

June 8, 1937.

F. D. REYNOLDS

2,082,974

HEEL SUPPORT

Filed April 27, 1935

Fig. 1

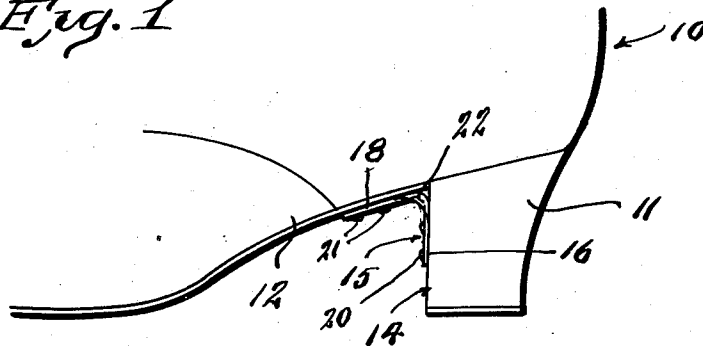


Fig. 2

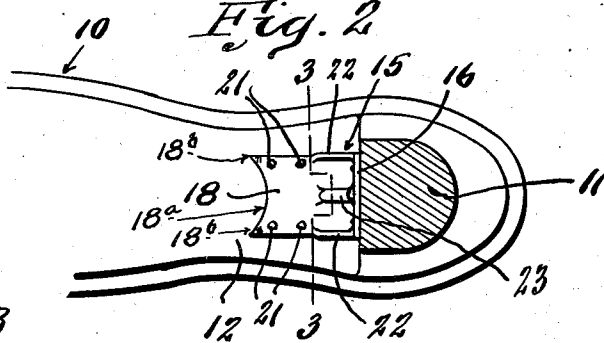


Fig. 3

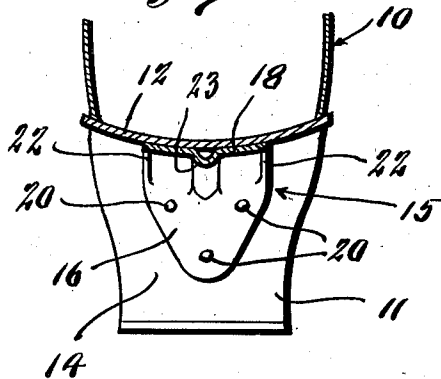


Fig. 4

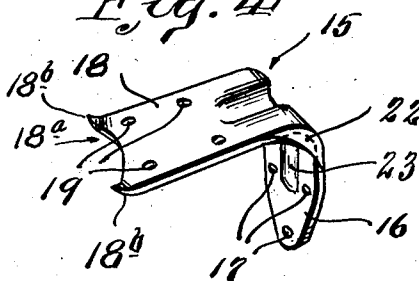
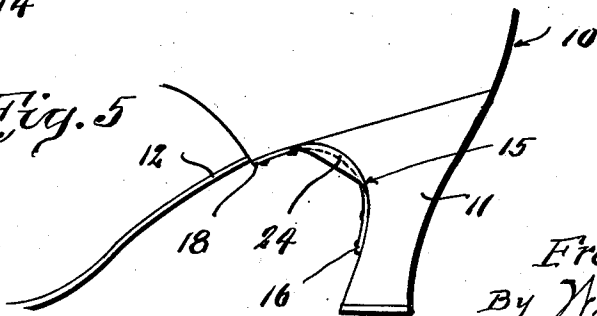


Fig. 5



Inventor
Frederick D. Reynolds
By William James, Att'y.

UNITED STATES PATENT OFFICE

2,082,974

HEEL SUPPORT

Frederick D. Reynolds, St. Louis, Mo.

Application April 27, 1935, Serial No. 18,611

4 Claims. (Cl. 36—76)

This invention relates to new and useful improvements in metal heel supports for shoes. The heels of shoes are not as a rule fastened very securely to the sole and they become loose or break off under certain conditions. This is particularly true of ladies' shoes where the heels are generally made of wood. Numerous attempts have been made to reinforce such heels by metal heel supports constructed to fit against and to be fastened to the breast of the heel and the shank of the shoe. These supports are generally made of metal stamping in order to keep the weight of the support to a minimum and also to maintain the support inconspicuous as possible so as not to detract from the appearance of the shoe. However, due to the stresses to which the metal supports are subjected, a fracture occurs in most cases at a point adjacent to the line where the heel portion of the support joins the shank portion. This fracture spreads laterally and finally the support breaks in two pieces at the junction of the shank and heel portions. This condition is particularly found where heels of Cuban style are used and is due on one hand to the sharp angle used between the shank and the heel portions of the metal support and on the other hand to the fact that the heels of this type are more generally used on shoes worn by stout women.

The main object of my invention is to provide a metal support which is reinforced at the corner or curve formed by the junction of the shank and heel portions of said heel support so that said support successfully resists the stresses applied thereto and is not liable to break when in service.

Another object of the invention is to provide a heel support of a metal stamping having a flanged portion or gusset extending between the shank and heel portions, thereby reinforcing said support at the point of greatest stress.

Additional objects of the invention are to provide a metal support for heels which is of simple but durable construction, is light in weight, and inconspicuous when attached in position, and which is reinforced at the edges of the junction formed by the shank and heel portions, thereby reducing the breakage of the heel support to minimum.

