

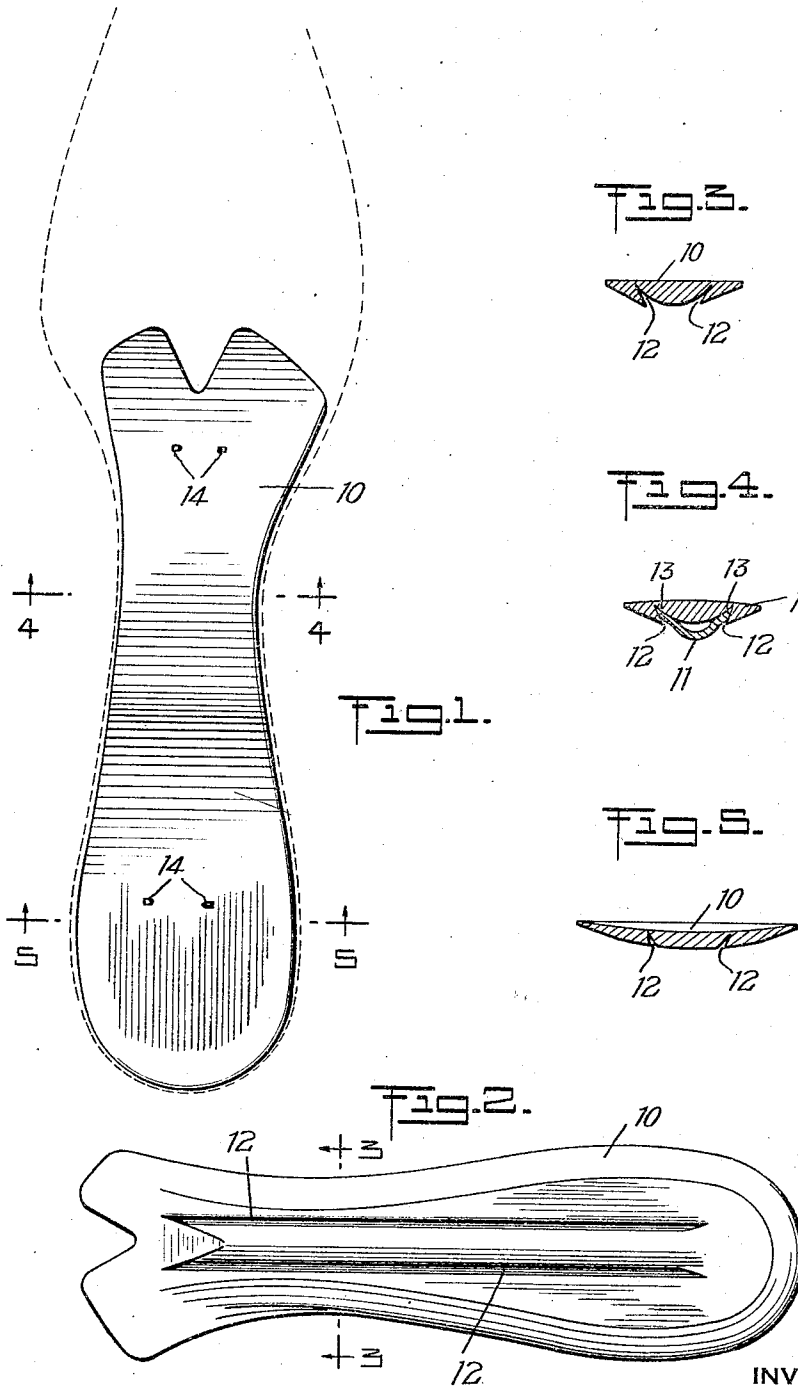
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C. J. HAUCK

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SHOE SHANK STIFFENER

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INVENTOR

Charles J. Hauck

BY HIS ATTORNEY

E. M. Mark

UNITED STATES PATENT OFFICE

CHARLES J. HAUCK, OF PORTSMOUTH, OHIO, ASSIGNOR TO THE SELBY SHOE COMPANY,
OF PORTSMOUTH, OHIO, A CORPORATION OF OHIO

SHOE SHANK STIFFENER

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My invention relates to shoe shank stiffeners and particularly to shoe shank stiffeners for turn-shoes.

In the manufacture of turn-shoes, the outsole is laid with its outer surface against the last and the upper with its outer surface against the last. After the upper is secured inside out to the outsole, the last is collapsed and the upper removed and replaced back on the last after it has been reversed; that is, with the grain surface of the upper and the inner surface of the sole against the last. Prior to reinserting the shoe on the last, the shank stiffener is inserted and it is the shank stiffener which determines the shape of the shoe in the arch portion.

Heretofore, shank stiffeners have been made by cutting out pieces of leather or other flexible material and securing to the leather piece, usually underneath, a metal stiffener piece. The metal stiffener piece bends the flexible piece so that it conforms to the shape of the stiffener. The shank stiffener is then inserted within the shoe and is held to the inner surface of the shoe sole by an adhesive. The shoe is then replaced on the last and the operation of forming the outsole in the arch portion so as to fill up the space between the shank stiffener and the inner surface of the sole is performed.

