

Sept. 29, 1970

J. S. KAMBORIAN

3,530,598

COUNTER WITH THICKENED BACKSEAM

Filed Nov. 14, 1968

2 Sheets-Sheet 1

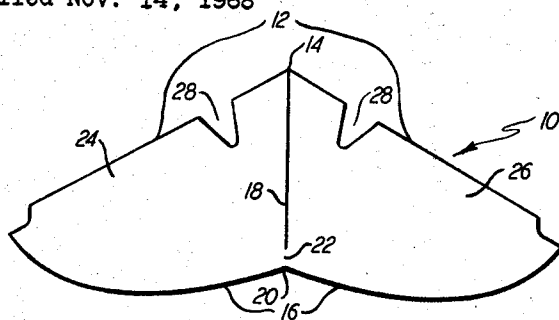


FIG-1

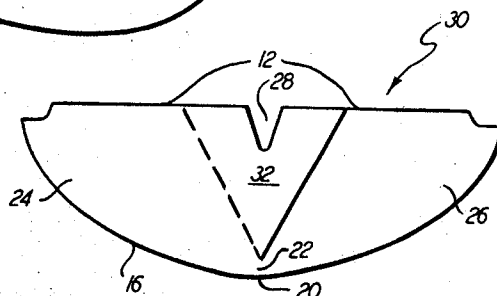


FIG-2

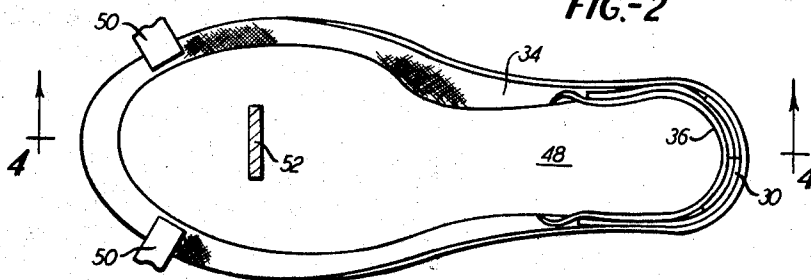


FIG-3

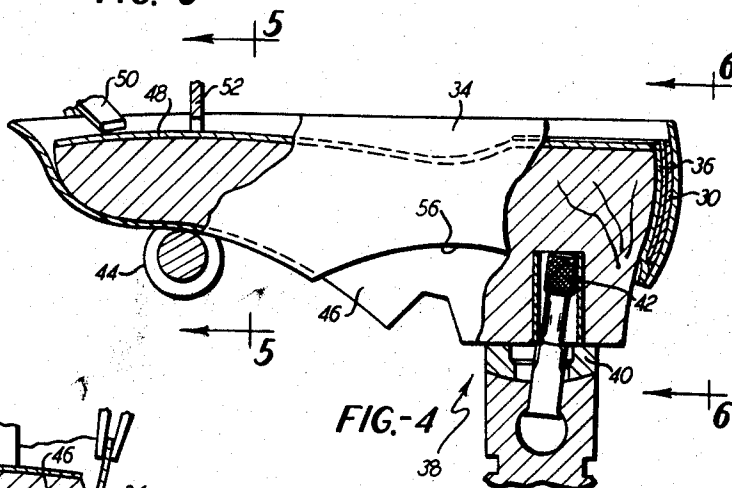


FIG-4

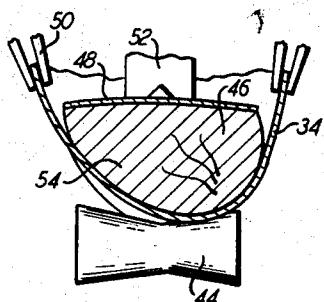


FIG-5

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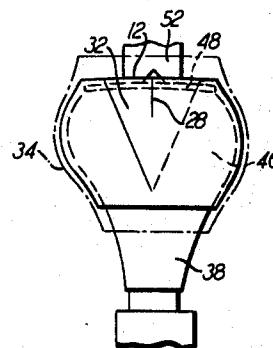
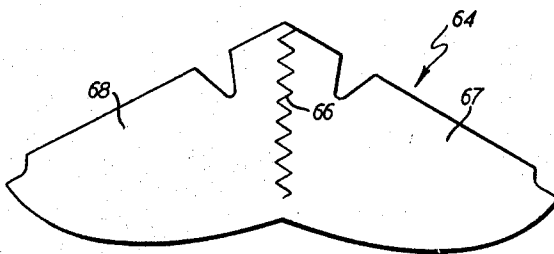
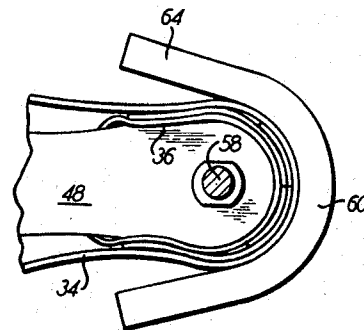
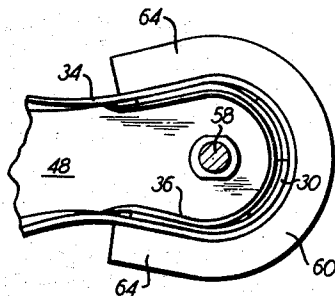
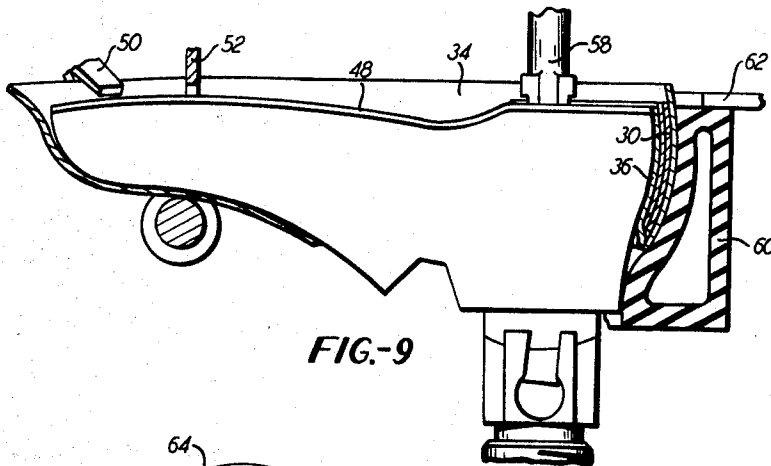
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3,530,598

COUNTER WITH THICKENED BACKSEAM

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2 Sheets-Sheet 2



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3,530,598

COUNTER WITH THICKENED BACKSEAM

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Int. Cl. A43b 13/42

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12 Claims

ABSTRACT OF THE DISCLOSURE

A counter having a pair of overlapping segments connected to each other at a hinge area to form a backseam of double thickness.

In the manufacture of shoes, it is standard practice to provide a counter in the heel portion of a shoe upper to serve as a stiffener which acts to rigidify this portion of the shoe. Attempts have been made in the past to thicken the heel end extremity or backseam of the counter to thereby strengthen this portion of the counter which is subject to the greatest stresses when the completed shoe is worn.

One aspect of this invention is concerned with a novel and improved counter having such a thickened backseam. The counter is formed of a pair of segments that are connected to each other at a hinge area and that overlap each other to form a region of double thickness at the backseam.

Another aspect of the invention is concerned with a method of making the counter. The counter is formed from a counter blank that has a cut extending there-through from its bottom edge most of the way towards the top edge, the cut dividing the blank into the pair of segments. The portion of the counter between the cut and the top edge of the counter forms the hinge area, and the segments are folded towards each other about the hinge area to form the counter.

