indicated, the resultant articles of footwear may be of numerous selected styles, padded 35 in part or in whole or not at all, reinforced in part or in whole, provided with or devoid of openings in the upper, and employing almost any desired type of heel. All these possible variants are coupled with the presence and the basic advantages of a stitched-in insole, and with an 40 inherent degree of strength not heretofore capable of achievement in footwear of the character mentioned.

Several ways of achieving these general objec-45 tives and advantages, and such other advantages as may hereinafter appear or be pointed out, are exemplified in the accompanying drawings, in which:

Figure 1 is a plan view of an illustrative blank defining an anchoring extension by means of 50 constituting the upper of an article of footwear constructed in accordance with the present invention:

Figure 2 is a plan view of an illustrative insole; Figure 3 is a plan view of a typical lining for **3** Figure 4 is a perspective view showing a first step in the assembly of the parts;

Figure 5 is an enlarged cross-sectional view along the line 5-5 of Figure 4;

Figures 6, 7, 8 and 9 are perspective views show- $_5$  ing further successive steps in the formation of an article of footwear;

Figures 10 and 11 are cross-sectional views taken along the lines 10-10 and 11-11 of Figures 7 and 8 respectively; 10

Figure 12 is a longitudinal cross-section through the shoe, taken along the line **!2—12** of Figure 9;

Figures 13, 14 and 15 are perspective views showing successive steps in the manufacture of a 1.5 modified article of footwear;

Figures 16 and 17 are cross-sectional views along the lines 15-16 and 17-17 of Figures 13 and 15 respectively;

Figure 18 is a fragmentary longitudinal cross-20 section through the shoe formed by the procedure of Figures 13-15; and

Figure 19 is a view similar to Figure 18, illustrating a further modification.

Referring first to Figures 1–12, I have chosen (3) to illustrate some of the features of my invention in connection with the manufacture of a shoe having a plain upper with no ornamental holes in it, a heel region reinforced by a stiff molded counter, and a heel of conventional style.

I start first with a blank of sheet material (Figure 1) which may be of any suitable material such as leather or fabric, this blank being shaped to define an upper 30 having a forward or vamp portion 31, shank portions 32, and heel portions 35 33. The edge of the blank is suitably rounded in the toe and heel regions, as shown, and is preferably configured in the shank region to define laterally projecting sections 34.

The element 35 (Figure 3) is a lining or inner 40 ply for the heel region of the shoe; and the element 36 (Figure 2) is an insole designed to extend rearwardly from the region of the toe but not for the full length of the shoe. The elements 35 and 36 may be composed of any suitable material, 45 preferably fabric.

In assembling these parts I prefer first to stitch together the rear edges 37 of the upper 30, as indicated in Figures 4 and 6, and to line the resultant heel region with the element 35 of Figure 3, this element being stitched along its edges 38 and 39, but not along its bottom edge 40 (see Figures 4, 5 and 6), thereby forming a downwardly-opening pocket adapted to receive a heel counter.

I then proceed with the securement into position of the insole 36. In accordance with my invention, this insole has its edges stitched to the upper 30 along a line substantially parallel to but offset inwardly by a substantial amount from the edge of the upper. This means, of course, that the insole must be of suitably reduced dimensions with respect to those of the upper. To facilitate the desired association of these two elements, it may be found expedient to draw a guide line on the upper 30, as indicated by the reference numeral 41 in Figures 1 and 6, the operator bringing the edge of the insole 35 into alignment with this guide line as the stitching operation progresses. This operation is indicated in partially-completed 70state in Figure 6, and the resultant assembly is best shown in Figures 7 and 10. It will be observed that the marginal region of the upper is thus caused to define an extension of appreciable

sion to the successful accomplishment of my desired objective I have applied the reference numeral 42 to it.

