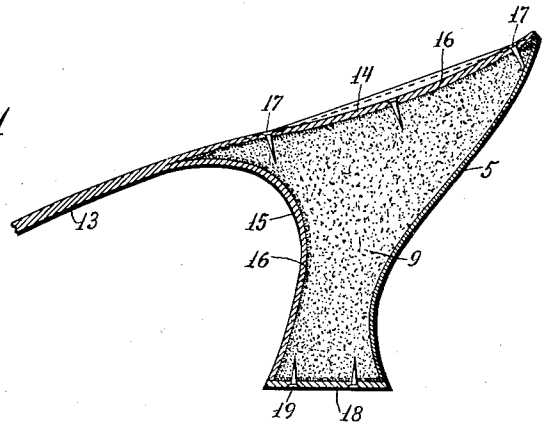
J. BURGER.

HEEL.

APPLICATION FILED JULY 5, 1919.

1,336,194. Patented Apr. 6, 1920.

Fig 1



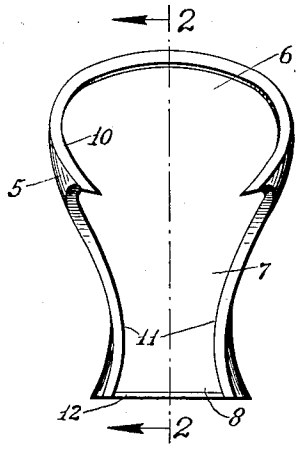


Fig 2

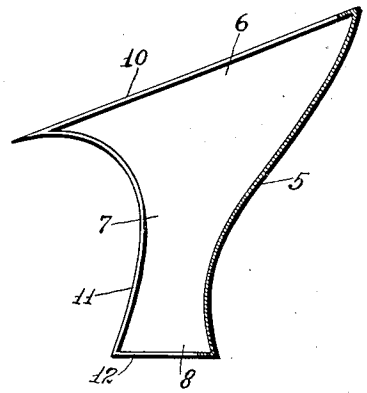


Fig 3

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HEEL.

1,336,194. Specification of Letters Patent. Patented Apr. 6, 1920.

Application filed July 5, 1919. Serial No. 308,872.

To all whom it may concern:

Be it known that I, JOSEPH BURGER, a citizen of the United States of America, and a resident of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Heels, of which the following is a specification, reference being had to the accompanying drawing, forming a part thereof.

My present invention relates to heels for ladies' shoes and particularly to those of the "full Louis" type.

The objects of the invention are to provide a light, durable and inexpensive heel structure and one which can be applied and fastened to the shoe in accordance with the practice which has now become standard in shoe manufacture.

Briefly, the invention consists of a body member which gives the shape to the heel and which is in the form of a light shell of suitable material, such as cast or sheet metal, aluminum for instance, and a filler within said shell, and exposed at the top or heel seat portion and at the front or breast portion of the shell, said filler being of a material which is permeable to an adhesive and penetrable to brads or nails. This construction provides a heel seat which can be glued to the sole while the shoe is still on the last and a breast portion to which the split lower half of the sole can be glued in the usual way. Also, after the adhesive has set and the shoe has been removed from the last, securing nails can be driven from inside the shoe down into the heel seat. As a further feature of the invention, this special filler is preferably exposed also at the bottom of the heel, to enable the lift, which is ordinarily of leather, being glued and nailed directly thereto.

Other features of the invention, including a novel method of securing the filler in place, will appear as the specification proceeds.

In the accompanying drawing, forming a part of this specification, I have illustrated but one of the possible embodiments of the invention and would have it understood that the same may be modified in various respects without departure from the true spirit and scope of the invention.

In said drawing:

Figure 1 is a sectional view of the completed heel applied to the sole of a shoe.

Fig. 2 is a front view of the shell portion of the heel.

Fig. 3 is a sectional view of the same.

The shell. which is designated 5, is a relatively light, hollow structure, shaped as by casting or pressing, to provide, in the present disclosure, the contour of a heel of the full Louis type, the same being characterized, as well understood in the art, by the forwardly extending arch portion which merges into the arch of the shoe.

This shell is shown as open at the top or heel seat portion, at 6, and as open at the forward or breast portion, at 7, and as open at the bottom, at 8.

9, designates the filler within the shell, which is shaped at the open top of the shell to provide a heel seat of the usual form and which follows the contour of the edges of the open forward side of the shell to provide the breast. At the bottom the filler may be finished off flush with the lower edge of the shell, substantially as indicated.

This filler is made of a material which forms at these exposed points, a surface which is permeable to glue or other suitable adhesive and at the same time a body which will take and hold nails or brads such as are commonly used in this art. I find a mixture of leather dust, rosin and sulfur, pressed into the shell while in a warm plastic state, serves excellently in this capacity, the same hardening quickly and assuming a permanent set, as it cools and providing a surface which is permeable to glue and a mass which is penetrable to nails.