In the drawings:

FIG. 1 is a view of the counter blank;

FIG. 2 is a view of the counter;

FIGS. 3-9 show various stages in the lasting of a shoe that includes an upper having the counter incorporated therein, FIG. 4 being taken on the line 4-4 of FIG. 3, FIG. 5 being taken on the line 5-5 of FIG. 4 and FIG. 6 being taken on the line 6-6 of FIG. 4; and

FIG. 10 is a view of an alternative form of counter.

A flat, thermoplastic counter blank 10, shown in FIG. 1, has a pair of convergent bottom edges 12 that meet at an obtuse angle that faces the top of the counter to form a zone of convergence 14 and a top edge 16. It should be noted that the counter is depicted upside down in the drawings from the position it assumes in a finished shoe wherein the sides 12 face toward the shoe bottom.

The blank 10 is formed of a material that is rigid and shape-sustaining at ambient temperatures, converts to a flaccid and moldable condition when heated a predetermined temperature above ambient temperatures and reverts to its rigid and shape-sustaining condition when cooled back to ambient temperatures. Both sides of the blank 10 are coated with a thermoplastic cement that is rigid and cohesive at ambient temperatures, is converted to a tacky, less cohesive condition when heated above said predetermined temperature and reverts to its rigid, cohesive condition when cooled back to ambient temperatures.

The counter blank 10 is cut out to the shape shown in FIG. 1 by a conventional die cutting or blanking operation from a sheet of counter material. The blank 10 is then cut through its entire thickness from the zone of convergence 14 to form a cut 18 along a straight line that

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extends most of the way towards the mid point 20 of the top edge 16, but does not intersect the edge 16, thereby leaving a hinge area 22 between the cut 18 and the point 20. The cut 18 and the hinge area 22 separates the blank 10 into two counter segments 24 and 26. A notch 28 is cut out from each of the counter segments 24 and 26 on each side of the zone of convergence 14 through the entire thickness of the counter so as to intersect its associated bottom edge 12.

