May 20, 1941. C. H. DANIELS ET AL 2,242,941

SHOE BOTTOM CONSTRUCTION

Filed May 19, 1939

Fig. 1

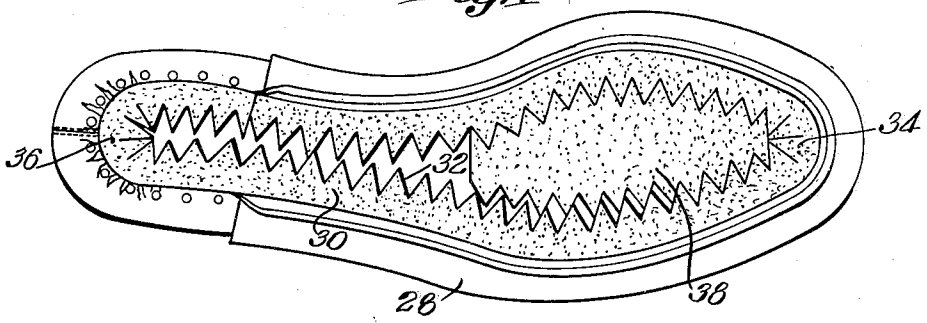


Fig. 2

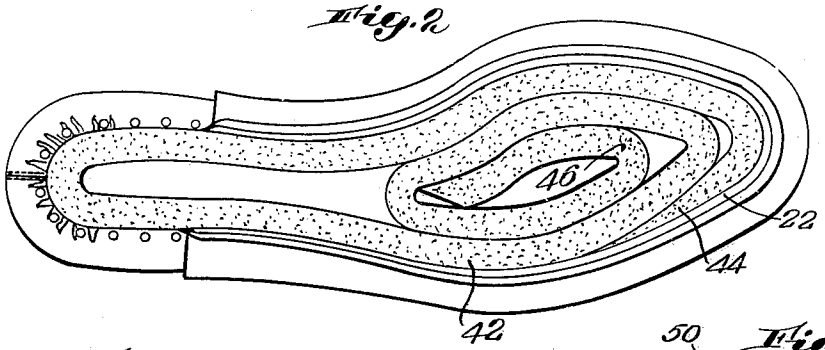


Fig. 3



Fig. 4



Fig. 7

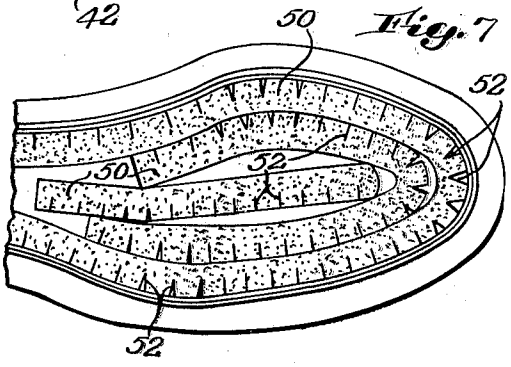


Fig. 5

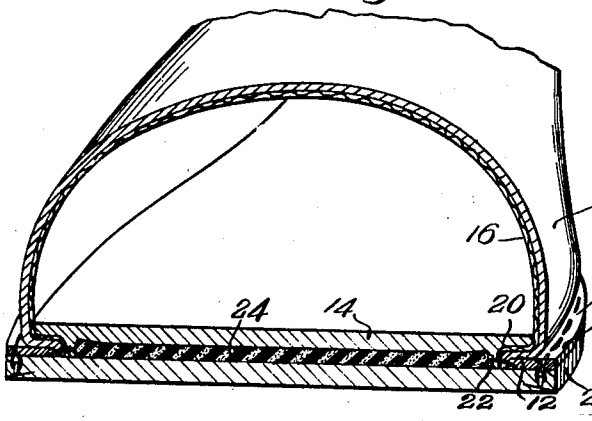
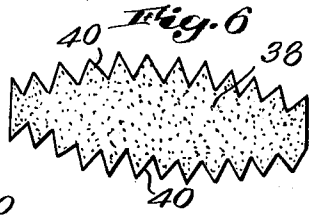


Fig. 6



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SHOE BOTTOM CONSTRUCTION

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Application May 19, 1939, Serial No. 274,640

2 Claims. (Cl. 36—30)

This invention relates to improvements in shoe bottom construction and to methods for bottoming shoes, more particularly to the manner of filling the bottom cavity in shoes of the type having the upper lasted over the insole, such as Goodyear welt shoes, pre-welt shoes, Compo, McKay and any shoes in which a bottom cavity is adapted to receive a filler.

It is customary practice to fill the bottom cavity of welt shoes with a plastic compound termed a "bottom filler" which must be spread and leveled off in the cavity. The bottom filler ordinarily dries, becomes hard and materially stiffens the forepart of the shoe. Sheet material such as sponge rubber has been used for filling the bottom cavity but must be cut to exact size to fit the cavity.

