

J. D. PRICE.  
ARCH SUPPORT.  
APPLICATION FILED JUNE 13, 1912.

1,106,000.

Patented Aug. 4, 1914.

Fig. 2.

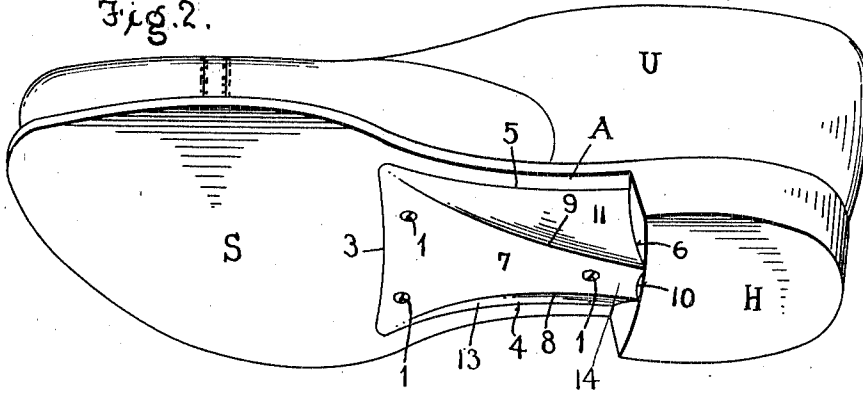


Fig. 4.

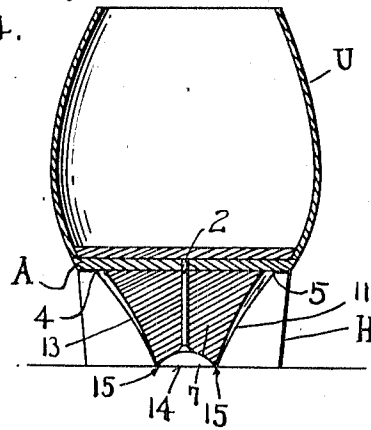


Fig. 1.

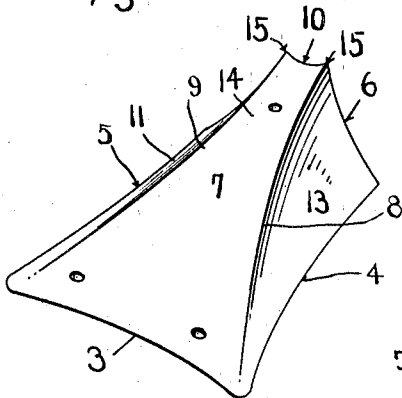
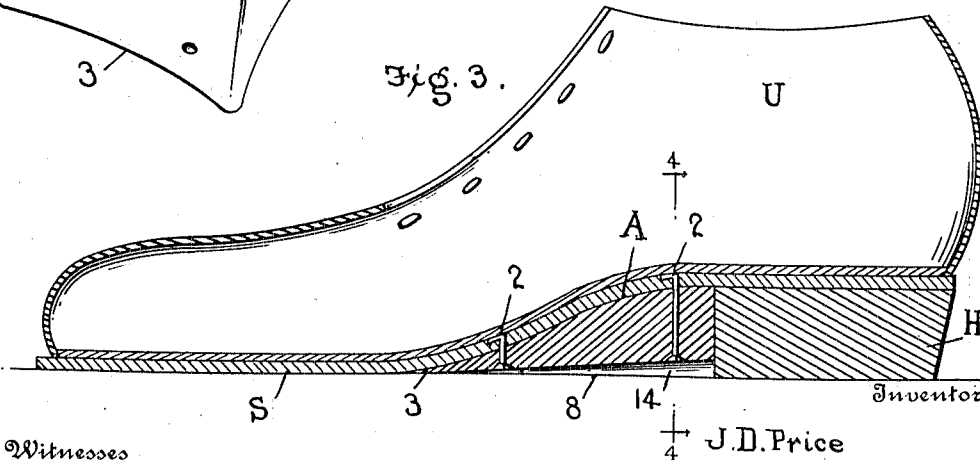


Fig. 3.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## ARCH-SUPPORT.

1,106,000.

Specification of Letters Patent

Patented Aug. 4, 1914.

Application filed June 13, 1912. Serial No. 703,531.

*To all whom it may concern:*

Be it known that I, JOHN D. PRICE, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Arch-Supports; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to boots and shoes, and more especially to foot supporters; and the object of the same is to produce an improved support for the arch of the shoe and foot, capable of being attached to any form of shoe by which term I mean to be understood in this specification as embracing all classes of foot-wear having a raised arch between the heel and the ball of the sole.

To this end the invention consists in the arch support hereinafter specifically described and claimed, and shown in the drawings, wherein—

Figure 1 is a perspective view of this support alone, and Fig. 2 a perspective view of the underside of a low-quarter shoe with the support attached thereto; Fig. 3 is a longitudinal sectional view through the shoe and arch support, and Fig. 4 is a cross section on the line 4—4 of Fig. 3.

In the drawings a shoe or other article of foot-wear is shown as composed of an upper U, heel H, and sole S arched between the ball of the sole and the heel as at A; and no novelty is claimed for this shoe. It is well known that with some people, especially those of considerable weight the arch often breaks down or flattens out, giving an untidy and unsightly appearance to the foot and having its bad effect upon the health as experience has shown. Efforts to overcome this defect in or abnormal condition of the foot have been made by providing arch supporters, most of which are placed inside the shoe, but the result is that the weight which caused the original trouble is then thrown onto the supporter and by the latter onto the arch of the shoe which in turn is broken down to an even greater extent than formerly.

