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M. MASUDA

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INSOLE FOR SHOES

Filed Sept. 18, 1929

Fig. 1.

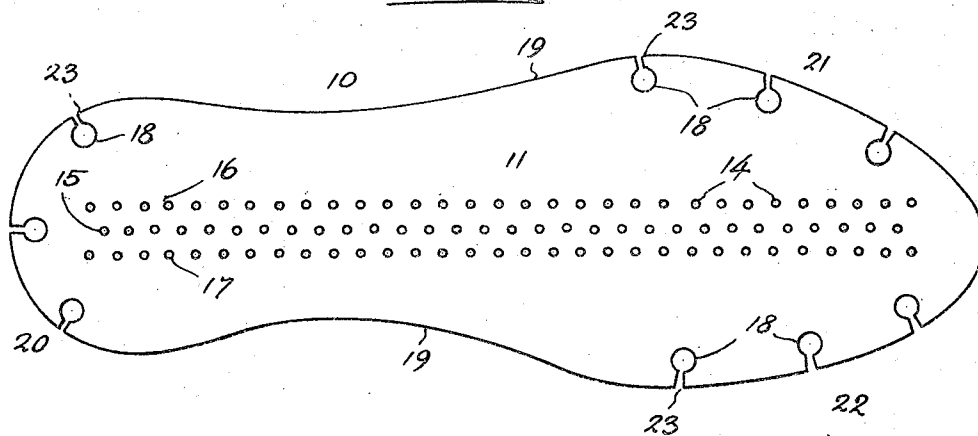


Fig. 3.

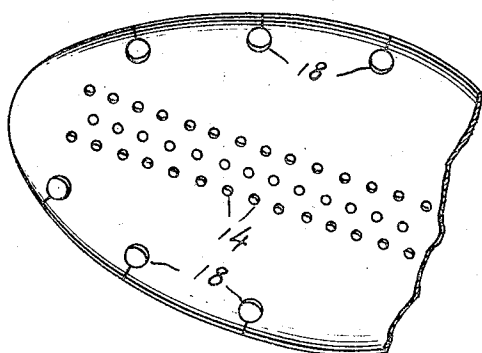
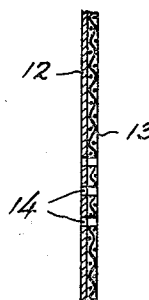


Fig. 2.



MATSUICHI MASUDA

INVENTOR

BY *Victor J. Evans*

ATTORNEY

WITNESS

C. Mank

UNITED STATES PATENT OFFICE

MATSUICHI MASUDA, OF NEW YORK, N. Y.

INSOLE FOR SHOES

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This invention relates to insoles for shoes and the like, and more particularly to insoles of the type adapted to be inserted loosely in the shoe to afford a better foot engaging surface than that usually provided in the shoe.

The primary object of the invention is to enable the insole to resist cracking or curling, particularly at the end of the heel portion, and at the sides of the toe portion, where such cracking or curling usually takes place due to the fact that the wearer's foot causes the upper surface of the leather sole of the shoe to become uneven, resulting in abrasions of the foot as well as rapid wear of the stockings.

Another object is to enable the insole to present a comfortable, smooth, ventilated surface for the foot. Still another object is to enable the insole to insulate the foot against excessive heat or cold, so that the feet can be cool in hot weather and warm in cold weather.

A further object is to enable the insole to be moisture proof, so that the foot can be kept dry even though the sole of the shoe may be wet; and also, to enable the insole to prevent perspiration of the foot and odor therefrom.

A still further object is to improve the construction of insoles generally, so as to make them long wearing, and to enable the same to be produced at small expense.

Other objects and advantages of the invention will be hereinafter specifically pointed out, or will become apparent, as the specification proceeds.

With the above indicated objects in view, the invention resides in certain novel constructions and combinations and arrangement of parts, clearly described in the following specification and fully illustrated in the accompanying drawings, which latter show an embodiment of the invention as at present preferred.

In the drawings:—

Figure 1 is a top plan view of the insole.

Figure 2 is an enlarged partial sectional view; and

Figure 3 is a detail perspective view illus-

trating the conformation feature to prevent buckling or cracking.