The filler is locked in the shell, in the present disclosure, by means of a continuous inturned angular flange 10, around the upper edge of the shell and similar coextensive flanges 11, along the forward edges of the shell, joining at the bottom with a like flange 12 around the lower edge of the shell. In addition to securing the filler in place, this continuous edge flange or flanges, braces and reinforces the shell, enabling the use of a very light gage or thickness of material.

In Fig. 1, I have shown how the heel of my invention can be attached to the shoe in the same way as the wooden heel which is now generally used. In this view 13 des-

ignates the shoe sole which is split in the usual way to provide an upper heel seat portion 14 and a lower breast portion 15. The heel is applied, preferably while the shoe is still on the last, by bringing the heel seat portion thereof into engagement with the heel section 14 of the sole, glue or the like having first been supplied to either one or both of said meeting surfaces. The glue permeates or "takes" into the exposed more or less porous surface of the filler at the heel seat and forms, as it sets, a strong and durable binder between the two.

The heel may be clamped in place while the glue is setting and this while the shoe is still on the last. After application of the necessary adhesive, the lower breast portion of the sole is brought over the breast of the heel and pressed fast thereto. Here also the glue takes into the exposed face of the filler and forms at this point a binder between the split lower part of the sole and the breast of the heel. When the glued surfaces, at 16, have hardened sufficiently, the shoe with the heel firmly attached, may be removed from the last and nails such as indicated at 16 can then be driven through the sole, from inside the shoe, down into the filler. In particular, these nails can be driven into the extreme rearward portion, at the point where the greatest strain comes on the heel, such nails, if driven quite far to the rear, striking the shell, as shown in Fig. 1, and turning to clench in the material of the filler.

In similar fashion the lift 18, may be glued and then further fastened by brads 19 driven into the exposed bottom portion of the filler.

From the foregoing it will be apparent that my invention provides a heel which is light, durable and relatively inexpensive and one which while possessing the advantages of the wooden heel in that it can be secured to the shoe while on the last, is free of the disadvantages of cracking and breaking, etc., more or less common in wooden heels. It is also an important advantage that this new heel can be made in the full Louis style and fastened by the breast to the split lower half of the sole. In addition to more securely fastening the heel in place this gives the desired stylish finish to the under-arch of the shoe. The exposed rearward portion of the heel shell may be finished in any desired way, as by enameling or stretching a cover thereover. Another advantage flowing from the construction disclosed is that a certain cushioning effect is provided by the filler which forms a supporting column extending from the bottom of the heel to the heel seat. The somewhat porous character of the filler provides a certain resiliency and this may be increased, as desired, by incorporating in the filler more of less elastic materials, such as ground cork, or the like. The shell may be made of aluminum or other suitable light and durable material which will hold its shape. Being relatively thin and free of any fixed tie between the sides of the same, the upper edges of the shell may be "sprung" slightly one way or the other, when necessary, to make the heel fit the sole of the shoe, which sometimes varies a little in width.

What I claim is:

1. A heel for ladies' shoes comprising a metallic shell of the full shape of the back and sides of the heel, extending from the top to the bottom of the heel and providing the complete contour of the heel, said shell being open at the front or breast portion thereof and a filler permanently secured in said shell, said filler being exposed at said open breast portion of the shell, shaped at said exposed part to form the breast of the heel and being of a material to which a part of the sole of the shoe may be adhesively secured.

2. A heel for ladies' shoes comprising a metallic shell of the full shape of the back and sides of the heel, extending from the top to the bottom of the heel and providing the complete contour of the heel, said shell being open at the front or breast portion thereof and a filler permanently secured in said shell, said filler being exposed at said open breast portion of the shell, shaped at said exposed part to form the breast of the heel and being of a material to which a part of the sole of the shoe may be adhesively secured, the shell further being open at the top and the filler, which is permanently secured in the shell, being exposed at said open top of the shell and shaped thereat to provide a heel seat to be permanently secured to the sole of a shoe.

3. A heel for ladies' shoes comprising a metallic shell of the full shape of the back and sides of the heel, extending from the top to the bottom of the heel and providing the complete contour of the heel, said shell being open at the front or breast portion thereof, a material permeable to adhesive filling said shell and having a shaped breast portion exposed at the open front of the shell and inturned flanges on the shell overlapping said filler to secure the same in place as a permanent part of the heel.

4. A heel for ladies' shoes comprising a metallic shell of the full height of the heel, closed only at the back and open at the top, front and bottom, a filler within said shell and inwardly projecting flanges extending along the upper, front and bottom edges of the shell and overlapping the filler to permanently confine the same within the shell.

5. The combination with a sole of the split type having a heel and a dependent breast portion, a hollow metallic heel shell

of the full height of the heel, open at the top and breast portions thereof and a filler permanently secured within said shell, permeable to adhesive and exposed and shaped at the top of the shell to form a heel seat secured to the heel portion of the sole and further exposed and shaped at the open front of the shell to form a breast to which the breast portion of the sole is adhesively secured.

In witness whereof I have hereunto affixed my signature, this 3rd day of July, 1919.

JOSEPH BURGER.