

L. McMILLAN.
 SHOE HEEL.
 APPLICATION FILED AUG. 25, 1920.

1,371,040.

Patented Mar. 8, 1921.

Fig. 1.

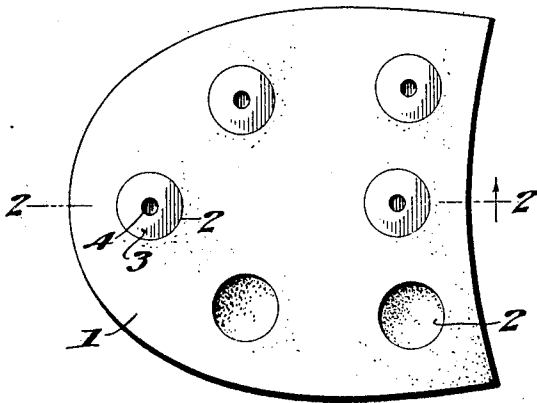


Fig. 2.

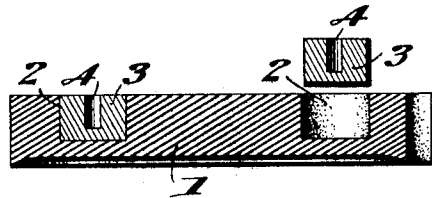


Fig. 3.

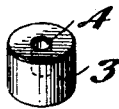


Fig. 4.

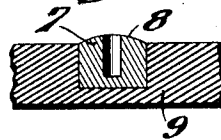


Fig. 5.

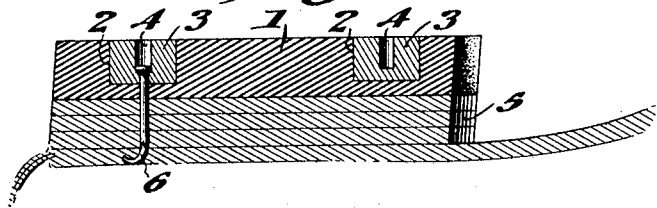
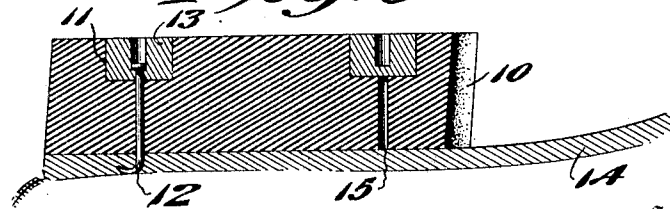


Fig. 6.



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SHOE-HEEL.

1,371,040.

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To all whom it may concern:

Be it known that I, LEVI McMILLAN, a citizen of the United States, residing at Wilmington, New Hanover county, and State of North Carolina, have invented new and useful Improvements in Shoe-Heels, of which the following is a specification.

My invention relates to an improvement in shoe heels, and particularly to rubber cushion heels.

An object is to provide, with a rubber or other cushion body, means to receive the fastenings for the heel body which will perform the additional functions of reinforcing the rubber heel against wear and will give additional friction to hold against slipping.

A further object is to so construct and arrange the parts that the resiliency of the cushion body is not materially lessened, while at the same time non-metallic reinforcement is presented for the nails or fastenings, and at those points on the surface of the heel which receive the greatest wear in use.

A still further object resides in constructing the heel in a manner to reduce the cost of manufacture to a minimum, while at the same time increasing the durability and wearing qualities thereof.

With these and other objects in view, which will be apparent from the drawings, specification and claims, this invention includes certain novel features of construction and combinations of parts which will now be set forth.

In the drawings:

Figure 1 is a view in bottom plan of a heel constructed in accordance with my invention.

Fig. 2 is a sectional view on line 2—2 of Fig. 1.

Fig. 3 is a view in perspective of one of the reinforcing plugs.

Fig. 4 is a fragmentary sectional view showing a slightly modified form of plug.

Fig. 5 is a longitudinal sectional view through the heel portion of a shoe showing my improved heel applied thereto.

Fig. 6 is a view similar to Fig. 5 illustrating the embodiment of the invention in a whole rubber heel.

The heel body 1 is of rubber or other cushion material, and this body may be of the half heel or whole heel type. In the main embodiment I have shown a half heel, and

in this adaptation have illustrated a heel of large size such as would be used upon a man's walking shoe, however it will be appreciated that this is only one form of the heel and that variations can be made to suit the requirements of use.

