June 24, 1924. 1,499,238

J. MALCHER

RUBBER HEEL

Filed Oct. 31, 1923

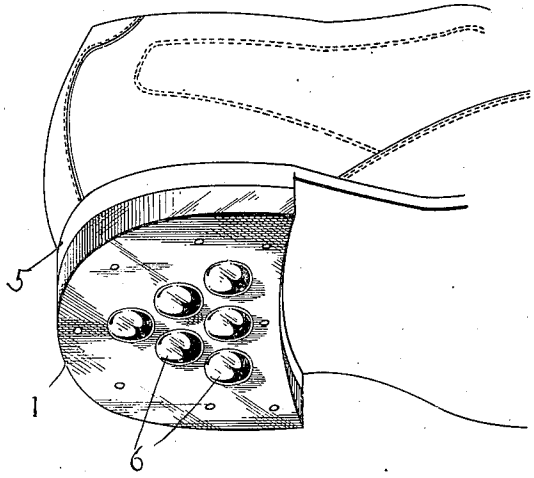


Fig. 1.

Fig. 3

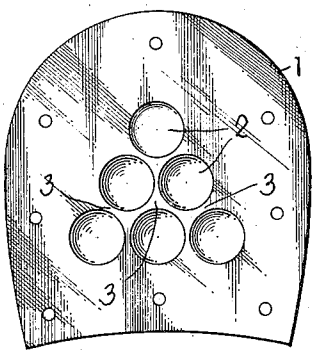
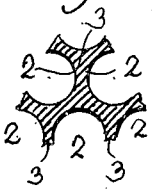
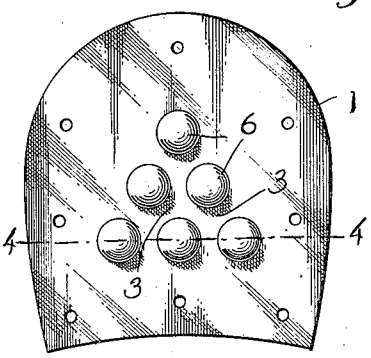


Fig. 2.

Fig. 6.





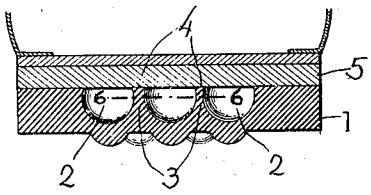


Fig. 4.

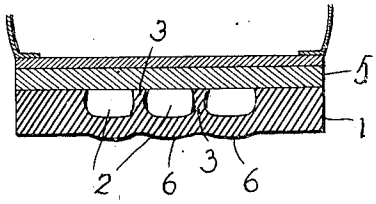


Fig. 5.

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UNITED STATES PATENT OFFICE.

JOHN MALCHER, OF CHICAGO, ILLINOIS.

RUBBER HEEL.

Application filed October 31, 1923. Serial No. 671,912.

To all whom it may concern:

Be it known that I, JOHN MALCHER, a citizen of the United States, resident of Chicago, in the county of Cook and State of Illinois, have made a certain new and useful Invention in Rubber Heels; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view of the invention as applied.

Figure 2 is a top plan view of the heel.

Figure 3 is a bottom plan view of the same.

Figure 4 is a section on the line 4—4, Figure 3.

Figure 5 is a similar view with heel under compression as in walking.

Figure 6 is a detail section on the line 6—6, Figure 5.

The invention has relation to rubber heels for boots and shoes, having for an object the provision of an improved heel of this description.

The invention consists in the novel construction and combinations of parts as set forth in the appended claim.

In the accompanying drawings illustrating an embodiment of the invention, the numeral 1 designates the body of the heel, having opening into its upper surface a plurality of cavities 2, preferably six in number and arranged close together in the central portion of the heel with solid vertical partition walls 3 separating the same and abutting at their tops 4 against the leather base 5 of the heel, said tops being in the same plane as the top surface of the heel body.

The cavities are arranged close together in a field occupying the central portion of the heel and have their lower ends in a plane above the plane of the bottom of the heel.

Underlying the cavities 2 centrally thereof are a plurality of protuberances 6, one protuberance underlying each cavity, the cavities being each substantially semi-spherical in form with some excess, and the protuberances being each somewhat less than semi-spherical or ball form, the radii of the protuberances being respectively less than the radii of the cavities, whereby the former project to a less extent from the tread surface of the heel and are more scattered thereon, having spaces therebetween greater than in the case of said cavities.

The protuberances are of small diameter compared to that of said cavities and project below the plane of the bottom of the heel.

The six cavities and protuberances are arranged in triangular fashion with one side of the triangle formed by three protuberances and cavities facing and approximately parallel to the breast of the heel, the other two sides of the triangle being made up each of three cavities and three protuberances, converging rearwardly of the heel.

In the use of this heel, the scattered partial ball form protuberances in their contact with the ground in walking will partially merge into the heel body as shown in Figure 5 of the drawings, the shock of contact being cushioned by the compression of the air contained in said cavities, and the partitions 3 at all times in contact at their tops with the leather base of the heel and being thickened under the compression following from the load borne aiding materially in the cushioning effect, said partitions being of compound radiating form and serving to prevent distortion of the heel when used continuously owing to their mutual bracing effect.

I claim:—

A rubber heel having opening into its upper surface a plurality of cavities of approximately semi-spherical form and arranged close together in a field occupying the central part of the heel and having their lower ends located in a plane above the bottom plane of the heel, and a plurality of partial ball form protuberances of small diameter compared to that of and underlying said cavities and projecting below the bottom plane of the heel.

In testimony whereof I affix my signature.

JOHN MALCHER.