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M. W. HIRSHFIELD

CUSHIONED HEEL

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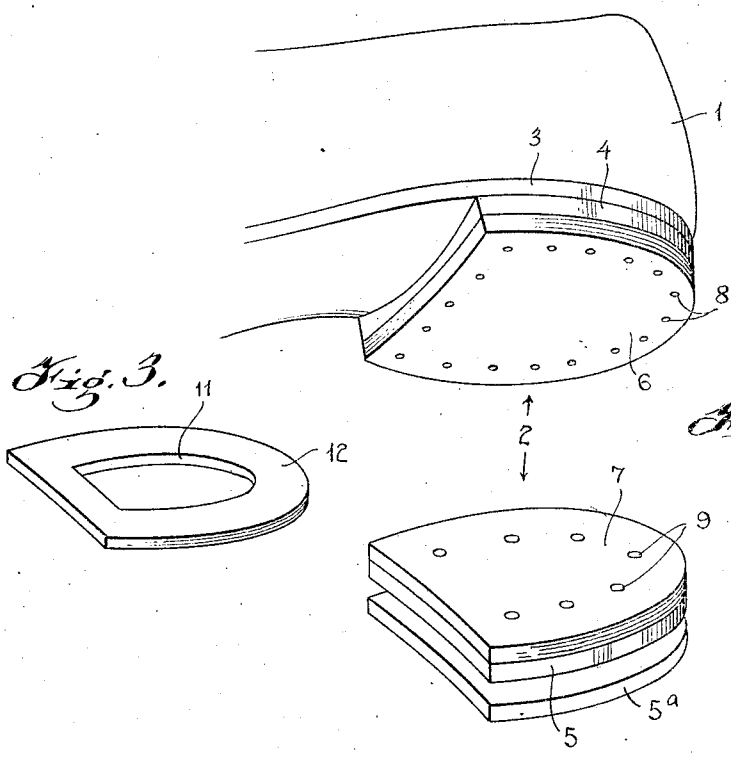


Fig. 1.

Fig. 3.

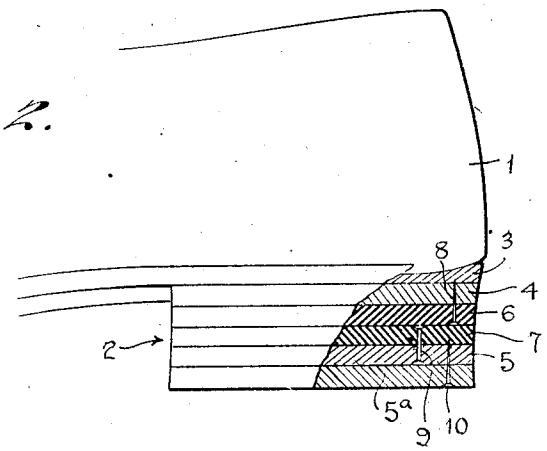


Fig. 2.

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CUSHIONED HEEL.

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This invention relates to foot coverings and particularly to the structure of the heel portion thereof.

The resilient heel in common use is built up of a series of leather lamentations called lifts and where a cushioned effect is desired the lower or outermost lift is made of rubber, the rubber being generally secured to the leather lifts by means such as nails driven through the rubber and into the leather lifts. This construction is open to the objection that the rubber portion serves not only as the cushioning element but also as the wear piece and as rubber is not as durable as leather it therefore wears out more quickly. Furthermore, as the rubber lift wears down the lower end of the securing nails become flush with the worn surface of the rubber, and the wearer in fact begins to walk on these nails thus destroying to a great extent any cushioning effect which it is hoped to attain by the employment of the rubber lifts. Where I have attempted to overcome this by cementing the rubber, I have found that an effective union between leather and rubber cannot be attained by the use of a binder such as cement. In the construction of the invention these objections are overcome and at the same time a tread is constructed which is resilient, free from the danger of the slipping of rubber on wet surfaces, and from that noiseless feature of a rubber heel which is so objectionable to some people.

Another one of the objects of my invention is an arrangement whereby the lower portion of the heel which is subject to wear may be readily removed and replaced.

