June 21, 1932. J. B. HADAWAY 1,863,690

SHANK STIFFENER

Filed Oct. 21, 1929

Fig. 1.

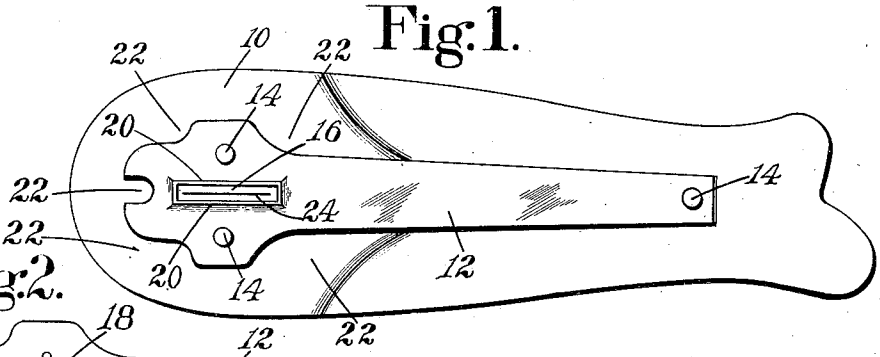


Fig. 2.

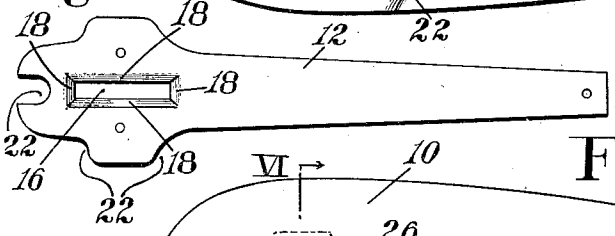


Fig. 3.

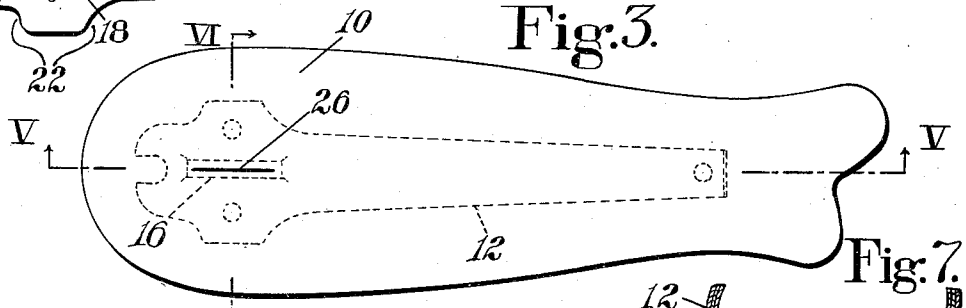


Fig. 4.

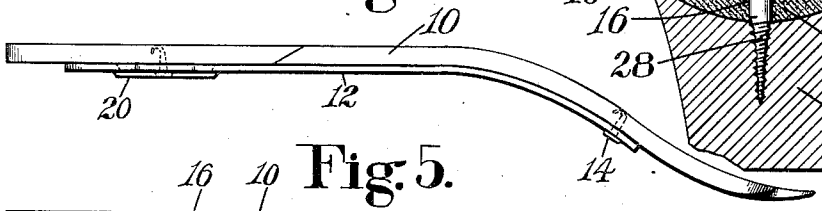


Fig. 5.



Fig. 6.

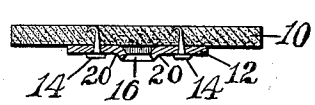
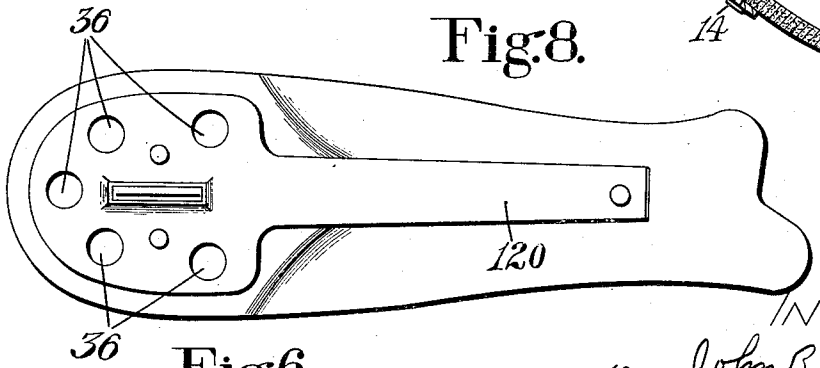


Fig. 7.