The assembly is now applied to a last 43 (Figures 8, 9 and 11), and either before or after the lasting operation I insert a stiff heel counter into the pocket provided for this purpose, and I stitch together the projecting sections 34 of the extension 42. The heel counter may be of any selected type, either with or without a shank reinforcement. I have illustratively shown a well-known type of counter 44 which is composed of stiff molded material and which carries a forwardly-projecting extension 45 to the underside of which a metallic shank stiffener 45 is secured. When a counter of this kind is used, the shank

when a counter of this kind is used, the shank reinforcement portion is caused to lie over the insole 36 (as the latter presents itself on the last 43) and under the stitched-together sections 34. This association of parts is best shown in Figure 8.

The next step consists in bringing the extension 42 over the edge of the last, as shown in Figures 8 and 11, and securing it to the insole 35. To facilitate this operation, glue or other adhesive may be employed, and heat and pressure may also be resorted to, if desired. Another aid in accomplishing the desired result consists in stitching an elastic strip under tension to the extension 42 in the rounded toe region thereof, whereby the contracting urgence of the elastic strip draws the extension into the desired turneddown condition and helps to keep it there. Such an elastic strip is not shown in the present drawings, but its mode of use, and its advantages, are fully set forth in my earlier Patent No. 1,769,449, issued May 22, 1929.

The margin of the upper in the heel region is also turned down in a similar fashion, and the assembly is then in readiness for the application of an outer sole, and of such heel as may be desired. In the article of footwear herein chosen for illustration, the outer sole 47 (Figures 9 and 12) extends for the full length of the shoe, tapering down beneath the heel region, and the heel 48 is of conventional character and may be com-

posed of wood or other suitable material. I have shown the heel 48 provided with a heel cover 49 and with a leather base 50.

The sole 47 is secured into position by means of 50 glue or other adhesive, and the heel may be similarly attached, with or without the aid of nails driven into the base of the heel counter. Where the heel counter is of the type shown, a filler 51 may be laid beneath the heel, if desired, 55 to occupy the space at the central region of the counter.

The structure is completed by gluing down a heel pad 52 on the interior of the shoe to cover the exposed lower edge 49 of the lining 35, the 60 exposed portion of the counter 44, and the nails, if any, by means of which the heel 48 is attached.

Obviously, the advantages of the resultant construction may be achieved regardless of the material or shape of the upper; whether or not any 65 ornamental openings are provided in the toe region or other parts of the upper; and whether or not the heel, the heel counter and the shank reinforcement are of the particular style hereinbefore described for illustrative purposes.

In Figures 13–19 I have shown the applicability of the invention to articles of footwear provided with pads and platforms of various kinds.

thus caused to define an extension of appreciable The upper 53 (Figure 13) may be of the same width. Because of the importance of this exten- 75 general type as the one previously described, and

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it may be assembled in similar fashion with an insole 54 (Figures 14 and 18), with a lining 55 in the heel region, and with a stiff counter 56 provided with a shank stiffener 57. Prior to the attachment of the insole 54, however, a platform wrapper 58 (Figures 13 and 16) is stitched to the exterior surface of the upper. This wrapper may be caused to extend only around the toe and vamp regions of the upper, or, as will be presently pointed out, it may extend completely around the entire shoe. It may or may not be of substantially uniform width as shown in Figure 13.

The wrapper 58 is composed of fabric or equivalent ornamental material, and it has one of its edges stitched to the upper along a line substan-15 tially parallel to but offset inwardly from the edge of the upper. This line of stitching is designated by the reference numeral 59 in Figures 13 and 16, and where the wrapper 58 extends only part way around the shoe, the stitches 59 may 20 afford an adequate cover for the platform sole, nevertheless be extended rearwardly as far as may be desired, to form on the underside of the upper a guide line which corresponds to the line 41 (Figure 1) and which helps the operator properly to position the edge of the insole 54 during 25 of one or more platforms or pads, to suit difthe subsequent process of stitching the latter to the upper.

