July 6, 1948. A. H. KERNGOOD 2,444,777

HEELS FOR FOOTWEAR

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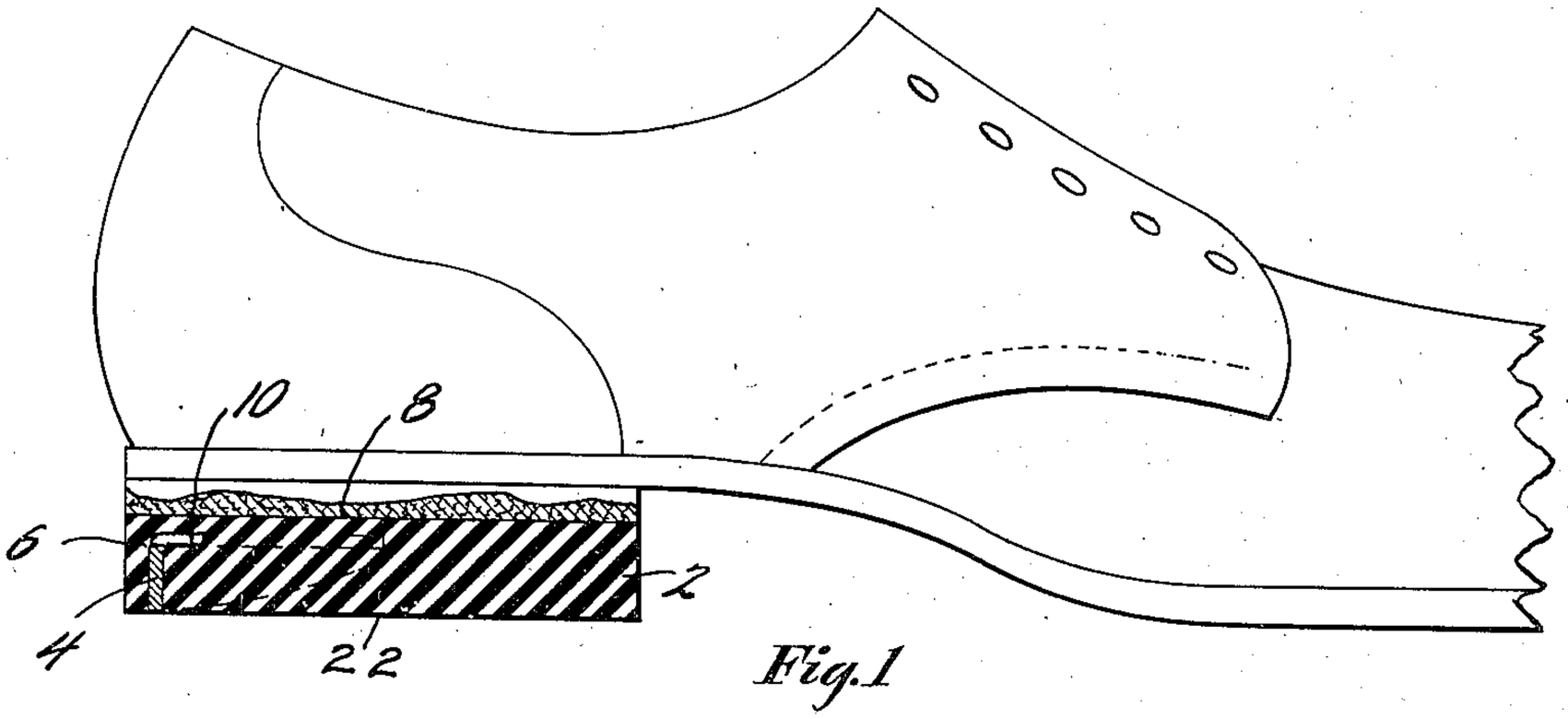

