April 9, 1929. H. P. ROBERTS 1,708,683

ARCH AND HEEL SUPPORT

Filed Sept. 16, 1927

Fig. 1.

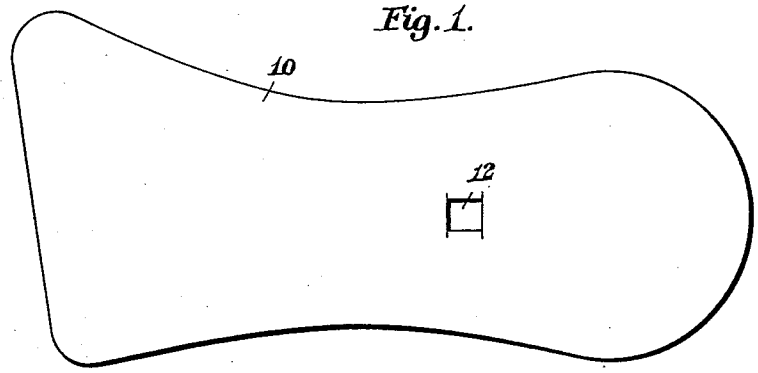


Fig. 3.

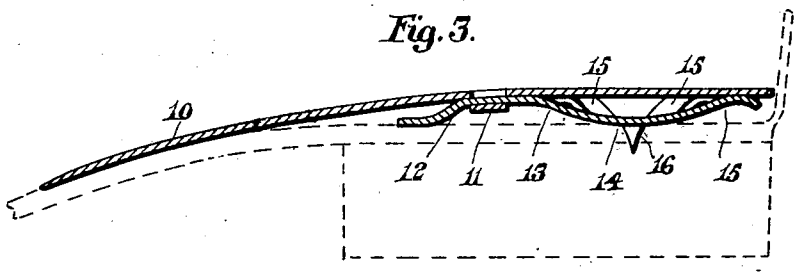


Fig. 2.

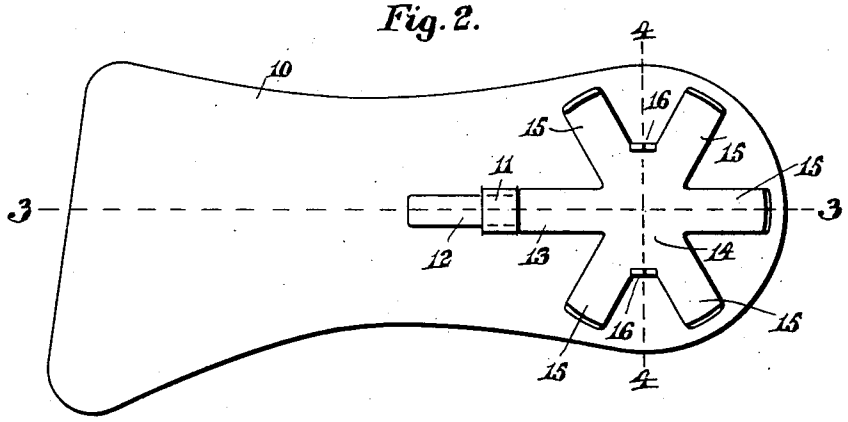
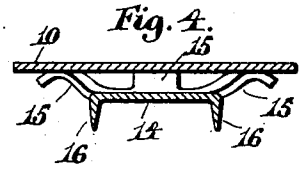


Fig. 4.



Inventor:
Henry P. Roberts,
by Walter E. Lombard,
Atty.

Patented Apr. 9, 1929. 1,708,683

UNITED STATES PATENT OFFICE.

HENRY P. ROBERTS, OF ROXBURY, MASSACHUSETTS, ASSIGNOR TO MASSACHUSETTS STEEL PRODUCTS, INC., OF BOSTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

ARCH AND HEEL SUPPORT.

Application filed September 16, 1927. Serial No. 219,959.

This invention relates to arch supports for boots and shoes and has for its object the production of a device of this character, one end of which is provided with a cushion to yieldingly support the heel of the wearer.