Fig. 8.



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UNITED STATES PATENT OFFICE

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SHANK STIFFENER

Application filed October 21, 1929. Serial No. 401,173.

This invention relates to improvements in shank stiffeners. The invention is herein set forth by way of illustration with particular reference to its application to shank pieces for turn shoes, although in certain aspects the invention is capable of embodiment in shank stiffeners for use in shoes of other types such, for example, as welt shoes and McKay-sewed shoes.

In the manufacture of turn shoes, in order to provide for more secure attachment of the heels which are commonly wood heels and to insure better support of the longitudinal arches in the shank portions of the shoes, it has been proposed to extend the metallic reinforcing strip of the usual composite shank piece rearwardly to a point beyond the heel breast line of the shoe and to provide a hole extending through the reinforcing strip and through the filler member of the shank piece for the reception of a heel-attaching screw which is to be inserted from the inside of the shoe after the shank piece has been laid in place. This proposed practice involves the formation of holes in the reinforcing strip and in the filler member by separate operations and the exercise of special care to insure the registration of the holes in the two members of the shank piece. Moreover, the holes in the shank piece must be located in different positions for use in connection with heels of different sizes and styles.

In view of the foregoing, one object of the present invention is to provide an improved shank piece for turn shoes which is adapted to be held in place at its rear end by means of a heel-attaching fastener and which is capable of being manufactured in a single size and form for use in connection with different sizes and styles of heels.

To the accomplishment of the above object, one feature of the present invention consists in the provision of a shank piece for turn shoes comprising a filler member and a reinforcing strip attached to one side of the filler member, the reinforcing strip having an enlarged rear portion having openings in its margin and having formed therein a slot which is elongated lengthwise of the reinforcing member for the reception of a heel-attaching fastener driven through the transversely central portion of the filler member, this construction enabling said fastener to be driven in different locations lengthwise of the shoe as may be desirable or necessary properly to hold in place heels of different sizes and styles, and providing also for the passage of heel attaching nails through the filler member without engaging the reinforcing strip. In the illustrated shank piece the reinforcing or stiffening strip is secured to the under side of a filler piece of leather, leatherboard or similar material, and the rear portion of the reinforcing strip is enlarged to facilitate and strengthen the attachment of the strip to the filler piece and thus to brace the heel as well as to reinforce the shank portion of the shoe. The enlarged portion of the illustrated reinforcing strip is provided with marginal openings arranged to permit the passage through the filler member of the usual heel-attaching nails and with a centrally disposed slot for the reception of a heel-attaching screw. The elongated slot in the illustrated reinforcing strip is provided with inclined or beveled walls which serve to deflect the point of a heel-attaching fastener such as a wood screw and guide the screw into the slot if it should unintentionally be driven slightly out of alinement with the locating marks on the filler piece, and which, moreover, permit the material of the filler piece underneath the beveled head of the screw to be displaced downwardly into the slotted portion of the stiffener member so that the upper surface of the head of the screw may be set flush with the upper surface of the filler piece without the necessity of counter-boring the filler piece to receive the head of the screw. To facilitate the positioning of the reinforcing strip in a longitudinally central position relatively to the filler member of the illustrated shank piece, an indentation or other suitable mark is formed on the under side of the filler member, the mark serving as a guide for the operator in assembling the component parts of the shank piece. After the illustrated shank piece is placed in a shoe, however, the mark above referred to is located at the under side of the shank piece which is hidden from the view

of the operator and accordingly in order to indicate the location in the upper side of the shank piece at which the heel attaching fastener is to be driven so that it may pass through the slot in the stiffener strip, a similar mark or indentation is provided upon the upper surface of the filler member. The last-mentioned mark being initially made in alinement with the mark on the under side of the filler member.

As hereinbefore mentioned, the invention is not limited to embodiment in shank pieces for turn shoes and in one aspect invention is to be recognized in the provision of a combined shank stiffener and heel brace comprising a strip adapted to extend along the shank portion of the bottom of a shoe and having an enlarged rear portion provided with marginal notches affording clearance for heel-attaching nails and constructed and arranged to afford considerable latitude in the locations where the nails may be driven and having a slot for the reception of a heel-attaching fastener, the slot being elongated lengthwise of the stiffener strip and having inclined walls arranged to facilitate the operation of inserting a heel-attaching fastener in the shoe.