With these and other objects in view, my invention consists in certain novel features of construction and arrangement of parts, hereinafter more fully described and claimed, and illustrated in the accompanying drawing, in which—

Figure 1 is a fragmental side elevational view

of a shoe with the heel support attached in position.

Figure 2 is a bottom plan view of same with the heel partly cut away.

Figure 3 is an enlarged transverse cross section taken on line 3—3 of Figure 2.

Figure 4 is a perspective detail view of my improved heel support.

Figure 5 is a view showing my heel support attached to a French style heel.

Referring by numerals to the accompanying drawing, 10 indicates a shoe having a Cuban style heel 11 and a shank 12. The breast 14 of heel 11 is disposed angularly to the shank 12. A metal heel support or brace 15 is provided to reinforce the heel 11 and prevent breakage thereof from the shoe. This heel support comprises a heel portion or tongue 16 having a plurality of nail apertures 17 and a shank portion 18 having a plurality of nail apertures 19.

The heel portion 16 fits against and extends a suitable distance downwardly of the breast 14 of heel 11 and is secured thereto by nails 20 engaging apertures 17.

The shank portion 18 fits against the shank 12 and extends a suitable distance forwardly and is secured thereto by nails 21 engaging apertures 19.

Each side of member or brace 15 is formed at the edge of the curve or the junction of the shank and heel portions thereof with a reinforcing flange or gusset 22 which is presented outwardly from said member and extends a suitable distance along the edge of each of said portions. This flange is preferably deepest at the center and tapers off at each end. These flanges 22 reinforce the heel support at the edges of the curve, which are the points of greatest stress, and thus eliminate the danger of breakage or cracking of the edges at these points. Preferably each support is provided with a stiffening rib 23 located centrally of the support and extending longitudinally a suitable distance of each portion thereof for reinforcing the curve.

In the form shown in Figures 1 to 4 inclusive, the heel support is applied to a Cuban style heel and for that reason the junction formed by the heel and breast portions is on a comparatively sharp curve or angle. In the formation of the breast of the type of heel shown in Fig. 5 the junction of the heel and shank portions is on a long curve as indicated at 24.

Where the heel support or brace is stamped from metal the reinforcing flanges 22 are formed integral with the edges of the curve and are bent

downwardly during the formation of the heel support.

The shank portion 18 is curved transversely so as to make a better fit with the underside of the shank 12 and provide a support for same. The forward end of shank portion 18 is curved inwardly, as indicated at 18a, and terminates in points 18b which are curved upwardly. When the brace is being applied in position, the shank portion 18 is disposed at an angle to the shank 12 and the points 18b forced thereinto a suitable distance from the heel 11. The brace is then forced in place and the points will hold it in place preparatory to the nailing operation. The points 18b are made strong and will not break. The back of the heel portion or tongue 16 is formed smooth so as to slide freely against the breast of the heel until the brace is locked in place.

After the nails 21 are in place, the points 18b engaging the shank 12 take the forward pressure off the nails 21 so that these are relieved of lateral strain and will not work loose.

The brace of my improved construction supports the arch and prevents the heel from coming off or from working forward under the arch. It is unbreakable and provides relief, safety and comfort to the wearer of the shoe. It is light in weight and inconspicuous so as not to detract from the appearance of the shoe.

I claim:

1. A shoe heel support of the character described comprising a member formed of a metal stamping and having a longitudinally curved heel portion adapted to fit against and be secured to the curved breast of a heel of a shoe and having a shank portion adapted to fit against and be secured to the shank of said shoe, and a flange formed integral with the edges of said portions and extending downwardly therefrom, whereby said edges are reinforced against cracking at points of greatest stress, each of said flanges being deepest at the junction of said shank and heel portions and tapering off along the edges of said portions.

2. As a new article of manufacture, a metal heel support of the character described, said support being formed of a single piece stamping and comprising a rear portion shaped to fit snugly against the curved breast of the heel of a shoe and a forward portion curved transversely to fit the shank of said shoe, there being apertures formed in both portions for receiving nails and securing them in position, said support having formed on each side a downwardly projecting flange formed integral with the edges of said portions at the junction thereof and extending a suitable distance along the edges of said portions for reinforcing said edges at said junction.

3. In a device of the character described, a metal stamping having a heel portion adapted to be attached to the breast of the heel of a shoe and having a shank portion adapted to be secured to the shank of said shoe, said stamping being in contact with said heel and shank portions throughout its entire length and being provided on each side with a downwardly projecting flange formed integral with and extending suitable distances from the edges of said heel and shank portions, said flanges reinforcing said edges at the line of greatest stress.

4. As a new article of manufacture, a metal heel brace comprising a member having a rear portion shaped to fit against and have contact with the breast of the heel of a shoe and having a forward portion curved transversely to fit the underside of the shank of said shoe, the end of said forward portion terminating in forwardly inclined points for engaging said shank and holding said brace in position when said rear portion is pressed home against said metal breast, a downwardly projecting flange formed integral with the edges of said portions at the junction thereof, whereby the edges of said brace are reinforced against cracking at the points of greatest stress, and means for nailing said portions to the respective parts of said shoe.

FREDERICK D. REYNOLDS.