Dec. 25, 1934. W. H. NICKERSON 1,985,545

SHOE SHANK STIFFENER

Filed May 19, 1934

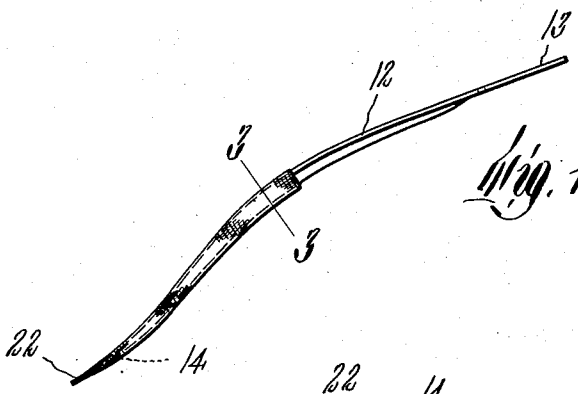



Fig. 1.

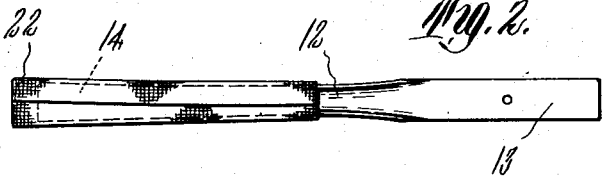



Fig. 2.




Fig. 3.

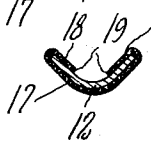



Fig. 4.




Fig. 5.

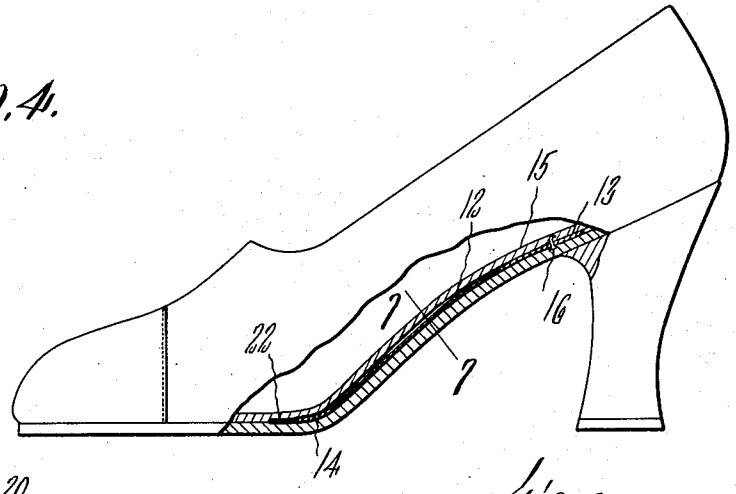



Fig. 6.

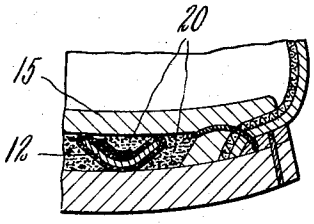



Fig. 7.

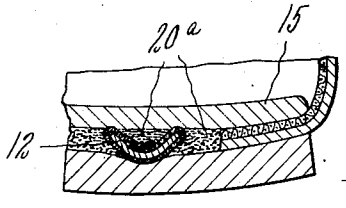



Fig. 8.

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# UNITED STATES PATENT OFFICE

1,985,545

## SHOE SHANK STIFFENER

William H. Nickerson, Newton Center, Mass.

Application May 19, 1934, Serial No. 726,509

1 Claim. (Cl. 36—76)

This invention relates to a metallic shank stiffener adapted to be interposed between an inner and an outer sole, and particularly to a stiffener provided with non-metallic inner and outer surfaces adhering to the stiffener and contacting with portions of the soles for various purposes.

Of the accompanying drawing forming a part of this specification,—

Figure 1 is an edge view of a shank stiffener embodying the invention.

Figure 2 is a top plan view of the same.

Figure 3 is a section on line 3—3 of Figure 1.

Figures 4 and 5 are views similar to Figure 3 showing different arrangements of the portions of the strip which constitute non-metallic surfaces of the improved stiffener.

Figure 6 is a side view partly in section showing a shoe provided with the improved stiffener.

Figure 7 is an enlarged section on line 7—7 of Figure 6.

Figure 8 is a view similar to Figure 7 showing a different type of shoe.

The same reference characters indicate the same parts in all of the figures.

