May 17, 1932. W. M. SCHOLL 1,858,524

ARCH SUPPORT AND PROTECTOR THEREFOR

Filed Dec. 27, 1927

FIG. 1

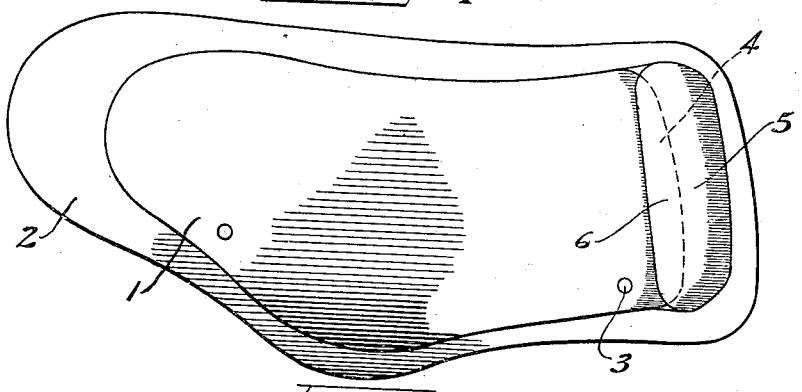


FIG. 2

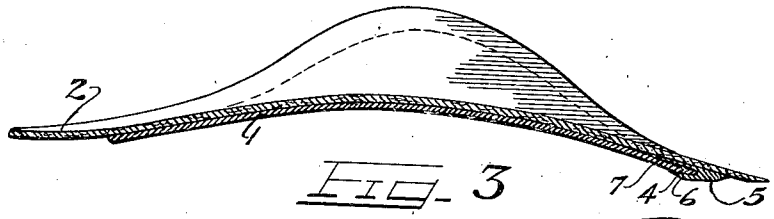


FIG. 3

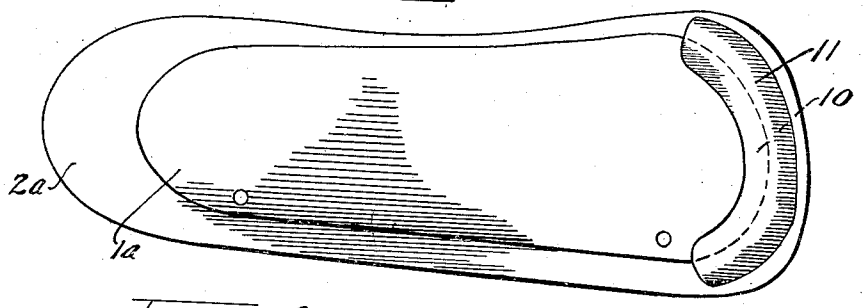


FIG. 6

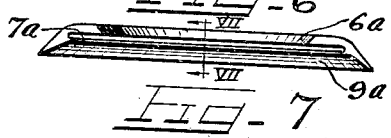


FIG. 7

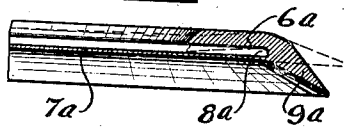


FIG. 4

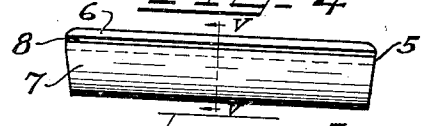
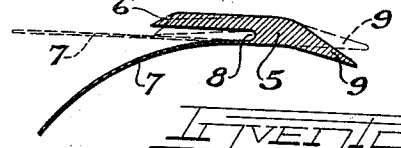


FIG. 5



INVENTOR

William M. Scholl

By Charles A. Kelly

Attys.

Patented May 17, 1932 1,858,524

UNITED STATES PATENT OFFICE

WILLIAM M. SCHOLL, OF CHICAGO, ILLINOIS

ARCH SUPPORT AND PROTECTOR THEREFOR

Application filed December 27, 1927. Serial No. 242,593.

This invention relates to improvements in arch supports for the foot, and more particularly to a protective sheathing or pad for the arch support which effectively prevents injury to hosiery and the inner part of the shoe of the wearer.

