Jan. 31, 1939. P. KYSKA 2,145,658

REINFORCING PLATE FOR SHOES

Filed Dec. 15, 1937

Fig. 1.

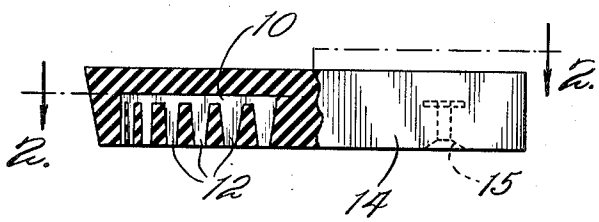


Fig. 2.

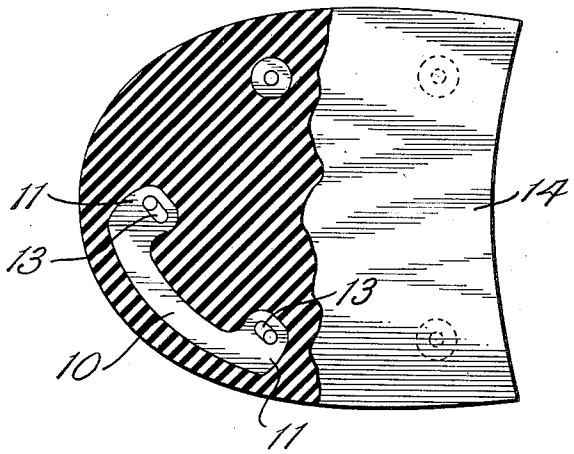
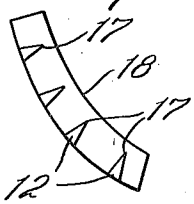


Fig. 5.



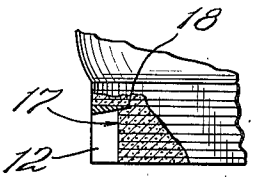


Fig. 6.

4.

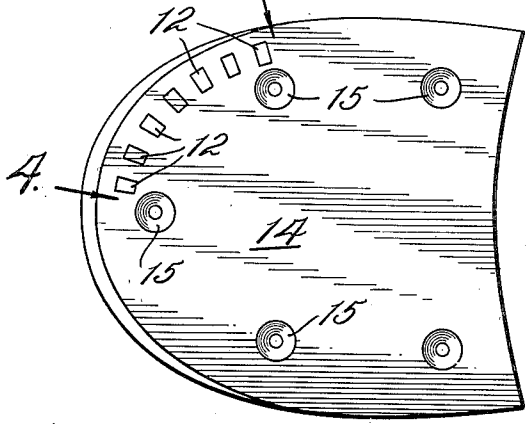


Fig. 3.

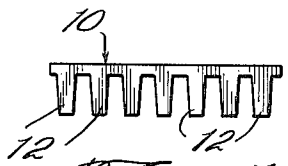


Fig. 4.

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REINFORCING PLATE FOR SHOES

Peter Kyska, Chicago, Ill.

Application December 15, 1937, Serial No. 179,852

2 Claims. (Cl. 36—75)

My invention relates to a metal reinforcing plate adapted to be placed in or on shoe heels or soles which are made of composition material or its equivalent, and further, is directed to the combination of a shoe heel or sole having embedded or otherwise molded therein the metal reinforcing plate or member of my invention.

It is well known that rubber composition heels of the standard type when forming the lower and main portion of the heel of a wearer much more quickly wear away along the rear edge thereof and more usually along the outer side of the rubber heel to cause the shoe to become misformed and one-sided and to frequently cause the wearer to get into a permanent habit of uneven walking so that the outer portions of his shoe heels and soles tread upon, contact and wear upon the ground or other surface.

An important object of my invention is the provision of a reinforcing plate which is adapted to be molded and embedded into a rubber composition heel or the like which, while wear-resisting, will not eliminate the resilient and cushioning qualities of the rubber heel to an objectionable degree and which will effectively aid in maintaining the wear upon the heel substantially evenly across its bottom surface.

An important object of my invention is the provision of a reinforcing member for shoe heels or the like which comprise an upper shank or plate portion and a plurality of integral spaced apart extensions or lugs which terminate in normally free ends and which are adapted to be gradually worn away, and further to provide a composition heel having a plate or reinforcing member substantially like the foregoing molded therein.

A further object of my invention is the provision of a metal heel or shoe plate which is adapted to be attached to a heel or sole to prevent uneven wear of the same, and which consists of a metal flat portion having a plurality of integral spaced apart lugs or extensions which are adapted to be worn away gradually from their free ends, and further to provide a plate like that above-described wherein the normally vertical edges of the lugs are formed relatively sharp and gradually beveled in order that the plate may be driven into either the side or bottom of a heel or sole.

Other and further objects of my invention will be apparent from the following specification and claims.

On the drawing:

Fig. 1 is a partially side elevational view of a composition heel with parts broken away and showing the reinforcing plate therein.

Fig. 2 is a top plan view of a heel with portions broken away to show the upper surface of my metal reinforcing plate.

Fig. 3 is a bottom view of a heel having my reinforcing plate molded therein and showing the ends of the lugs thereof.

Fig. 4 is a side elevational view of one of my reinforcing plates.