Fig. 1

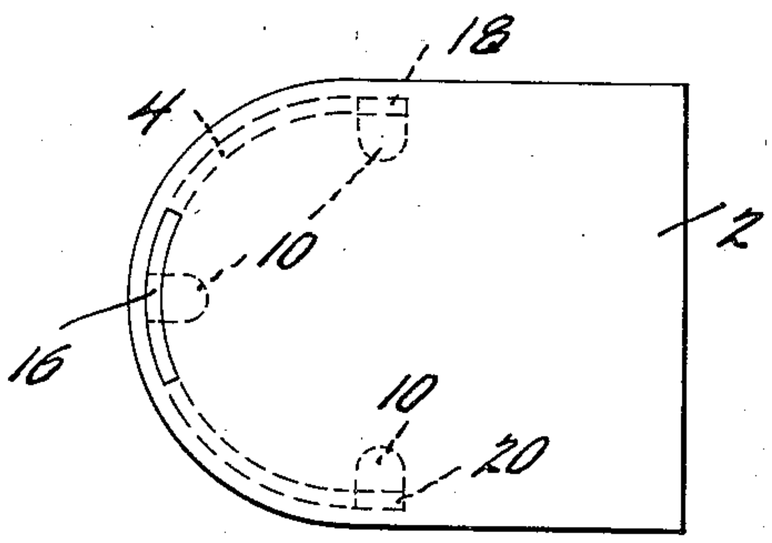

Fig. 2

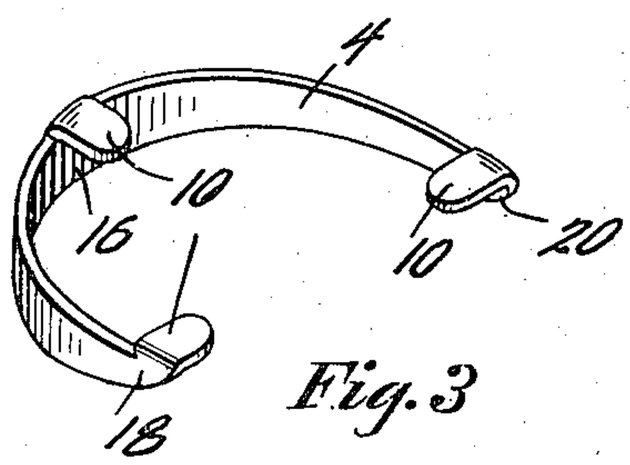

Fig. 3

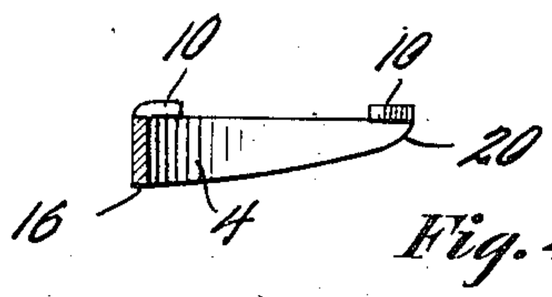

Fig. 4

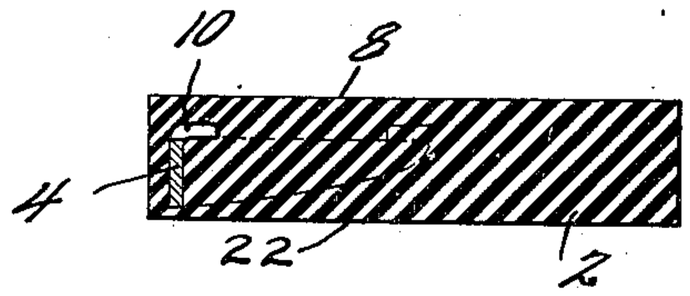

Fig. 7

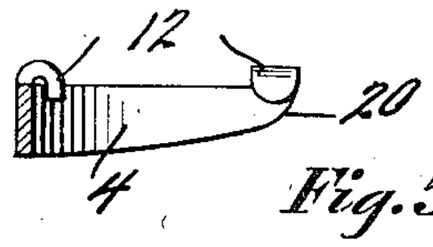

Fig. 5

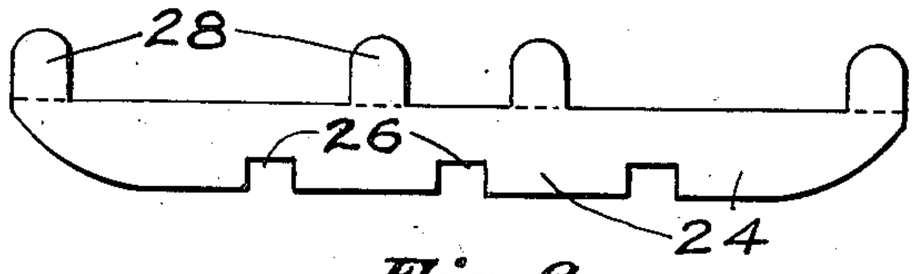

Fig. 8.

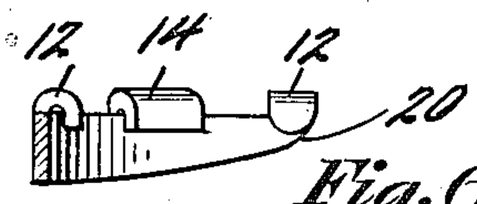

Fig. 6

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HEEL FOR FOOTWEAR

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3 Claims. (Cl. 36—75)

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This invention relates to heels for shoes, boots and other footwear.

Uneven wear of heels on shoes, boots, etc., is highly prevalent, and many expediencies have been devised for correcting or counteracting this uneven wear. These expediencies include studs, plates and other objects of varying configuration, made of material possessing greater resistance to wear and generally harder than the main body of the heel and disposed at selected locations in the body of the heel where greatest wear of the heel takes place. In these prior heels, the harder material has a tendency to break away from the softer material unless nailed or otherwise firmly secured by prongs or screws. The various fastening means have proved to be unsatisfactory and objectionable.

Among the objects of this invention is the provision of a heel for shoes, boots, etc., with wear-resisting element firmly secured in and to the heel.

A further object of this invention is to provide a rubber heel wherein the wear-resisting element is a strip or plate of wear-resisting metal, curved to conform to the heel and adhesively secured to the rubber in order to adequately resist separation therefrom.

