Sept. 29, 1936. H. HÄRTL 2,055,574

INSOLE

Filed Nov. 9, 1934

Fig. 1.

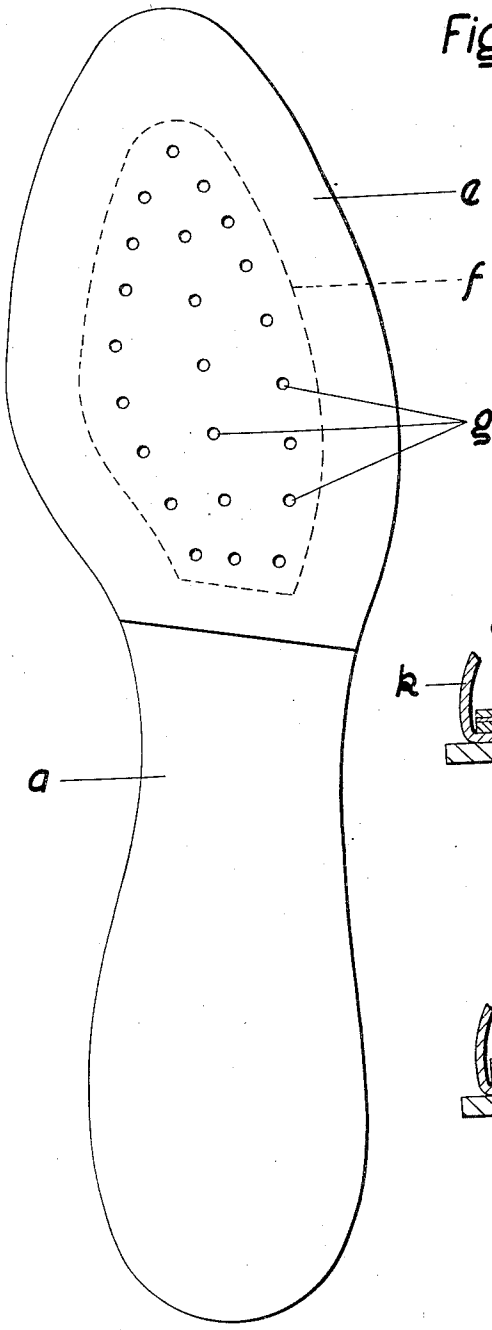


Fig. 2.

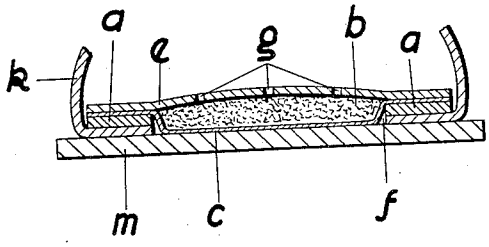
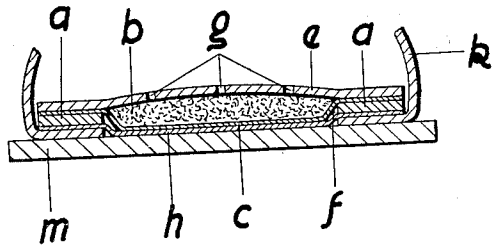


Fig. 3.



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UNITED STATES PATENT OFFICE

2,055,574

INSOLE

Hans Härtl, Dresden, Germany, assignor to Josef Müller, Prague, Czechoslovakia

Application November 9, 1934, Serial No. 752,315
In Germany November 17, 1933

1 Claim. (Cl. 36—44)

My invention relates to footwear and more especially to the insoles forming part of boots and shoes. It is an object of my invention to provide an insole which possesses particularly favorable properties.

The insole forming the subject matter of this invention is formed with a comparatively large aperture in which is arranged an elastic cushion, preferably a sponge rubber cushion, which is preferably enclosed between a thin sheet of rubber and a preferably apertured cover sheet of leather, cloth or the like. Preferably the rubber sheet projects between the circumferential edge of the sponge-rubber cushion and the inner edge of the aperture in which this cushion is arranged, and the marginal portion of the rubber sheet rests on the part of the insole which surrounds the aperture. The cover sheet is preferably attached to the insole by stitching or by means of a suitable cement or by other means.

In the drawing affixed to this specification and forming part thereof two insoles embodying my invention are illustrated diagrammatically by way of example.

In the drawing:

Fig. 1 is a plan view of an insole.

Fig. 2 is a transverse section of the forepart of the insole shown in Fig. 1.

Fig. 3 is a view similar to Fig. 2 but showing a modification.

Referring to the drawing and first to Figs. 1 and 2, *m* is the outsole, *k* is the upper, *a* is the insole and *f* is the aperture formed in the front half of the insole. *c* is a sheet of rubber resting with its marginal portion on the part of the insole surrounding the aperture, while its middle portion extends into the aperture, resting on the sole *m*. *b* is the sponge rubber cushion having substantially the contour of the aperture and resting on the middle portion of the rubber sheet *c*. *e* is the apertured cover sheet resting on the sponge rubber cushion and on the border portion of the insole, *g* being perforations providing the necessary ventilation and allowing the air enclosed in the sponge rubber cushion below the cover sheet and compressed by the foot of the wearer to escape when the foot is lifted from the ground, while the cushion is allowed to expand, taking in air and prepare a fresh intervening air space for the foot.

In the second modification shown in Fig. 3 a sheet of fabric *h* such as linen is interposed between the rubber sheet *c* and the sole *m*, its marginal portion being inserted between the upper and the insole and cemented or otherwise attached to this latter. This sheet of fabric serves for stiffening the part of the insole surrounding the aperture.

In preparing the insole I may split the front part of the piece of leather, from which it is formed, and form the aperture only in one of the two halves, the rubber cushion being inserted in the aperture and the other non-aperture half replacing the cover sheet *e* shown in Figs. 1 and 2.

I wish it to be understood that I do not desire to be limited to the exact details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

I claim: —

An insole comprising in combination a piece of leather having the form of an insole and provided with a larger aperture in its front portion, an elastic sheet arranged with its middle portion extending into the aperture and with its marginal portion resting on the portion of the leather piece bordering the aperture, an air-filled cushion on said middle portion, a cover sheet on said cushion and extending over said marginal portion, and a sheet of fabric extending underneath both said elastic sheet and said piece of leather.

HANS HÄRTL.