Arch supports in general embody a stiffened or metal plate shaped to support the plantar region of the foot in its proper position. These plates in most instances do not extend the full length of the shoe of the wearer, when inserted therein, and so have a tendency to slip forward or otherwise become displaced with the resultant discomfort or injury to the user. It has also been found that the metal plate during continued use tends to become worn and relatively sharp along its forward edge and, therefore, tends to cut into the inner sole of the shoe, thereby injuring the same and in many instances the hosiery of the wearer. Heretofore means have been provided to protect the inside of the shoe or to prevent the forward edge of the plate from becoming sharp. These means have usually been in the form of leather pads or sheaths and have proven objectionable in various ways, in that when used for a comparatively short time the leather tended to become worn and smooth and would not effectively prevent slipping of the arch support. Moreover, in many instances, the metal plate in arch supports is covered by a flexible member to prevent direct contact of the foot with the plate, and these formerly used leather sheaths were not sufficiently elastic to permit the flexible covering to assume its proper position within a shoe.

The present invention is designed to overcome the above noted defects and objections in the provision of a pad or sheath for the arch support plate which sheath is formed of elastic or resilient material such as rubber or the like, and effectively prevents slipping of the arch support.

The invention also seeks to provide a pad or sheath which may be readily attached to any arch support and which permits all parts of the arch support to assume their proper positions within a shoe, at the same time fully protecting the inside of the shoe and preventing the forward edge of the stiffened plate from becoming sharp due to wear thereon.

A further object of the present invention is to provide a novel and time-saving method of making an arch support with a protective sheath.

While some of the more salient features, characteristics, and advantages, of devices embodying this invention have been above pointed out, others will become apparent from the following disclosures.

The invention includes these and other features of construction and combinations of parts hereinafter described and shown in a preferred form of the drawings, as more particularly indicated by the claims.

In the drawings:

Figure 1 is a bottom plan view of an arch support equipped with a device embodying principles of the present invention.

Figure 2 is a sectional view through the arch support, showing the same in position for use.

Figure 3 is a bottom plan view of an arch support equipped with a slightly modified form of the present invention.

Figure 4 is a rear view in elevation of the device itself shown in Figure 1, in inverted position.

Figure 5 is a sectional view of the device taken substantially along line V—V of Figure 4.

Figure 6 is a rear view in elevation of the slightly modified form of the device shown in Figure 3, in inverted position.

Figure 7 is a sectional view taken substantially along line VII—VII of Figure 6.

As shown in the drawings:

In the illustrated embodiment of this invention there is shown an arch support embodying a stiffened or metallic plate 1 shaped to properly support a foot in its normal position, direct contact of the foot and plate being prevented by a flexible covering 2, preferably of leather or similar material, secured to the upper side of the plate by means of rivets 3 or in any other desired manner. Since the plate 1 must be provided with various degrees of curvature therein, the for-

ward margin 4 of the plate is substantially at an angle to the remainder of the plate. This margin 4, if permitted to contact with the insole of a shoe, would obviously become relatively sharp and possibly injure the shoe or hosiery of the wearer.

Novel protective means have been provided to prevent the margin 4 from becoming sharp or causing such injury, and to hold the plate from slipping from its desired position within a shoe. These means comprise a sheath or pad 5 preferably integrally moulded of rubber or a compound thereof, and shaped to conform in general to the contour of the forward edge of the plate 1. The pad 5 has rearwardly extending spaced flaps 6 and 7 thereon which define a slot 8 therebetween to receive the forward portion of the plate 1 including the margin 4. At its forward end the pad is provided with an upturned margin or lip 9, which together with the remainder of the pad, provides an arcuate upper surface thereon.

In applying the pad to the arch support, the flap 7 is disposed between the plate 1 and the covering 2, and this flap together with the upper surface of the remainder of the pad and the lip 9, is preferably secured to the under side of the covering 2 by some adhesive such as glue, mucilage, or the like. When the margin 4 of the plate 1 enters the slot 8 the lip 9 will tend to somewhat straighten as indicated by the dotted lines in Figure 5, and the flap 6 will thereupon intimately grip the under side of the plate 1. This is especially true when the pressure of a foot is upon the arch support, the lip 9 permitting the upper portion of the pad to stretch slightly, and the pad will, therefore, not tend to become loosened from the covering 2. Due to the flexibility and peculiar shape of the pad 5, the forward portion of the covering 2 will assume its correct and proper position within a shoe.