The invention will be explained with reference to the accompanying drawing, in which

Fig. 1 is a bottom plan view of an improved shank piece embodying the invention;

Fig. 2 is a top plan view of the metallic reinforcing or stiffening member of the shank piece;

Fig. 3 is a bottom plan view of the shank piece;

Fig. 4 is an edge view thereof;

Figs. 5 and 6 are sectional views taken respectively on the lines V—V and VI—VI of Fig. 3;

Fig. 7 is a cross-sectional view taken through the heel portion of the shank piece, illustrating the manner in which the shank piece is applied to a shoe; and

Fig. 8 is a bottom plan view of a modified form of the shank piece.

Referring to the drawing, the improved shank stiffener and heel brace comprises a filler member 10 made of leather, leatherboard or other suitable material, and a metallic reinforcing or stiffening strip 12 which is adapted to extend along the shank portion of the bottom of a shoe and which is secured by tacks 14 to the under side of the filler member 10. The marginal contour of the filler member 10 is such as to fit the interior of the heel and shank portions of a shoe and the portions of the filler member which are adapted to overlie the shank portion of the shoe bottom are reduced or beveled in the customary manner.

The reinforcing strip 12 is made long enough to overlie the heel seat portion of the filler member and the rear portion of the reinforcing strip is provided with a slot 16 which is elongated lengthwise of the strip and is formed with inclined or beveled side and end walls 18 at the upper side of the strip. As shown, the beveled walls of the slot 16 are conveniently formed by striking up narrow flanges 20 from the material of the strip 12. Advantageously, the flanges 20 may be struck up during the operation of punching the slot in the reinforcing strip. The rear portion of the reinforcing strip 12 is enlarged in order to strengthen the strip and to provide for a greater area of contact between the reinforcing strip and the filler member, as well as between the rear portion of the strip and the attaching face of a heel which is subsequently to be attached to the shoe in which the shank piece is to be incorporated. Enlargement of the rear portion of the reinforcing strip 12 permits the use of two tacks 14 for securing the rear portion of the reinforcing strip to the filler member and also helps to reinforce and strengthen a shoe to which the shank piece is applied by stiffening the shank portion of the shoe against lateral twisting stress. As shown the tacks are so located as to insure against possibility of interference with either the heel attaching screw or the heel attaching nails. In order that the enlargement of the rear portion of the reinforcing strip 12 shall not interfere with the use in the shoe of the usual wood heel-attaching nails, the rear portion of the reinforcing strip is shaped, as shown in Figs. 1 and 2, with suitable marginal openings or notches 22 enabling heel-attaching nails to be driven in their usual locations in the shoe, the notches being arranged to afford considerable latitude in the locations where the nails may be driven.

As shown in Fig. 1 a mark 24 is provided on the lower side of the filler member 10 for use in facilitating the assembly of the reinforcing strip 12 and the filler member in such relation that the elongated slot 16 will be centrally positioned relatively to the heel portion of the filler member. The mark 24 may conveniently be formed by slightly indenting the filler member, the indentation being preferably in the form of a line substantially as long as the slot in the reinforcing strip. Inasmuch as the mark 24 will be hidden from view of the operator when the shank piece has been placed in a shoe, a second mark 26 (Fig. 3), similar to and located in line with the mark 24, is provided upon the upper surface of the filler member for assisting the operator in locating a fastener relatively to the filler member so that it may be driven downwardly through the slot in the reinforcing strip and into a heel which has been applied to the shoe for the purpose of securing the shank piece and the heel in place.

As shown in Fig. 7, the illustrated shank

piece and heel-attaching fastener 28 is in the form of an ordinary wood screw having a beveled head 30. In driving the screw 28 the screw should be positioned so that when it is driven through the filler member 10 the screw will enter the slot 16 in the reinforcing strip 12. However, in case the screw is inaccurately located by the operator, or in case the members of the shank piece were not assembled in the proper relation to one another, the screw 28 may be driven through the filler member in a location slightly out of central relation widthwise of the slot 16. In such an event, however, the beveled side walls of the slot 16 will serve to deflect the point of the screw to one side or the other a sufficient amount to insure the passage of the screw through the slot 16, through the fitted end 32 of the sole of the shoe, and into the heel 34. Inasmuch as the slot 16 is elongated lengthwise of the shank piece considerable latitude is allowed in the positioning of the heel-attaching screw lengthwise of the shoe, thus enabling heels of different sizes and styles to be used in connection with shank pieces having reinforcing strips of the same size. The beveled walls at the ends of the slot 16 will function in the same manner as the beveled side walls of the slot if the point of the heel-attaching screw is brought into engagement with these beveled end walls. Moreover, the beveled side and end walls of the slot 16 permit the material of the filler member 10 immediately beneath the head of the screw 28 to be displaced downwardly into the slot 16 as the screw is driven into place, thus enabling the head of the screw to be sunk into the material of the filler member and set therein with the upper surface of the head 30 flush with the upper surface of the filler member without the necessity of previously counterboring the filler member to receive the head of the screw. After the screw 28 has been tightened it serves, not only to hold the heel firmly in place, but also to hold the rear portion of the shank piece firmly against the heel seat portion 32 of the sole of the shoe in such a manner as to prevent relative movement between the shank piece and the shoe and to stiffen the shank portion of the shoe against lateral twisting stress. This stiffening of the shank portion of the shoe is made even more effective by the enlargement of the rear portion of the metallic reinforcing strip 12, while the shape of the enlarged portion of the reinforcing strip is made, such as heretofore described, so as not to interfere with the driving of the usual wood heel-attaching nails through the shank piece and into the heel.