Fig. 5 is a view looking at the bottom of a slightly modified form of reinforcing plate.

Fig. 6 is a fragmentary and side elevational view with parts broken away illustrating the reinforcing plate of Fig. 5 molded in a conventional heel.

Referring to Fig. 1, reference numeral 10 designates an arcuate relatively flat metal plate or member, preferably made of a size shorter than one-third of the length of the arcuate side wall of a conventional rubber heel, and which plate may be as small as desired and practicable. The plate or member 10 is slightly enlarged at its opposite ends to form integral ears 11, which ears have formed therein end apertures 13. The apertures 13 are preferably so spaced that they will both register with nail receiving apertures which are conventional and usual in standard rubber composition heels. Said apertures 13 are preferably slightly oval or elongated so that a single plate may fit and be embedded and molded into several sizes of rubber heels.

Reference numeral 12 designates a plurality of spaced apart metal lugs which are formed integral with the flat plate portion of the reinforcing member and which extend perpendicularly therefrom and which are of substantially equal length and terminate in a plane substantially parallel with the flat plate 10. Said lugs are preferably of the same thickness as the plate 10 and are preferably spaced apart from each other a distance substantially equal to the width of one of the lugs.

As shown in Figs. 1 and 2, numeral 14 designates a rubber composition heel of usual shape having a plurality of nail receiving apertures 15 formed therein and having molded and embedded therein suitable metal washers in registry with apertures 15 whereby said heels may be securely nailed and held to a shoe or the like. The metal reinforcing plate or member 10 is illustrated as molded and embedded into the rubber heel along the arcuate edge thereof and preferably along the side and rear surface of said arcuate edge where the greatest amount of wear on the heel

is usually encountered and where heels are usually worn more quickly on the outer and rear edges than elsewhere. It is to be noted that the reinforcing member is embedded entirely within the rubber heel a short distance from said arcuate edge, with the exception that the ends of the lugs 12 are exposed and terminate flush with the bottom surface of the heel, thus wholly concealing the reinforcing member with the exception of the lug ends. The important purpose of having said lugs 12 spaced apart a substantial distance is so that the edge portion of the rubber heel adjacent and outside of the reinforced member will be firmly and integrally joined with the main body of the rubber heel by the connected portions of the molded rubber which are formed between said lugs respectively.

A further advantageous structural feature is that the reinforcing member or plate is positioned when the heel is molded so that the end apertures 13 thereof will lie in registry with two of the nail apertures to perform the same function as if washers were placed in such heel apertures. When the heel is secured to the shoe, the nails may be driven through all the apertures alike until their heads engage said embedded washers and the said molded-in reinforcing member.

Figs. 5 and 6 illustrate a slightly modified form of my reinforcing plate which is similar to that hereinbefore described with the exception that the inner edge of the reinforcing plate is formed bevelled and relatively sharp as indicated by numeral 18, and the lugs 12 thereof are formed triangular in cross section so that their inner edges are relatively sharp, as indicated by reference numeral 17. This form of reinforcing plate is adapted to be driven into the edge of a heel or sole, as for example, a leather heel or sole, from the edge thereof and at a position where the wear normally first wears down the heel or sole. This form of reinforcing plate is adapted to be manufactured and sold as an independent unit separately from any composition heel or sole and as before stated, is easily attachable by driving the same into the edge of the round engaging portion of the shoe until the side surface thereof is at least flush with the edge surface of the heel or sole respectively.

An important accomplishment of my invention is that it provides a metal reinforcing wear-resisting plate or member which is wholly concealed from the outside, which does not wholly resist wear but which retards the wearing away of that area of the heel or sole which most frequently is first worn away; and which will wear away slowly and evenly and simultaneously prevent a too rapid wearing away of the heel areas adjacent thereto, this in turn preventing the too frequent one-sided wearing away of the heels and consequent uneven positioning of the shoe.

Various changes may be made in the embodiment of the invention herein specifically described without departing from or sacrificing any of the advantages of the invention or any features thereof, and nothing herein shall be construed as limitations upon the invention, its concept or structural embodiment as to the whole or any part thereof except as defined in the appended claims.

I claim as my invention:

1. In a composition tread element for shoes or the like, a body member of moulded composition material having a substantially flat tread surface and an arcuate side wall and having a plurality of nail-receiving apertures therein, and a metal member embedded in said body and having a plurality of integral downwardly extending spaced apart accurately aligned lugs terminating at their lower ends substantially flush with the tread surface of said body member, said metal member having apertures therethru in registry with certain nail-receiving apertures of said body member, each of said downwardly extending lugs having one side edge relatively sharp and disposed in a direction toward the center of the heel.

2. In combination, a heel of yieldable composition material having a plurality of nail receiving apertures therein, and a reinforcing plate adapted to be mounted in a heel or the like comprising an arcuate substantially flat metal body having a plurality of spaced apart integral lugs, enlarged integral end portions on said body and having an elongated aperture in each thereof, said lugs being of substantially equal length, said elongated apertures of said end portions being adapted to receive heel-securing nails, said lugs being reduced at their free ends, the inner edge of said arcuate body being relatively sharp to permit driving thereof into a heel from its lateral side.

PETER KYSKA.