In order to have the shank stiffener fit snugly down against the inner surface of the sole, pieces of flexible material are usually employed. Since however, it has been customary to provide the metallic shank piece with a rib extending out from its concave side, considerable space is ordinarily taken up by the combination of the flexible piece and the metal piece which together form the shank stiffener.

Accordingly it has been difficult to secure a close bond between the under surface of the stiffener and the inner surface of the sole which tends to make the shoe uncomfortable to the wearer and which prevents the foot

from fitting snugly down within the shoe. Further, a loosely fitting shank stiffener tends to make the upper of the shoe bulge out and form unsightly wrinkles along the sides of the upper extending down to the arch of the shoe.

It is an object of my invention to reduce the space between the inner surface of the sole and the upper secured to the sole and the under surface of the shank stiffener. It is thus my object to provide a shank stiffener construction which will permit a closer contact between the sole and the last during the operation of assembling the shoe on the last which is when the final beauty of shape of the shoe is determined.

It is another object of my invention to provide a shank stiffener which will be more securely adhered to the shoe sole and the inner surface of the upper connected to the sole. In my new shank stiffener construction, I thus provide a better line to the edge of the sole in the shank portion of the shoe because there being less space than ordinary between the sole and the shank stiffener, the sole requires less bending and beating up to fill in this space.

It is an object of my invention to provide a shank stiffener which will have substantial thickness along its longitudinal medial line so that the edges of the flexible portion may be skived off to fill in completely the space between the edges of the stiffener and the inner surfaces of the shoe upper where it is attached to the sole.

Another object of my invention is the provision of a flexible portion for the stiffener with a metal stiffener piece of substantially rigid construction.

Another object of my invention is to provide a shank stiffener which will permit the sole portion under the heel to fit more closely than has been customary to the last, so as to permit a stronger and more close fitting bond between the heel and the sole and which fur-

ther reduces the amount of the sole which is necessary to cut away for the proper fitting of a wood heel.

The above objects, it is my purpose to accomplish by providing a flexible stiffener piece provided with a groove within which the metal stiffener is countersunk.

The above objects and other objects to which reference will be made in the ensuing disclosure I accomplish by that certain combination and arrangement of parts of which I have shown a preferred embodiment.

Referring to the drawing:

Figure 1 is a plan view of a shank stiffener arranged in conformity with the present invention and with the proper position of the shank stiffener within a shoe indicated in dotted lines.

Figure 2 is a bottom plan view of the flexible portion of the stiffener showing the countersunk grooves or recesses for receiving the stiffener.

Figure 3 is a cross section of the flexible member shown in Figure 2 taken along the lines 3—3

Figure 4 is a sectional view taken along the lines 4—4 in Figure 1.

Figure 5 is a sectional view taken along the lines 5—5 in Figure 1.

I have provided a flexible piece 10 shaped in accordance with the usual shape of shank stiffeners which is of substantial thickness along its medial line and with the outer edges skived off so that the piece will fit in snugly against the sole and upper. The use of flexible material such as heavy leather of substantial thickness provides a solid support for the foot in walking.

A rigid shank piece 11 ordinarily having a rib extending out on its longitudinally concave side has inturned edges 13 which fit and are countersunk in recesses 12 which are formed in the under surface of the flexible piece 10.

At its ends the metal piece 11 is provided with the tines 14 which seat themselves firmly in the leather at the ends of the recesses 12.

The metal stiffening piece and the flexible portion thus form a shank stiffener which is of substantial thickness along its longitudinal medial line but which tapers off to provide thin edge portions for fitting down snugly against the inner surface of the sole. The thin edges of the stiffener can be securely bonded to the inner surface of the sole and the adjacent upper and will conform readily to the desired shape of the shoe in its arch portion without leaving any substantial space between the stiffener and sole to cause deformation of the appearance of the shoe.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A shank stiffener comprising a flexible insert, said insert being provided with grooves

in the under side thereof extending lengthwise thereof, and a rigid member inserted within said grooves.

2. A shank stiffener comprising a leather insert to cover the heel-seat and the shank portion of a shoe adapted for insertion within a shoe after the same has been formed, said insert being provided with longitudinal grooves extending lengthwise thereof, and a rigid metal member having its edges embedded in the said grooves.

3. A shank stiffener comprising a leather insert to cover the heel-seat and the shank portion of a shoe adapted for insertion within a shoe after the same has been formed, said insert being provided with longitudinal grooves extending lengthwise thereof, a rigid metal member having its edges embedded in the said grooves, and means for permanently attaching said metal member to said leather insert.

4. In combination with a turn-shoe, a flexible insert of substantial thickness along its medial line and with thin peripheral edges, and means set within the substantially thick medial portion determining the longitudinal curvature of said insert, said means having a reinforcing rib extending from its longitudinally concave side tapering off into flat portions at the ends of the said means.

CHAS. J. HAUCK.