Feb. 17, 1931. W. R. BARCLAY 1,792,527

SHOE AND HEEL

Filed Oct. 17, 1927

Fig. 1.

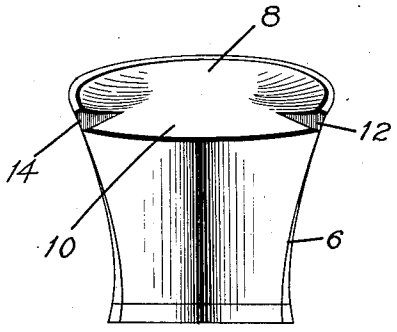


Fig. 4.

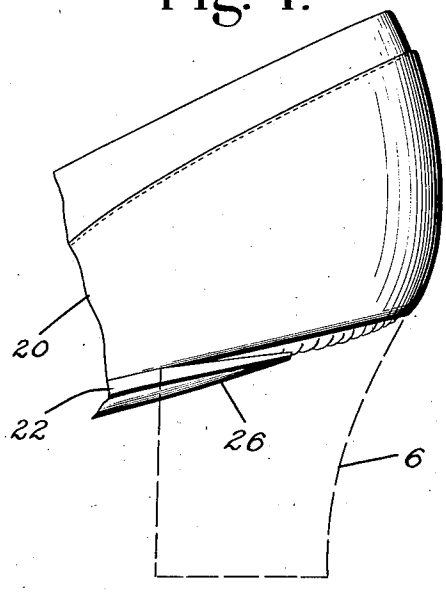


Fig. 3.

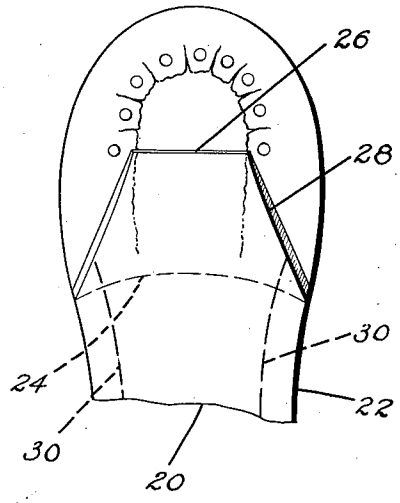
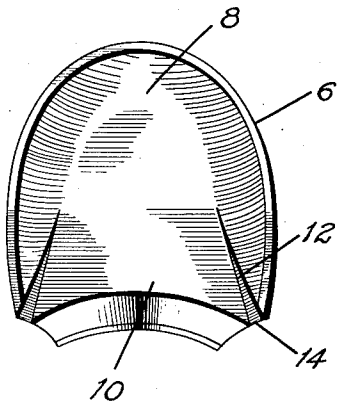


Fig. 2.



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1,792,527

UNITED STATES PATENT OFFICE

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SHOE AND HEEL

Application filed October 17, 1927, Serial No. 226,783, and in Great Britain October 29, 1926.

This invention relates to improvements in shoes and particularly to heels and the heel seat portions of shoes.

In the manufacture of shoes having wood heels it is customary to attach the heels with a narrow rim formed upon the upper edge of the heel and extending around the heel from breast corner to breast corner bearing directly against the inturned edge of the counter portion of the shoe upper so that the sole of the shoe is not visible to the rear of the heel breast line. To produce this effect it is usual to trim surplus material from the periphery of the heel seat portion of the sole of the shoe, the heel seat portion of the sole being at the same time beveled along both edges and at the rear. Some form of abutment for the heel is ordinarily provided at the heel breast line, for example a pair of shoulders, one at each end of the heel breast line, formed by cutting into the sole substantially transversely thereof so as to intersect the trimming cut. A shoe having a sole fitted in this manner for the reception of a wood heel is shown in Fig. 11 of Letters Patent of the United States No. 1,307,284, granted June 17, 1919 on an application of Samuel J. Wentworth. The vast majority of wood heel shoes having Cuban heels and other heels with straight breasts, and a considerable proportion of the shoes having wooden Louis heels are fitted in this manner.

When a shoe is fitted in the way just described the edge portions of the sole are not supported by the heel. It frequently happens moreover, particularly in the manufacture of McKay sewed shoes or indeed of any shoes having their outsoles attached by through-and-through stitching, that the sole attaching seam is not extended quite back to the heel breast line. This may be either inadvertent or purposeful in order to facilitate the heel seat fitting operation. From these circumstances it follows that such shoes are likely to open up and show a crack between the sole and upper in the vicinity of the heel breast line or to break down and lose their shape in other ways adjacent to the heel breast line. It is, accordingly, an object of the present invention to cause the heels of shoes having heels which bear directly against the shoe upper to support the whole width of the sole at the heel breast line to substantially the same extent that it is supported in the case of a shoe having a leather heel attached in the conventional manner. Thus the shoes will retain the close edge in the vicinity of the heel breast line which is insisted upon in women's shoes.