This object is attained by the mechanism illustrated in the accompanying drawing.

For the purpose of illustrating the invention, one preferred form thereof is illustrated in the drawings, this form having been found to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which the invention consists can be variously arranged and organized, and the invention is not limited to the precise arrangement and organization of these instrumentalities as herein shown and described except as required by the scope of the appended claims.

Of the drawing:

Figure 1 represents a plan of a shank support embodying the principles of the present invention.

Figure 2 represents an inverted plan of the same.

Figure 3 represents a longitudinal section of same on line 3, 3, on Fig. 2, and

Figure 4 represents a transverse section of same on line 4, 4, on Fig. 2.

Similar characters indicate like parts throughout the several figures of the drawings.

In the drawings 10 is a metal plate which may be of any suitable shape in plan and curved in elevation to fit any style and size boot and shoe.

The plate 10 is stamped out to form a bridge 11 on the under side thereof.

Inserted between the plate 10 and bridge 11 is the narrowed end 12 of the arm 13 forming a part of the resilient member 14.

This resilient member 14 is of spring metal and has radial arms 15 the outer ends of which bear upon the under face of the heel end of the plate 10.

Extending downwardly from the member 14 are two prongs 16 which are pressed into the sole of the boot or shoe when the shank support is inserted into said boot or shoe, as indicated in Fig. 3, in which a portion of a boot or shoe is indicated in dotted lines.

When the prongs 16 are thus driven into the sole of the boot or shoe, the plate 10 will be maintained in position and cannot move endwise or laterally.

As the radial arms 15 are bent upwardly into contact with the plate 10, the heel end of said plate 10 will normally rest upon the outer ends of said arms 15, said arms being stiff enough to sustain the weight of the wearer of the boot or shoe.

When in use the heel end of the support under the weight of the wearer will give, moving up and down, and preventing any jar as the shoe heel strikes the ground.

In fact, with this resilient member 14 installed upon the plate 10, all the advantages are secured which can be attained by the resilient rubber heels now in general use.

With the resilient member 14 interposed between the inner sole of the shoe and the shank supporting plate 10, there is no wear thereof and consequently the device may be used almost indefinitely and it is obvious the same supports may be used in several pairs of shoes if desired.

In other words, the supports may be easily removed from one pair of shoes and quickly positioned in another pair when the latter pair are to be used.

The members 14 are easily detached from the plate 10 and may be made of various thicknesses so as to accommodate the supports to various weights of the users of said supports.

Obviously the support in use by a person weighing two hundred pounds would require a member 14 of thicker material than would be required by a person weighing only one hundred pounds.

The narrowed end 12 of the arm 13 is bent downwardly and bears upon the inner sole of the shoe and as this arm 13 is made of spring metal it gives additional yielding support at this point.

The entire support may be constructed at low cost and assembled with little labor.

It is believed that the operation and many advantages of the invention will be understood readily without further description.

Having thus described my invention, I claim:

1. An arch support having a rearward extension forming a heel plate and a yielding member provided with upwardly and outwardly extending arms, the outer ends of which bear against the under face of said

plate and one of said arms being longer than the others and secured at its end to said plate.

2. An arch support having a rearward extension forming a heel plate and to which is secured a yielding member provided with upwardly and outwardly extending arms, the outer ends of which bear against the under face of said plate, said member having between said arms downwardly extending integral prongs for insertion into the sole of a shoe.

3. An arch support having a heel plate provided with a depressed bridge portion and a yielding member having radial arms bearing at their outer ends upon the under face of the plate and another arm inserted between said plate and bridge.

4. An arch support having a heel plate provided with a depressed bridge portion and a yielding member of spring metal having radial arms bearing at their outer ends upon the under face of the plate and another arm inserted between said plate and bridge with its forward end bent downwardly away from said plate.

Signed by me at 746 Old South Bldg., Boston, Massachusetts, this 14th day of September, 1927.

HENRY P. ROBERTS.