Broadly speaking my present invention contemplates the location of the arch supporter beneath the arch of the sole and outside of the shoe, and I make it so thick ad-

jacent the heel that it normally strikes the floor or pavement in the act of walking so that it assists the heel in supporting the weight thrown onto the shoe by the wearer. By preference I make this improved arch supporter of rubber or rubber composition so that it will have a certain yielding effect and cushion the weight thrown upon it, but the composition should contain materials to prevent undue wear.

Coming now more particularly to the details of the present invention the supporter is shown detached in Fig. 1, attached by screws 1 in Fig. 2, and attached by nails 2 in Fig. 4, although in either case the heads of the fastening devices are at their lower ends. Viewed from beneath, the general outline of this arch support is that of a truncated isosceles triangle, if I may use the expression, with the base 3 disposed adjacent the ball of the sole S and by preference slightly dished, the short side 4 along that edge of the arch A which is shortest or where the sole S comes nearest to the heel H and also slightly dished, the long side 5 at the other side of the shoe and slightly dished, and the truncated end 6 of the triangle next the heel. Such is the shape of the face, or (when the device is inverted and in proper position) the bottom of the supporter. The back, or (when the device is in proper position and inverted) the top 7 also follows the general shape of a truncated isosceles triangle whose base is coincident with the base 3 of the triangle forming the bottom, whose sides 8 and 9 are dished to a considerably greater extent than the sides of the bottom and converge much more rapidly, and whose truncated end 10 is flat like the truncated end 6 of the bottom as shown. It follows that when the two triangles described are superposed with their bases 3 coincident, there is a considerable space along their remaining sides; but as the supporter grows thicker from its front edge 3 toward its rear end as seen in Fig. 3, the faces constituting these sides are beveled or inclined as shown at 11 and 13. Finally, the top face 7 toward its truncated end 10 is dished transversely as best seen in Fig. 4 at 14 leaving two sharp edges 15 which are intended to contact with the floor or pavement just in advance of or simultaneously with the contact of the lower face of the heel H therewith and thereby take some of

the weight off the heel, although the edges wear away as fast as does the lower lift of the heel as will be clear.

As suggested above, the device is attached  
 5 to the sole by nails or screws whose heads are raised above the floor because they stand within the dished face 7, by preference its edge 3 lies along the rear edge of the ball of the sole S and its edge 6 lies adjacent to the  
 10 front face of the heel where it makes an angle with the arch A of the sole. When it is worn by a person whose tendency is to crush down the arch, the weight thrown onto the arch A of the sole berds the latter  
 15 downward slightly and is communicated through the thicker portion of this supporter to the edges 15 which bear upon the floor or pavement, and thereby breaking down of the arch of both the foot and sole  
 20 is prevented. The advantages of forming the lower face of the supporter in the two sharp edges described, lies in the fact that the block of rubber when brought to such edges has more elasticity than if left flat  
 25 and solid, the channel between the edges would span an obstruction on the floor if the wearer should happen to step on it, if the edges should project a little below the heel when the device is first applied they  
 30 will cling to the floor while yet yielding under pressure to allow the heel to come down onto it, and if they do so project they will wear away more rapidly than if the block were solid. A further advantage of this  
 35 formation lies in the ease of application of this device to a shoe by the cobbler. If he finds that the shoe has such a low heel that the edges would project undesirably below it, he can readily trim off the extreme  
 40 corners of the edges by the use of an ordinary knife, and can produce a much better job than if the block were solid throughout its width. But whether he cuts it away or the device in time becomes worn down to  
 45 the level of the bottom of the heel, it wears thereafter just as rapidly as does the lower lift of the heel H or the lower face of the sole S, and in fact the device will probably adapt itself better to use after it has been  
 50 worn for a few days than at first. The forward tapering end of the resilient block forming the supporter is solid and closely contacts with the arch of the sole of the shoe adjacent to and forming a continuation of the same, said forward end of the supporter  
 55 being wider than the remaining portion of

the same whereby the arch of the sole is rendered more durable, and further causing the same to retain its original contour. It is further to be observed that the lower 60 flat, solid and tapering forward end of the supporter forms additional wearing surface and protects the arched portion of the sole of the shoe from wear and injury without materially reducing its pliability. Being 65 outside the shoe, this supporter has no tendency to spring the parts of the shoe asunder and cause leakage, but on the contrary it retains all the graceful lines of the shoe during the life of the latter, and such life is 70 of course prolonged because the use of the supporter prevents the arch A of the sole from being crushed by the superimposed weight.

It is extremely economical to manufacture 75 this device, because it may be made of one piece of material, and if of rubber composition it is preferably molded and pressed by a process which it will not be necessary to amplify in this specification. When in place 80 is absorbs the shock due to stepping down suddenly on the foot, as when the wearer ascends or descends steps or is forced to run for a few paces. Manifestly the device will be manufactured in sizes to fit various shoes, 85 and in thicknesses to fit heels of various heights. It may be applied at the time of making the shoe, or may be sold as an attachment and applied later.

What is claimed as new, is;

An arch support of the character described comprising a resilient block arranged to be detachably secured to the sole of a shoe beneath the arch thereof, with its inner end abutting the front face of the heel, 95 said block having the opposite sides thereof tapered inwardly and concavo shaped whereby to produce a narrowed tread surface and thereby to increase the resiliency of said support, said block being gradually tapered from its central portion to the outer end thereof, said tread surface being dished transversely to form two sharp edges whereby to augment the resiliency of said block. 100

In testimony whereof I have hereunto 105 set my hand in presence of two subscribing witnesses.

JOHN D. PRICE.

Witnesses:

T. J. SHANTER,  
 ELIZABETH DUDLEY.