As illustrated the cushion heel body is adapted to be secured upon the shoe heel by the use of six nails or fastenings, although a greater or less number might be used, and with this in mind the cushion body has the recesses 2 formed in the outer side thereof to extend substantially three-fourths of the way through the body. These recesses are located in a line conforming substantially to the edge contour of the body, and are preferably made circular, although they might be of other configuration. It is desirable that the recesses have straight side walls as the cushion body is thus more readily cast or formed in the manufacture.

Reinforcing plugs 3, of leather, fiber, or any suitable material other than live rubber are shaped to fit snugly within the recesses 2 with their outer faces flush with the tread face of the cushion body. Each reinforcing plug has a central recess 4 extending from the outer side through substantially three-fourths of its thickness, the remaining portion of the thickness of the plug being unperforated.

In the manufacture of the heels as above described, the cushion bodies can be molded out with the recesses 2 therein and then the reinforcing plugs 3 can be inserted in these recesses before the heels are sold or these can be left to be placed by the shoemaker who applies the heel. In some cases the plugs may be embedded in the cushion body to be permanently held therein, although it is desirable that these be removably fitted within the recesses.

The heel cushion body 1, with the reinforcing plugs 3 fitted in the several recesses 2, is fitted in the usual manner upon the leather heel lifts 5 of a shoe, substantially as shown in Fig. 5. The unpenetrated thickness of each reinforcing plug 3, and the material of the cushion heel beneath each recess 2 can be perforated with an awl, or the fastening nails 6 can be driven through this material and into the leather heel 5 to clench within the shoe. When the fastening nails are driven and set within the recesses 4 of the reinforcing plugs 3, these

plugs will be held against withdrawal by the heads of the nails, and the engagement of the reinforcing plugs with the material of the cushion heel body at the bottom of each recess will clamp the body against the leather heel.

In Fig. 4 I have shown the reinforcing plug 7 as made of a slightly different form, the top 8 being made convex to extend beyond the tread face of the cushion body 9.

In the illustration in Fig. 6 I have shown the embodiment of my invention as a whole rubber heel, and in this adaptation the cushion body 10 is made of the usual form, it being provided with plug receiving recesses 11. The fastening nails 12 may be driven through the material of the reinforcing plugs 13 forming the bottoms of the recesses therein, and through the material of the cushion body, to clench against the inner side of the shoe sole 14. However, as difficulty may be encountered in driving the fastening nails through the thickness of the cushion body it may be found desirable to provide openings 15 through the cushion body, centered with respect to recesses 11.

By constructing my improved heel in the manner set forth leather, or like material, is combined with rubber to form the tread surface, the reinforcing plugs being positioned and presented to receive the fastenings for the heel body, to reinforce this cushion body at the points where the greatest wear comes, and to hold against slipping. It is well known that inserts of fiber, leather, and like materials embodied in a rubber heel prevent slipping on wet surfaces. The cushion heel will be firmly fixed and secured in place by reason of the fact that the fastening nails are frictionally held in the material of the reinforcing plugs and also in the material of the cushion body. As the recesses extend through only a part of the thickness of the cushion body 1 each plug 3 bears against a layer of the cushion material and the resiliency of the main cushion body is

imparted to those portions in which the plugs 3 are received.

A similar reinforcing for fastenings might be embodied in conjunction with and for securing of a rubber or other cushion sole.

In the foregoing description I have referred to the cushion heel as being of rubber, and have described the plugs as being made of leather, however it is to be understood that leather-board vulcanized fiber, and other recognized equivalents for leather may be employed in making the plugs.

While, in the foregoing, I have mentioned only certain possible modifications, and have described specific embodiments, it will be appreciated that in practice I do not limit myself to such specific details as herein set forth, but may resort to any practical modifications falling within the scope of the invention as defined in the appended claims.

I claim:

1. A cushion heel having recesses in its tread surface, and unperforated plugs of leather fitted within the recesses of the body but unsecured to have fastenings driven therethrough to secure the cushion heel in place.

2. A rubber cushion heel having in its tread surface a plurality of recesses and leather plugs formed to fit therein and provided on their tread surface with recesses to receive the heads of fastening devices passing through the plugs and securing the heel to the shoe.

3. As an article of manufacture a cushion heel having recesses molded in its tread side, and leather reinforcing plugs having recesses formed in their tread sides and unperforated throughout the remainder and shaped to be fitted within the recesses of the body and adapted to have fastening devices driven therethrough with the heads of the nails sunk in the recesses of the plugs.

In testimony whereof, I affix my signature.

LEVI McMILLAN.