To form the counter 30 (FIG. 2) from the counter blank 10, the counter segments 24, 26 are folded towards each other about the fulcrum formed by the hinge area 22 until the notches 28 are in substantial alignment. The counter segments 24, 26 are thus caused to overlap each other in their median portion and form a region 32 of double thickness with the bottom edges 12 of the two segments extending along a substantially straight line and with the width of the region of double thickness progressively increasing from the top edge 16 to the bottom edges 12 of the counter.

Referring to FIGS. 3 and 4, the counter 30 is inserted into a counter pocket formed at the heel portion of an upper 34 between the upper and a liner 36 that is stitched to the upper. The counter is then heated above the aforementioned predetermined temperature so as to render it flaccid and moldable and so as to render the cement coatings tacky.

The upper-counter assembly is now mounted on a last 46, having an insole 48 secured to its bottom, in such a manner that the heel portion of the margin of the upper extends away from the insole (FIGS. 4 and 6) and the bottom edges 12 of the counter 30 extends, to a more limited degree, away from the insole. In folding about the curved surface of the heel portion of the last, the edges of the notches 28 will fold towards each other, as indicated in FIG. 6, and be in substantially abutting relationship so that, for all practicable purposes, the heel end extremity of the counter 30 has a double thickness region 32 extending to the top edges 12 of the counter.

The upper-counter assembly is operated on in a heel seat lasting machine such as that disclosed in pending application Ser. No. 683,939 filed Nov. 17, 1967. The machine includes a shoe assembly support arrangement 38 comprising a support plate 40 and a last pin 42 extending upwardly of the plate 40, and the machine also includes a toe rest roller 44. The shoe assembly, comprising the last 46, the insole 48, the upper 34 and the counter 30 incorporated in the upper, is now placed bottom-up on the shoe assembly supporting plate 40 with the last pin 42 entering the conventional last pin hole in the last. The toe portions of the upper and last are supported on the toe rest roller 44 and the forepart portions of the upper margin are inserted between the open jaws of pincers 50. The pincer jaws are then closed to grip the forepart portions of the upper margin and a toe hold-down 52 is moved down against the forepart of the insole and is locked against movement in this position. Now the pincers 50 are moved towardly (to the left in FIG. 4) and upwardly. The toward movement of the pincers causes a firm wrapping of the upper and the now moldable counter about the heel portion of the last and the upward movement of the pincers causes the upper to be stretched about the vamp 54 (FIG. 5) of the last and also stretches the topline 56 of the upper tightly on the last. During this upper stretching movement the vamp portion of the upper will slip towardly and laterally between the toe rest 44 and the last 46 as the downward force applied by the toe hold-down 52 is not great enough to bind the vamp 54 of the upper between the toe rest and the last and preclude this slippage.

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After the upper stretching operation of the pincers 50 has been completed, a heel hold-down 58 (FIG. 9) is positioned directly above the heel portion of the insole 48 and the shoe assembly is forced upwardly together with the members 38, 44, 50 and 52 until the heel portion of the insole is brought into abutment with the bottom of the heel hold-down 58. This is followed by the movement of a U-shaped heel clamp pad 60 and heel wipers 62 from an initial out-of-the-way position to a working position until the bight of the pad 60 abuts the heel end of the shoe assembly as shown in FIG. 7. After this the legs 64 of the pad 60 are caused to swing inwardly towards the shoe assembly to thereby press the upper 34 firmly against the heel portion of the last 46 as shown in FIG. 8. Before swinging inwardly, the pad legs 64 are first stretched toewardly, in the manner disclosed in Pat. No. 3,436,779, to exert a heel to toe stress on the sides of the heel portion of the upper and smooth out any wrinkles that may have been present in this portion of the upper. The parts are now in the position shown in FIG. 9.

After this, a cement applicator (not shown) is caused to apply a ribbon of cement to the periphery of the heel portion of the insole and the wipers 62 are actuated to move in a wiping stroke to intersect the heel portion of the margin of the upper 34 and wipe it against the insole 48 and adhesively bond the upper margin and the insole by way of the cement ribbon. During the latter part of the wiping stroke the pincers 50 are opened to release the forepart portions of the upper margin and the toe hold-down 52 is unlocked and moved upwardly and away from the insole. At or near the end of the wiping stroke the heel hold-down 58 is raised from the insole bottom thus transferring the upwardly directed force exerted by the shoe assembly from the hold-down 58 to the wipers 62. At approximately the same time as the heel hold-down is raised, the upwardly directed force exerted by the shoe assembly is increased to cause the wiped upper margin to be pressed onto the insole and the bottom surfaces of the wipers 62 to effect a more permanent bond between the insole and the upper margin. When this increased bedding pressure has been applied for a sufficient length of time, the shoe assembly is released from the machine and the machine cycle is completed.