The metallic body of the shank stiffener here shown is of well known form and has a longitudinally and transversely curved major portion 12 and substantially flat end portions 13 and 14 and curved spaced apart longitudinal edges 10. The portion 13 constitutes the rear end, and the portion 14 the forward end of the stiffener. The major portion 12 has transversely curved inner and outer surfaces, the inner surface being transversly concave and the outer surface transversely convex. It is customary to secure the rear portion 13 to the inner sole 15 of a shoe by a tack 16, the forward end portion 14 being unattached.

In carrying out my invention I adhesively secure to the major portion 12 an oblong strip of flexible non-metallic material preferably closely woven cotton or linen cloth treated with any suitable adhesive, the strip having a longitudinal central portion 17 conforming to the convex side of the stiffener, and longitudinal edge portions or flaps 18 conforming to the concave side.

The central portion 17 extends continuously across the convex side, while the longitudinal edge portions 18 are bent across the longitudinal edges of the stiffener and constitute flaps conforming to the concave side.

The margins 19 of the edge portions or flaps 18 face in opposite directions. One of said flaps may overlap the other, as shown by Figure 3, or the edges 19 may be spaced apart as shown by Figure 4, or butted together without overlapping, as shown by Figure 5. In any case, the flaps conform to the concave side of the stiffener, so that said concave side is not materially obstructed by the coating strip and is adapted to receive a portion of the usual bottom filler 20 used in a welt shoe shown by Figure 7, or cement $20^a$ in a compo shoe shown by Figure 8.

The forward ends of the central and edge portions of the coating strip extend forward from the forward end of the stiffener and are adhesively united to each other, so that they collectively constitute a flexible tab 22 which is pinched between the inner and outer soles when the shoe bottom is flexed by the act of walking, and acts to prevent the forward end of the stiffener from digging injuriously into the outer sole.

The coating strip is so thin that it does not sufficiently increase the thickness of the stiffener to cause the latter to outwardly bulge a thin outer sole. The shank coated as described adheres more firmly to the sole surfaces with which it contacts in a compo shoe than would be possible without the coating.

In a sewed shoe the coating strip prevents squeak when the wearer is walking.

The coating conforming to the concave side of the stiffener not only leaves space in said concave side for bottom filler and cement, but also provides a direct relatively solid connection between the metal stiffener and the insole.

It will now be seen that the improved shank stiffener comprises a metal body including a longitudinally and transversely curved major portion 12, substantially flat end portions 13 and 14, and spaced apart longitudinally curved edges, said body having a transversely convex outer side and a transversely curved concave inner side and spaced apart curved longitudinal edges 10.

The stiffener comprises also an enveloping veneer cemented to the body, and composed of an oblong cement coated strip of non-metallic sheet material, said strip including a longitudinal central portion 17 closely conformed to the convex side of the body, flaps 18 closely conformed to the concave side of the body, and necks 11 connecting the flaps with the central portion, and closely conformed to the longitudinal edges of the body.

The veneer is applicable to the body by pressure of the central portion 17 against the convex side of the body and pressure of the necks 11 and flaps 18 against the longitudinal edges and concave side of the body.

The entire enveloping portion of the veneer adheres closely to the body and increases the bulk thereof only by the thickness of the sheet material of which the veneer is composed.

It will also be seen that the tab 22 is provided by a portion of the veneer extended from an end of the body, the tab including a part of the central portion 17, parts of the flaps 18 and parts of the necks 11, the extended central and flap parts being adhesively bonded together and forming substantially flat sides of the tab.

I claim:

A shank stiffener comprising a metal body including a longitudinally and transversely curved major portion between substantially flat end portions, said body having a transversely convex outer side, a transversely concave inner side, and spaced apart curved longitudinal edges, and an enveloping veneer cemented to said body and composed of an oblong non-metallic cement coated strip of sheet material of greater width than said body, said strip including a longitudinal central portion closely conformed to the convex side of the body, flaps closely conformed to the concave side of the body, and necks connecting the flaps with the central portion and closely conformed to the longitudinal edges of the body, an end portion of the veneer being extended from an end of the body, and forming a tab which includes a part of the central portion, parts of the flaps, and parts of the necks, the extended central and flap parts being adhesively bonded together and forming substantially flat sides of the tab, said veneer being applicable to the body by pressure of the central portion of the strip against the convex side, and pressure of the necks and flaps against the longitudinal edges and concave side, so that the entire enveloping portion of the veneer adheres closely to the body and increases the bulk thereof only by the thickness of the sheet material.

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