In order to support the entire width of the sole at the heel breast line the illustrated heel, which has a concave attaching surface with a narrow rim extending from one heel breast corner backwardly around the rear of the heel and forwardly to the other heel breast corner, is provided also with a recess at the forward portion of its attaching surface. The forward portion of this recess is of the full width of the breast of the heel. The forward portion of this recess is also of a depth equal to the full thickness of the sole of the shoe in order that the portion of the sole in the vicinity of the heel breast line need not be reduced in thickness and may, therefore, be of maximum strength. This recess tapers in width rearwardly and its bottom merges into the concave attaching surface of the heel, as illustrated somewhat less than half way from the breast to the rear of the heel. Preferably the walls of the recess, at least at their forward extremities, are inclined to correspond to the inclination of the breast corners of the heel.

In another aspect the invention comprises a shoe having attached thereto a heel such as has just been described, the sole of the shoe being fitted in a fashion complemental to the heel. Thus, as illustrated, the heel seat portion of the sole of the shoe is trimmed to the form of a truncated V with the top of the V at the heel breast line of the sole. The side walls of the V are inclined, at least at their forward extremities, to an extent corresponding to the inclination of the side walls of the recess in the heel. If desired, the portion of the sole back toward the end of the truncated V may be reduced in thickness to conform to the depth of the recess in the heel.

It will be observed that when a shoe fitted in this way is provided with a heel of the

character described, the sole of the shoe is supported by the heel through its entire width at the heel breast line and there is, accordingly, no chance for a crack to open up between the shoe upper and the sole even if the sole attaching seam should not be tight at the heel breast line. Moreover, as this seam is located a considerable distance inwardly from the edge of the sole, it may extend a substantial distance to the rear of the heel breast line without possibility of being damaged during the heel seat fitting operation.

While the invention is illustrated as embodied in a wood heel and a shoe having such a heel, obviously in various of its aspects it is not so limited, since a heel of the character defined in the claims might easily be made of other material.

With the above and other objects and features in view the invention will now be described with reference to the accompanying drawings and pointed out in the claims.

In the drawings,

Fig. 1 is a front elevation and Fig. 2 a plan view of a Cuban heel having its attaching surface recessed in accordance with the present invention;

Fig. 3 is a bottom view of the rear portion of a shoe having its sole fitted for the reception of such a heel; and

Fig. 4 is a side elevation of the rear portion of the shoe of Fig. 3 with the outline of a Cuban heel indicated in dotted lines to show its position relatively to the sole of the shoe.

Figs. 1 and 2 illustrate a wooden Cuban heel 6 of conventional form except that its concave attaching surface 8 is provided with a recess 10 extending rearwardly from the heel breast line and merging into the concave attaching surface 8. The side walls 12 of this recess extend from the heel breast line rearwardly, converging toward the rear so that the recess 10 has the form of a truncated V. As indicated at 14 the side walls 12 of the recess 10 are inclined relatively to the vertical at their forward extremities to the same extent as the heel breast corners. This inclination may, if desired, be continued rearwardly through the whole length of the walls 12. The conventional covering of a wood heel is omitted from the drawings merely in the interests of a clear and simple disclosure. Obviously the heel may be covered or finished in any desired way and it is not essential to the utility of the invention that the heel be of wood.

The shoe 20 of Figs. 3 and 4 is provided with a short outsole 22 the portion of which to the rear of the heel breast line 24 is tapered heightwise, being, as shown at 26 in Fig. 3, in the form of a truncated V, the sides of the V intersecting the edges of the sole at the heel breast line. If desired, the end of the sole may be reduced in thickness, as indicated by the diminishing width of its edge in Fig. 3, to conform to the shape of the recess 10. Thus the portion of the heel seat of the sole to the rear of and adjacent to the heel breast line corresponds in form to that of the recess 10 of the heel, the edges of the sole to the rear of the heel breast line being preferably beveled slightly, as shown at 28, corresponding to the inclination of the side walls 12 of the recess in the forward portion of the attaching surface of the heel. When a shoe has a sole attached by through-and-through stitching, for example a McKay shoe, and is fitted in this manner, it will be observed that the stitching may extend a considerable distance to the rear of the heel breast line before it is cut in trimming the sole for the reception of the wood heel. This strengthens the shoe at the heel breast line and co-operates with the supporting action of the heel across the whole width of the sole to maintain a tight joint between the upper and the sole of the shoe in the vicinity of the heel breast line.

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

1. A shoe having a sole the heel seat portion of which tapers heightwise from the heel breast line rearwardly, and a heel attached to the shoe having an attaching surface the forward portion of which is provided with a recess extending rearwardly from the breast corners of the heel and of a shape complemental to that of the heel seat portion of the sole of the shoe.

2. A shoe having a sole the heel seat portion of which diminishes in thickness from its breast line rearwardly and is in the form of a truncated V with the sides of the V intersecting the edges of the sole at the extreme ends of the heel breast line of the sole, and a wood heel attached to the shoe having a concave attaching surface the forward portion of which is provided with a recess extending rearwardly from the breast corners of the heel and of a shape complemental to that of the heel seat portion of the sole of the shoe.