The counter 30 and the cement coatings therefor are so constituted that the counter has reverted to its rigid shape sustaining condition and the cement has reverted to its rigid cohesive condition at about the time the machine cycle is completed. During the above described upper stretching and clamping operation and the wiping operation, however, the upper is still in its flaccid and moldable condition and the cement coatings are still tacky so that the stretching and clamping operations enable the counter, together with the heel portion of the upper, to be molded or shaped to the heel portion of the last, enable the cement coatings of the counter 30 to adhere to the liner 36 and the upper 34 and enable the counter segments 24, 26 to adhere to each other in the region of double thickness 32. When the shoe assembly is released from the machine, the counter, together with the heel portion of the upper, has rigidified to the shape of the last with the counter, upper and liner in firm adherence. Since the cement coatings on the counter are tacky during the toeward stresses applied to the upper during the toeward stretching movement of the pincers 50 and the clamping action of the pad legs 64, the overlapping counter segments 24, 26 may slip with respect to each other about the hinge area 22 in order to ensure that the counter is firmly molded to the shape of the last.

The completed shoe assembly has a counter that is of double thickness at the back seam or heel end extremity, which is highly desirable since the back seam area is subjected to the greatest stresses when the shoe is

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worn. This thickened area extends substantially through the entire height of the backseam, discounting the relatively small hinge area 22 at the top of the counter, and the portion of greatest width of the thickened area is at the bottom of the shoe which is subjected to the greatest stresses when the shoe is worn.

FIG. 10 shows an alternative form of counter blank 64 which is identical to the counter blank 10 except that zigzag cut 66 is formed therein instead of the straight cut 18 of the counter blank 10. It has been found that the undulating edges of the counter segments 67 and 68 along the cut 66 are less likely to project and show through the upper in the finished shoe than the straight edges of the counter segments 24 and 26 of the counter 30.

I claim:

1. A counter comprising: a pair of segments connected to each other at an area at the top of the counter and overlapping each other for the entire distance between said area and the bottom of the counter to form a region of double thickness.

2. The counter as defined in claim 1 wherein the heightwise dimension of said area is substantially less than the heightwise dimension of the region of double thickness.

3. The counter as defined in claim 1 wherein the segments are integrally connected at said area.

4. The counter as defined in claim 1 further comprising: a pair of aligned notches in each of the segments in the region of double thickness that intersect the counter bottom.

5. The counter as defined in claim 1 wherein the region of double thickness progressively increases in width from said area to the counter bottom.

6. A shoe, having an upper; and a counter located interiorly of the heel portion of the upper, wherein said counter comprises: a pair of segments connected to each other at an area proximate to the top of the upper and overlapping each other for the entire distance between said area and the bottom of the counter to form a region of double thickness at the heel end extremity of the upper, said counter bottom being proximate to the upper bottom and the area of overlapping forming a region of double thickness.

7. The shoe as defined in claim 6 wherein the heightwise dimension of said area is substantially less than the heightwise dimension of the region of double thickness.

8. The shoe as defined in claim 6 wherein the segments are integrally connected at said area.

9. The shoe as defined in claim 6 further comprising: a pair of aligned notches in each of the segments in the region of double thickness that intersect the counter bottom, the opposite edges of the notches being in substantially abutting relationship.

10. The shoe as defined in claim 6 wherein the region of double thickness progressively increases in width from said area to the counter bottom.

11. A method of making a counter comprising: initially providing a counter blank having a pair of convergent bottom edges that meet at an obtuse angle that faces the top of the counter to form a zone of convergence, and a cut extending through the thickness of the counter that extends from the bottom of the counter at the zone of convergence most of the way towards the top edge of the counter thereby leaving a hinge area between the cut and the top edge of the counter, the cut dividing the counter blank into a pair of counter segments; and folding the counter segments toward each other about the hinge area until the bottom edges of the counter segments are in substantial alignment with overlapping areas of the counter segments forming a region of double thickness that progressively increases in width from the hinge area to the counter bottom.

12. The method as defined in claim 11 wherein each counter segment is initially provided with a notch extend-

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ing through its thickness that intersects its bottom edge;
and wherein said folding places the notches in alignment;
whereby the placement of the counter interiorly of a shoe
upper and the mounting of the upper-counter assembly
about the heel portion of a last causes the edges of the
notches to fold towards each other into substantially
abutting relationship.

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1,781,953 11/1930 Miller et al. ----- 36—68
2,091,720 8/1937 Sewall ----- 36—68
2,660,742 12/1953 Meltzer.

5 ALFRED R. GUEST, Primary Examiner

U.S. Cl. X.R.

References Cited

12—146

UNITED STATES PATENTS

10

1,351,172 8/1920 Jones ----- 36—68