After the elements have been assembled, and after the device has been mounted on a last 60, the anchoring extension 61 is turned and secured 30down over the insole 54, all as previously described. At this stage, instead of immediately applying an outer sole, a platform sole is glued or otherwise secured into desired position. I have illustratively shown a platform sole 62 con- 35 toured to conform to the forward region of the shoe and tapering down to a wedge shape at its rear edge 63 (Figure 18). The platform sole 62 may be composed of any suitable or desired material such as matted felt or fibre or the like. The 40 tal open-work uppers, or other well-known exwrapper 58 is then brought down, as shown in Figure 15, to cover the peripheral edge of the platform sole 62, and the free edge of the wrapper is turned down over the margin of the platform sole and glued or otherwise secured in platformcovering position. Then the outer sole 64 is applied, as hereinbefore described, and the structure completed by the application of a heel 65 and heel pad 66.

In Figure 19 I have shown a construction which 50 illustrates the possibility of extending the platform sole for the full length of the shoe. In this case, the upper 67 is associated, as before, with a stitched-in insole 52, a heel lining 69, a stiff counter 70, an outer sole 71, and a heel 72, and carries a platform wrapper 73 which extends entirely around the shoe. At the stage of the manufacturing procedure depicted in Figure 15. a platform sole 74 is applied to the assembly on the last, this sole being coextensive in area with the entire shoe bottom, and the wrapper 73 is then stretched over and around this sole to define an attractive platform cover, this procedure being then followed by the application of the outer sole 71 and the heel 72. In this case, to illustrate the versatility of the invention. I have shown how the outer sole 71 may be caused to arch upwardly in the instep region and then continue rearwardly on the exterior surface of the heel 72, the latter being appropriately tapered in  $_{70}$ shape, as shown. I have also indicated how an additional padding in the heel region may be provided for, a forwardly-tapering pad 75 being laid on the interior of the shoe to underlie the heel of the wearer, the forward portion of the pad 75

being inserted endwise beneath the rear end of the insole 68, and the heel pad 76 being finally glued into position to cover the raw edge of the lining 69, the pad 75, and the rear edge of the insole 68.

As hereinbefore indicated, the platform wrapper (exemplified by the strips 58 and 73) need not be of uniform width throughout its extent. A varying width would be provided for where the platform sole to be covered is itself of varying thickness. Such soles are well-known in the art, and I do not deem it necessary to illustrate them. Suffice it to point out, by way of example, that the platform sole 74 of Figure 19 might be thickened rearwardly to an extent which would do away completely with the necessity for adding a separate heel to the structure. In such an event, the platform wrapper 73 would be correspondingly wider in the rear region of the shoe, so as to and the outer sole would then lie directly against the platform sole throughout the entire extent of the shoe bottom.

Other variations in the shaping and disposition ferent tastes and to comply with changing style requirements, will readily suggest themselves to those skilled in the art.

The various constructions illustrated serve to indicate the wide range of applicability of my invention to shoes of different kinds, styles and purposes. Footwear constructed in accordance with the present invention is staunch and resistant to wear, attractive and workmanlike in appearance, and inherently simple and inexpensive. All the advantages of a stitched-in insole are achieved, without any sacrifice in strength, and without any limitations as to style or optional provision of reinforcements, platforms, ornamenpedients.

It will be understood that many of the details herein described and illustrated, as well as the several variants of the invention, are intended to  $^{45}$  be merely illustrative; and that minor changes suggesting themselves to those skilled in the art will not necessarily depart from the spirit and scope of the invention as expressed in the appended claims.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent is:

1. In a shoe, an upper provided in the heel region thereof with a lining defining a downwardly-opening pocket, a counter in said pocket, an outer sole, and an insole having its edge stitched to the upper along a line substantially parallel to but offset inwardly from the edge of the upper, said insole terminating short of the 60 heel region to leave said pocket opening accessible for insertion of said counter, the margin of the upper beyond said insole defining an anchoring extension which is turned in to lie beneath said counter in the heel region of the shoe and 65 between the insole and outer sole in the shank and toe regions.

2. In a shoe, the combination with the elements set forth in claim 1, of a platform sole between the insole and the outer sole, and a platform wrapper secured at its top edge to said anchoring extension.

#### JACK MELTZER.

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