It is an object of our invention to fill the bottom cavity with rubber, cork, felt or similar flexible material and to obtain a close fit around the margin of the cavity without requiring exact cutting to size of the piece or pieces used to fill the cavity.

It is further an object of our invention to employ a flexible strip of material for lining the marginal edge of the bottom cavity and to substantially fill the forepart with a separate piece or pieces or by a continuation of the marginal strip.

Further objects and advantages of our improvements will be more readily apparent from the following description of preferred embodiments thereof as disclosed in the attached drawing, in which:

Fig. 1 is a plan view showing the bottom of a Goodyear welt shoe before the outsole is applied;

Fig. 2 is a similar plan view showing a modified construction;

Fig. 3 is a fragmentary perspective view of the strip material used in Fig. 1;

Fig. 4 is a fragmentary perspective view of the strip material used in Fig. 2;

Fig. 5 is a vertical cross section taken through the forepart of a Goodyear welt shoe having the improved bottom construction;

Fig. 6 is a plan view of the piece used in the forepart as shown in Fig. 1;

Fig. 7 is a fragmentary plan view of a shoe bottom showing a further modification of the filling material for the cavity.

A Goodyear welt shoe of the usual construction, except for the bottom filler, is disclosed in Fig. 5 in which 10 is the upper, a marginal edge 12 being lasted over the marginal edge of the insole 14. A lining 16 may also be provided for the upper. A welt 28 is applied in the usual manner, and the parts are secured by the stitching 20 to a flange 22 of the insole. The cavity in the shoe bottom within the area bounded by the flange 22 is filled in our construction with sponge rubber 24 or other suitable flexible material, the outsole 26 is then applied and secured to the welt by the stitching 18.

One of the preferred methods of filling the bottom cavity is disclosed in Figs. 1, 3 and 6. Strip material 30 of sponge rubber or some other suitable flexible material is cut as shown in Fig. 3, having a serrated or irregular edge 32 on one side. The strip 30 is laid in the bottom of the shoe and adhesively or otherwise secured thereto as shown in Fig. 1. The serrations 32 upon the inner edge facilitate the bending of the strip as shown at the toe 34 and heel 36. In order to substantially fill the forepart of the shoe, a piece of sponge rubber sheet material 38 is cut, as shown in Fig. 6, having the serrations 40 on the opposite edges thereof. It will be apparent that it is not necessary for this piece 38 to exactly fit the cavity in the forepart, and therefore different sizes of the piece 38 are not required for each change in the size of the shoe. The piece 38, due to the serrations or irregular edge, will interfit with the marginal strip 30. The strip 30 and forepart piece 38 may be quickly laid in place and suitably secured by adhesive or otherwise. It will also be apparent that the marginal strip and the forepart piece might be made with straight edges instead of the serrated edges shown, and that a plurality of pieces might be cut to fill the forepart instead of the single piece 38.

Another method of filling the bottom cavity is shown in Figs. 2 and 4, in which the strip 42 of rubber or some other suitable material is employed. One end 44 of the strip is cut off at an angle and laid in place against the flange 22 of the insole, and the strip is continued around the entire marginal edge of the bottom cavity and then looped as shown at 46 to substantially fill the forepart of the shoe bottom.

A further modification is shown in Fig. 7. Strip material 50 is used having at least one edge segmented or slit by the cuts 52 which permit bending of the strips as shown. The forepart of the cavity may be filled with a single strip as in Fig. 2 or a plurality of pieces may be used as in Fig. 7.

It is to be understood that any suitable preformed material may be used which is flexible

so that it may be laid in place as described, such as leather, rubber, cork, felt or composition material. This method of construction reduces the stiffening of the shoe which results from the use of a hard bottom filler. Any strip or cord material may be used for filling the cavity which may be wound around the cavity. It is to be noted that a close fit is obtained at the margin of the cavity without the trouble of cutting a piece to exact size. In the claims, "segmented" is intended to refer to the provision of slits or notches which may be used to prevent bulging and crinkling when the strip material is bent as shown.

We claim:

1. In a shoe of the type having a bottom cavity between the insole and the outsole, a strip of sponge rubber laid around the margin of the cavity, said strip having a serrated inner edge and an elliptical piece of sponge rubber having a serrated outer edge laid in the cavity at the forepart of the shoe and approximately filling the cavity by having the serrations of the strip and the elliptical piece in interfitting relationship.

2. In a shoe of the type having a bottom cavity between the insole and the outsole, a rubber strip laid around the margin of the cavity, said strip having an irregular inner edge and a rubber piece having an irregular outer edge laid in the cavity at the forepart of the shoe and approximately filling the cavity by having the irregular edges of the strip and piece in interfitting relationship.

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