Among the more important objects of my invention therefore are: The provision of a cushioned heel which includes a cushioning element and a wearing element; the provision of a cushioned heel in which the cushioning element is formed as an intermediate part thereof; the provision of a cushioned heel formed without the use of rigid elements passing therethrough; the provision of a heel having a cushioning element which is non-rigid throughout; the provision of a heel having a cushioning element secured in position without the employment of any rigid member passing therethrough; the provision of a heel having a plurality of cushioning elements secured to each other by a binder; the provision of a heel having its intermediate portion formed of a plurality of cushioning members cemented together; the provision of a heel having an intermediate air pocket; the provision of a heel having a cushioning element provided with a space intermediate thereof; the provision of a heel having a cushioning element as an intermediate part thereof, said element having an air space therein; the provision of a heel construction, having a readily replaceable lowermost portion; the provision of a heel having a cushioning element as an intermediate portion thereof in association with a readily replaceable lower portion; and the provision generally of a new and improved heel construction of the character to be described.

For the attainment of these objects and of such other objects as will appear or be pointed out, I have illustrated my invention in the drawings wherein:

Figure 1 discloses an "exploded" view of one form of shoe heel constructed in accordance with my invention;

Figure 2 is a side view thereof partly broken away; and

Figure 3 is a view of a form of insert which may be used in constructing the heel shown in Figure 1.

Now referring to the drawings more in particular, 1 represents a portion of a shoe, said shoe having a heel 2. The heel is constructed of the usual rand 3, and the two leather lifts 4 and 5 in between which lifts is sandwiched a pair of resilient members 6 and 7 made preferably of rubber. The rubber lift 6, is secured to the leather lift 4 by means of a row of nails 8, driven through the rubber at preferably countersunk places as is usual in the art. Securing means 9 in a similar manner secure the rubber lift 7 to the leather lift 5. It will be noted that although both rows of securing means 8 and 9 are parallel to the edges of the lifts, one of the rows, in this instance the row 9 is positioned inwardly with respect to the other. This construction is provided so that the heads of the nails will be cushioned against the rubber of the next lift and thereby any possibility of contact between the sets of nails is prevented. After the rubber lifts are secured to their respective leather lifts the exposed surfaces of the rubber lifts 6 and 7 are cemented or vulcanized together, thus forming a complete heel.

The heel is provided with the lowermost lift 5^a which is made preferably of leather

and which in fact forms the wear piece for the heel.

The manner in which the various parts of the heel are secured in position forms an important part of my invention generally, and an essential part of some phases thereof.

As will be observed upon viewing Figure 2 of the drawings, the rubber lift 7 and the leather lift 5 are secured together preferably by rivets 9, so that these two become in fact a unit, and the lowermost lift 5ª is in turn secured to this unit in any preferred way as by nails 10 of a type which permit of the ready removal of the lift 5ª and of its replacement by another. These nails 10 extend furthermore only part way, if at all, into the rubber lift 7. When therefore this lowermost lift shows any wear, its removal is easy because of the manner of its support from the upper lifts and because of the unitary association of the lifts 5 and 7. It will furthermore be observed that due to the manner of fastening the various lifts to each other, the possibility of impairing the cushioning function of the rubber lifts because of rigid members through these lifts is avoided.

It will therefore be understood that in one sense my heel construction includes (1) the upper or supporting means which is partly resilient (2) a second section which is also partly resilient (3) and a third and readily removable section or wear piece made preferably of leather.

If desired an intermediate lift 12 of rubber may be introduced and cemented or vulcanized between the lifts 6 and 7 to further increase the resiliency of the heel. This lift will further increase the shock absorbing quality of the heel if cut out or cast out in its central portion as indicated at 11 to provide an air cushion, working on the principle of a pneumatic shock absorber enclosed between the lift 12 and the two lifts 6 and 7. The construction of the heel as above set forth adapts itself toward easy manufacture thereof.

Having thus described my invention what I claim as new is:

1. A tread member comprising a pair of leather lifts, a pair of rubber lifts each respectively nailed to a leather lift, said rubber lifts being securely joined to one another, the nails securing one of the rubber lifts to its leather lift being disposed out of alignment with the nails securing the other rubber lift to its complementary leather lift.

2. A tread member comprising upper and intermediate sections, an intermediate cushioning member therebetween and a lower removable wear member, the upper and intermediate sections each consisting of a leather lift nailed to a cushioning element, the nails of the upper section and the nails of the lower section being out of alignment with each other, said sections being secured to opposed faces of the intermediate cushioning member by a binder, said cushioning member having an air space therein.

3. A tread member including a plurality of rubber lifts in superposed relation, leather lifts respectively superjacent and subjacent to said rubber lifts, the rubber lifts being secured to each other along contacting surfaces by a binder and to the adjacent leather lifts by metallic fastening means.

In testimony whereof I have hereunto signed my name.

MAURICE W. HIRSHFIELD.