The insole 10 in this instance comprises a thin, flat, strip 11, shaped to conform to the outline of the shoe sole. This strip 11 is formed as a flexible unit and preferably includes a top layer 12 and a bottom layer 13. The top layer in this instance consists of a material which is impervious and at the same time presents a smooth, glossy surface. I have found celluloid to be very satisfactory for this purpose, but any material having substantially the same characteristics may be used. The bottom layer 13 in this instance, consists of a fabric material though I may use fibre or any reasonably strong material, or celluloid-like material at both upper and under layers, with equal satisfaction. The top and bottom layers are permanently united so that the two layers constitute an integral unit.

To provide for ventilation of the insole, I lay out a plurality of series of small relatively closely spaced apertures 14, extending the same longitudinally of the insole in a central line 15, with lines 16 and 17 to the left and right of the central line, respectively. These ventilating apertures enable the feet to resist the development of perspiration, with consequent odor; and they also tend to help the dissipation of heat developed from friction during locomotion.

The construction of the insole enables the same to withstand cracking along the body of the insole; yet the insole is flexible and adapted to conform to the depressions in the inner leather sole of the shoe which are usually formed by the foot after a short use. In order to prevent cracking or curling of the outer edges of the insole at the end of the heel portion and at the sides of the toe portion, which usually takes place due to the fact that depression of the leather sole of the shoe occurs at these points, I provide a plurality of rounded notches 18 around the outer edge 19 of the insole. In this instance, I form a series of three such notches at the end of the heel portion of the insole, as seen at 20; a second series 21 at the left side of the toe portion, and a third series 22 at the

right side of the toe portion. These notches 18 are spaced slightly from the edge of the insole. The portion of the insole between the outer edge 19 and the rounded portion 18 of each notch is cut-out to provide a relatively narrow open portion 23. The notches 18 are appreciably larger than the apertures 14, and rather more widely spaced relatively to each other. By this construction, as the edge of the insole is caused to turn up or curl, due to the depression of the leather shoe sole at the sides of the foot, the sides of the open portion 23 meet each other to close up the open portion 23, thus presenting an unbroken outer edge 19 as seen in Figure 3. Thus there are no cracks formed, nor can the edge of the insole bulge up to injure the foot or its covering. I have found that three notches in each series, as illustrated herein, accomplish the above described purposes satisfactorily in a majority of cases; but a greater or less number of notches may be provided depending on the size of the insole.

The insole constructed as above affords a very comfortable bearing for the foot, in any temperature or weather condition, and its therapeutic advantages render it highly desirable for use by persons obliged to be on their feet a large part of the day.

The hereinbefore described constructions admit of considerable modifications without departing from the invention; therefore, I do not wish to be limited to the precise arrangements shown and described, which are, as aforesaid, by way of illustration merely. In other words, the scope of protection contemplated is to be taken solely from the appended claims, interpreted as broadly as is consistent with the prior art.

What is claimed as new is:—

1. As a new article of manufacture, an insole for shoes comprising a thin flat flexible strip shaped to conform to the outline of the shoe, said insole including a top layer of smooth, glossy impervious material and a base layer of other material, said layers united to form an integral unit, said insole having a plurality of notches at the end of the heel portion of the strip, a plurality of notches at the right side of the toe portion and a plurality of notches at the left side of the toe portion, each of said notches including an open portion spaced slightly from the edge of the insole and a smaller cut-out extending from said open portion through the outer edge of the insole, the parts of the insole at the sides of the narrow cut-out portions being adapted to meet to close up said narrow cut-out portion as the edges of the insole turn up within the shoe to conform to depressions in the upper surface of the shoe sole.

2. As a new article of manufacture, an insole for shoes comprising a thin, flat flexible

strip shaped to conform to the outline of the shoe, said insole including a top layer of smooth, glossy impervious material of the character of celluloid and the like and a base layer of fabric material, said layers united to form an integral unit, said insole having a plurality of notches at the end of the heel portion of the strip, a plurality of notches at the right side of the toe portion and a plurality of notches at the left side of the toe portion each of said notches including an open portion spaced slightly from the edge of the insole and a relatively narrow cut-out extending from said open portion to the edge of the insole, said notches being appreciably larger and more widely spaced than said longitudinal apertures, and the parts of the insole at the sides of the narrow cut-out portions being adapted to meet to close up said narrow cut-out portion as the edges of the insole turn up within the shoe to conform to depressions in the upper surface of the shoe sole.

In testimony whereof I have affixed my signature.

MATSUICHI MASUDA.