More specifically, it is an object of this invention to provide a rubber heel with a metal strip or plate as aforesaid, said strip or plate having a configuration so that the rear part is substantially at the thread face of the heel, from which the plate preferably tapers inwardly below the surface of the heel.

A still further object of this invention is to provide a novel wear-resisting element for use in heels of rubber composition.

Other, further and more specific objects of this invention will become readily apparent to persons skilled in the art from a consideration of the following description when taken in conjunction with the accompanying drawing wherein:

Fig. 1 is a fragmental side elevation of a shoe provided with novel heel, a portion of the heel being broken away to illustrate the internal construction.

Fig. 2 is a plan view of the heel shown in Fig. 1.

Fig. 3 is a perspective view of the curved strip or plate of hardened metal constituting the wear-resisting element of my heel.

Fig. 4 is a cross section through the crested middle of the plate shown in Fig. 3.

Fig. 5 is a cross section through the middle of

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a modified form of plate serving as the wear-resisting element.

Fig. 6 is a section through the middle portion of another modification of wear-resisting element.

Fig. 7 is a section through a heel showing the wear-resisting element disposed entirely below the outer face of the heel.

Fig. 8 is a plan view of a metal blank from which another modification of my wear-resisting element is formed.

The heel forming my invention comprises the body 2 made of a suitable rubber composition commonly employed in the art and having the wear-resisting plate or strip 4 adhesively secured to the rubber. This plate 4 is made of wear-resisting metal having a thickness of 1/16 to 1/8" and is vulcanized to the body 2 by any process well known to the art. The body 2 is made of rubber composition, the rubber of which is preferably vulcanized. The wear-resisting strip or plate 4 is positioned in the heel prior to molding and vulcanization.

The band or plate 4 is curved to conform to the rounded portion of the heel and is disposed approximately 1/8" from the edge of the heel. The plate 4 extends into the heel to a level 6 so that at least 1/8 inch of rubber composition separates the plate from the outer face 8 of heel. This plate 4 is preferably provided with lugs 10 disposed in substantially the same plane, which are set in the heel and afford proper bearing support in substantially the same plane and also anchoring means for the plate. In Figs. 1, 2, 3, 4 and 7 these lugs are shown substantially at right angles to the plate or strip 4. Lugs 12 of U-shape, shown in Figures 5 and 6, or of other configuration may also be employed, and if, desired, intermediate lugs 14 may be provided (as shown on Fig. 6) in addition to the middle lug and end lugs shown in the plates illustrated in the other views.

An important feature of this invention is the novel configuration of the plate or strip 4 of hard, wear-resisting metal. This plate is crested at the middle portion 16, the depth gradually receding or tapering toward the ends 18 and 20. When this plate 4 is positioned in the heel as shown in Fig. 1, the crest 16 will substantially reach the tread face 22 of the heel. From this deepest portion of the plate 4, the edge of the plate recedes inwardly to provide a gradually increasing cushion of rubber composition between the plate 4 and the surface of the heel. With this construction of heel, there is afforded not only

the wear-resisting element to forestall run down heels, but there is also provided the cushioning material for promotion of much comfort to the wearer.

In Fig. 8, which shows the wear-resisting plate before it is curved into shape for use, the crested portion **24** is provided with notches **26**. After this plate is curved and incorporated in the heel, the lugs **28** will be at substantially right angle to the plate and rest in the heel, as in Fig. 1. The notches **26** will also be filled with rubber composition, which provides additional means for retaining the wear-resisting element in the heel. It is to be understood that the number and location of the lugs and notches may be varied to meet the particular needs and fancy of the user. This modification has been found particularly adaptable to heels of soft rubber composition.

To increase adherence of the plate to the rubber composition, one or both of the walls of the plate may be roughened prior to its vulcanization to the rubber composition of the heel.

The expression "rubber composition" as used in the specification and claims is intended to include compositions wherein the elastic component is natural rubber, artificial rubber and/or mixtures of both.

The present invention is not limited to the specific details set forth in the foregoing examples which should be construed as illustrative and not by way of limitation, and in view of the numerous modifications which may be effected therein without departing from the spirit and scope of this invention, it is desired that only such limitations be imposed as are indicated in the appended claims.

I claim as my invention:

1. A wear-resisting element for heels for footwear, said wear-resisting element comprising a crested plate of wear-resisting material curved to conform to the curved edge of a heel, the bottom of the plate being in substantially the same plane and the top edge of the plate having an intermediate high portion and receding from said high portion toward the extremities of the plate.

2. A wear-resisting element for heels for footwear, said wear-resisting element comprising a crested plate of wear-resisting material curved to conform to the curved edge of a heel, the bottom of the plate being in substantially the same plane and the top edge of the plate gradually receding from a high point in the center toward the extremities of the plate.

3. A heel for footwear, said heel comprising a body of rubber composition with an imbedded wear-resisting element, said element comprising a crested plate of wear-resisting material curved to conform to the curved edge of the heel, the bottom of the plate being in substantially the same plane and the top edge of the plate having an intermediate high portion and receding from said high portion toward the extremities of the plate.

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