In Figure 3, there is shown an arch support commonly known as a "metatarsal support", and comprising a metal or stiffened plate 1*a* provided with a covering 2*a*, the difference between this support and that disclosed in Figures 1 and 2 lying in the curvature of the body of the plate 1*a* and a rounded forward margin 10. The differences in curvature of the body portions of the plates 1 and 1*a* are immaterial with regard to the present invention, but the substantially semi-circular forward edge of the plate necessitates the provision of a pad 11 of slightly different form than the pad 5. The pad 11 is, of course, curved to fit the contour of the margin 10, and is provided with spaced flaps 6*a* and 7*a* defining a slot 8*a* therebetween, and an upturned lip 9*a*, which parts function the same as in the previously described pad.

It will be apparent from the disclosures hereinabove that the present invention contemplates the provision not only of pads 5 and 11 but of similar pads of any suitable shape to fit the curvature of the forward edge of any arch support plate. The pads, of course, may be readily attached to any arch support by simply separating the covering 2 from the plate 1, inserting the flap 7 therebetween, and securing the pad to the covering 2 in the manner above described.

However, if it is desired, the pad may be attached to the covering 2 simultaneously with the making of the arch support. In this case, the covering 2 or 2*a* is obtained and a suitable pad secured thereto, after which the plate 1 or 1*a* is attached to the covering. The covering and under flap of the pad may then be sprung back to permit the insertion of the forward margin of the plate within the slot defined by the flaps of the pad.

From the foregoing, it will be apparent that I have provided a novel protector for arch supports which effectively prevents slipping of the support within a shoe and which, due to its peculiar structure, will at all times firmly grip the forward edge of the arch support plate, and follow both the peripheral and bodily contour or curvature thereof, and will not tend to become loosened from its operative position. Moreover, the protector described herein may be simply, easily, and economically manufactured.

I am aware that many changes may be made and numerous details of construction may be varied through a wide range without departing from the principles of this invention and I, therefore, do not purpose limiting the patent granted hereon otherwise than necessitated by the prior art.

I claim as my invention:

1. A protective pad adapted to engage over an extremity of one of two superposed arch support members, a pair of flaps on said pad, said flaps defining a slot therebetween to receive a portion of one of said arch support members, one of said flaps to be secured to the other of said arch support members, the other of said flaps to loosely embrace said received member, and an obliquely upturned portion forming the forward margin of said pad and causing said loose flap to intimately grip said received member when pressure is exerted on said arch support members.

2. In combination, an arch support embodying a relatively stiffened plate and a covering therefor, and a protective device for said plate comprising a resilient pad shaped in general to the contour of the edge of said plate, a pair of flaps on said pad to engage a portion of said plate therebetween and an obliquely upturned lip on the forward margin of said pad, one of said flaps and said lip being secured to said covering, whereby said pad will not tend to loosen from said covering but will flex therewith when pressure is applied on said arch support.

3. In combination, an arch support embodying a stiffened member and a covering therefor, a molded pad secured to said covering including a portion to underlie a margin of said stiffened member, and an obliquely upturned lip on said portion to intimately contact said covering at all times and to cause said portion to grip said member when pressure is exerted on said covering.

4. In combination, an arch support embodying a relatively stiff member, and a resilient pad having a slot therein to receive the forward margin of said member, and an integral obliquely upturned lip on said pad adjacent the forward terminus of said slot to cause the under portion of said pad to intimately contact said member when the same is inserted in said slot and pressure applied on said lip.

5. In combination, an arch support including a relatively stiffened arched member having a rounded forward end and a covering for said member, and a molded rubber pad-like protector secured to said covering and including a pair of flaps defining a slot therebetween curved to fit the rounded forward end of said member, said flaps embracing the forward margin of said member, and an angularly disposed lip on said pad to cause said pad to grip said member without being secured thereto.

In testimony whereof I have hereunto subscribed my name at Chicago, Cook County, Illinois.

WILLIAM M. SCHOLL.