3. A shoe having a sole the heel seat portion of which diminishes in thickness from its breast line rearwardly and is in the form of a truncated V with the sides of the V intersecting the edges of the sole at the ends of the heels breast line of the sole, and a heel attached to the shoe having an attaching surface the forward portion of which is provided with a recess extending rearwardly from the breast corners of the heel and of a shape complemental to that of the heel seat portion of the sole of the shoe.

4. A shoe having a sole the heel seat portion of which diminishes in thickness from its breast line rearwardly and is in the form of a truncated V with the top of the V at the heel breast line, the sides of the V in the vicinity of the heel breast line being inclined

toward the tread surface of the sole, the shoe having a wood heel with a concave attaching surface the forward portion of which is provided with a recess complemental in shape to the heel seat portion of the sole.

5. A shoe having a sole the heel seat portion of which diminishes in thickness from its breast line rearwardly and is in the form of a truncated V with the top of the V at the heel breast line, the sides of the V in the vicinity of the heel breast line being inclined toward the tread surface of the sole but being substantially at right angles to the tread surface of the sole toward the extreme rear end of the sole, the shoe having a heel with a concave attaching surface the forward portion of which is provided with a recess complemental in shape to the heel seat portion of the sole.

6. A shoe having a sole attached by through-and-through stitching extending substantially to the rear of the heel breast line, the thickness and the width of the heel seat portion of the sole tapering from the heel breast line rearwardly, and a heel attached to the shoe having an attaching surface the forward portion of which is provided with a recess extending rearwardly from the breast corners of the heel and having a depth at its forward portion over its entire width equal to the full thickness of the sole of the shoe, said recess being of a shape complemental to that of the heel seat portion of the sole of the shoe.

7. A shoe having a sole attached by through-and-through stitching extending substantially to the rear of the heel breast line, the heel seat portion of the sole diminishing in thickness from its breast line rearwardly and being in the form of a truncated V with the top of the V at the heel breast line of the sole, and a heel attached to the shoe having an attaching surface the foward portion of which is provided with a recess extending rearwardly from the breast corners of the heel and of a shape complemental to that of the heel seat portion of the sole of the shoe.

8. A heel the forward portion of the attaching surface of which is provided with a recess to receive the rear end of a short sole, the forward portion of said recess being of a depth, over its entire width, equal to the full thickness of the sole which is to be received therein and extending at its forward extremity the full width of the breast of the heel, said recess diminishing in depth rearwardly of the heel from its forward extremity.

9. A wood heel having a concave attaching surface the forward portion of which is provided with a recess to receive the rear end of a short sole, the forward extremity of said recess being of a depth over its entire width equal to the full thickness of the sole and extending the full width of the breast of the heel but diminishing in width rearwardly of the heel breast as well as diminishing in depth rearwardly of the heel from its forward extremity.

10. A heel the forward portion of the attaching surface of which is recessed to a depth corresponding to the thickness of the sole of the shoe to which the heel is to be attached, said recess extending from the breast corners of the heel rearwardly with a diminishing width and being bounded by side walls the forward portions of which have the same inclination as the breast corners of the heel.

11. A wood heel having a concave attaching surface the forward portion of which is recessed to a depth corresponding to the thickness of the sole of the shoe to which the heel is to be attached, said recess extending from the breast corners of the heel rearwardly with a uniformly diminishing width and being bounded by straight side walls the forward portions of which have the same inclination as the breast corners of the heel.

12. A shoe having a sole the heel seat portion of which tapers heightwise from the breast line rearwardly over its entire width, and a heel attached to the shoe having an attaching surface the forward portion of which is provided with a recess extending rearwardly from the breast corners of the heel and of a shape complemental to that of the heel seat portion of the sole of the shoe.

13. A heel having a concave attaching surface the forward portion of which is provided with a recess to receive the rear end of a short sole, said forward portion of said recess being of a depth equal to substantially the full or unreduced thickness of the sole which is to be received therein and extending at its forward extremity the full width of the breast of the heel but diminishing in depth from the heel breast line rearwardly over its entire width.

14. A shoe having a sole attached by through-and-through stitching extending substantially to the rear of the heel breast line, the depth of the heel seat portion of the sole tapering from the heel breast line rearwardly over its entire width, and a heel attached to the shoe having an attaching surface the forward portion of which is provided with a recess extending rearwardly and having a depth at its forward portion equal to the full thickness of the sole of the shoe, said recess being of a shape complemental to that of the heel seat portion of the sole of the shoe.

15. A shoe having a sole attached by through-and-through stitching extending substantially to the rear of the heel breast line, the depth of the heel seat portion of the sole tapering from the heel breast line rearwardly over its entire width, and a heel attached to the shoe having an attaching surface the forward portion of which is provided

with a recess extending rearwardly from the breast corners of the heel and having a depth at its forward portion equal to the full thickness of the sole of the shoe, said recess being of a shape complemental to that of the heel seat portion of the sole of the shoe.

In testimony whereof I have signed my name to this specification.

WILLIAM RODERICK BARCLAY.