A modification of the above-described shank piece is illustrated in Fig. 8 wherein apertures 36 are provided in the enlarged rear portion of the reinforcing strip 12 in place of the openings or notches 22 shown in Fig. 1 to provide clearance for the wood heel-attaching nails.

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

1. A shank piece for turn shoes comprising a filler member having a marginal outline shaped to fit the inside of the heel and shank portions of a shoe, and a reinforcing strip for the filler member, said reinforcing strip having an enlarged rear portion adapted to be located rearwardly beyond the heel breast line of a shoe and said filler member having its margin notched and its central portion perforated to permit the passage of heel-attaching fasteners driven in their usual locations through the shoe bottom.

2. A shank piece for turn shoes comprising a filler member having a marginal outline shaped to fit the inside of the heel and shank portions of a shoe, and a reinforcing strip for the filler member, said reinforcing strip having an enlarged rear portion arranged to extend rearwardly beyond the heel breast line of a shoe and having formed therein marginal openings for the passage of heel-attaching nails and a central slot elongated lengthwise of the reinforcing member for the reception of a heel-attaching fastener driven through the filler member, said reinforcing strip having side walls inclined in directions to facilitate the passage of said fastener through said slot, and means for securing said strip to said filler member including fastenings located at opposite sides of said slot and spaced inwardly from the edge of the enlarged rear portion of the strip.

3. A composite shank piece for turn shoes comprising a filler member, and a reinforcing strip for the filler member, said reinforcing strip having a portion extending rearwardly over the heel seat portion of the filler member, said portion having formed therein a slot elongated lengthwise of the reinforcing member to receive a heel-attaching fastener, and said filler member having a line on its inner face corresponding in length to the length of the slot and in line with the center line of the slot for indicating the location and length of said slot.

4. A composite shank piece for turn shoes comprising a filler member, and a reinforcing strip for the filler member, said reinforcing strip having a portion extending rearwardly over the heel seat portion of the filler member, said portion having formed therein a slot elongated lengthwise of the reinforcing member to receive a heel attaching fastener, and said filler member having a line on its outer face corresponding in length to the length of the slot and in line with the center line of the slot for gaging the assembled relation of said strip and filler member.

5. A composite shank piece for turn shoes comprising a filler member, and a reinforcing

strip for the filler member, said reinforcing strip having a portion extending rearwardly beyond the middle of the heel seat portion of the filler member, said portion having formed therein a slot elongated lengthwise of the reinforcing member to receive a heel attaching fastener, said filler member having lines on its inner and outer faces corresponding in length to the length of the slot and in line with the center line of the slot.

6. A composite shank piece for turn shoes comprising a filler member, and a reinforcing strip attached to one side of the filler member, the reinforcing strip having an enlarged rear portion formed with openings in its margin to provide for the passage of heel-attaching nails through the filler member without engaging the reinforcing strip and having a slot elongated lengthwise of the reinforcing strip for receiving a heel-attaching fastener driven through the transversely central portion of the filler member.

7. A combined shank stiffener and heel brace comprising a strip adapted to extend along the shank portion of the bottom of a shoe and having an enlarged rear portion provided with marginal notches affording clearance for heel-attaching nails and constructed and arranged to afford considerable latitude in the locations where the nails may be driven and said strip having a slot for the reception of a heel-attaching fastener, the slot being elongated lengthwise of the stiffener strip and having inclined walls arranged to facilitate the operation of inserting a heel-attaching fastener in the shoe.

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

JOHN B. HADAWAY.