

Oct. 16, 1923.

1,471,041

N. V. LEVITT

BUNION SHIELD

Filed Oct. 29, 1919

Fig. 1.

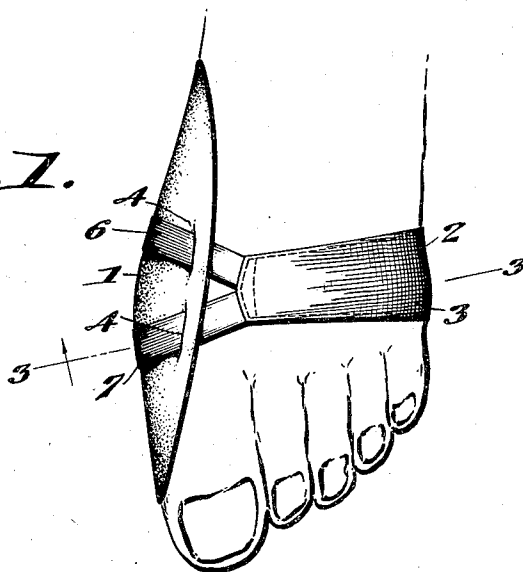


Fig. 2.

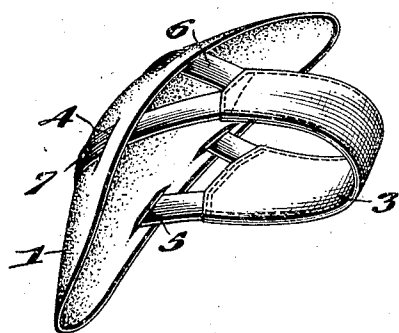


Fig. 3.

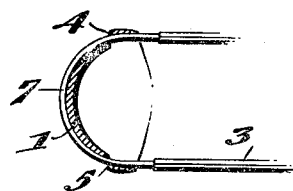
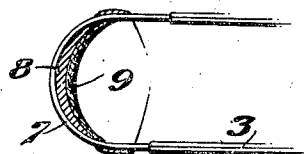


Fig. 4.



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BUNION SHIELD.

Application filed October 29, 1919. Serial No. 334,184.

To all whom it may concern:

Be it known that I, NATHAN V. LEVITT, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia, State of Pennsylvania, have invented new and useful Improvements in Bunion Shields, of which the following is a specification.

My invention relates to an improved form of bunion shield.

The primary object of the invention is to provide a shield which is constructed to be fitted over the enlarged metatarso-phalangeal joint of the great toe, with a fastening by which the device is snugly held in place over the enlarged bunion joint to act as a protector and reducer.

A further object of the invention is to provide, in combination with a shield member to be fitted over the enlarged bunion joint underneath the stocking or over the stocking inside the shoe, a fastening associated therewith by which the shield is resiliently held in place to restrain and support the bones of the metatarso-phalangeal joint with a minimum of pressure upon the bunion.

A still further object is to so arrange the fastening band that the shield is held snugly in place over the enlarged bunion joint and to so construct the band that it will not bulge or shift within the shoe to rub or present enlargements to chafe the foot.

Another object of the invention is to provide a fastening band made up of a soft non-elastic material in that portion bearing upon the sole of the foot and around the ball, and having combined therewith elastic portions to resiliently retain the shield in place and thus give a yieldable support for the bunion joint and relieve harsh bearing restraint thereon.

Yet another object is to associate the fastening band and shield in a manner that the band will retain the shield in different adjustments upon a bunion joint, but at the same time shifting of the band with respect to the shield, which might cause painful pressure, is positively precluded.

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

In the drawings:

Figure 1 is a plan view of my improved bunion shield showing the same applied in the position for use upon a foot.

Fig. 2 is a perspective view of my invention to better disclose the forms of the shield and fastening band and the manner of associating the same.

Fig. 3 is a fragmentary sectional view through the shield substantially on line 3—3 of Fig. 1 to show the connection of the fastening band with the shield member.

Fig. 4 is a view similar to Fig. 3 illustrating a modified construction of the shield member.

The device consists essentially of a shield member 1 and a fastening band 2, by which the shield member is held in place, and my invention resides in the particular construction of the fastening band and the novel manner of associating the same with the shield member.

This shield member 1 can be made of soft rubber molded to fit over the enlarged bunion joint, as shown in Fig. 1, and it will of course be appreciated that the material of the shield member is reduced at the edges to present a thin marginal portion which will lie and fit snugly against the foot. The shield member is preferably made deeply concave in its middle portion to take the enlarged joint.

The fastening band 2 is made up of a strip 3, of fabric, leather, or other suitable soft material and this strip is widened out at one end to present a broad portion to bear beneath the ball of the foot. The shield member 1 is provided with a pair of slits or openings 4 and 5 through its upper and lower reduced edges, and these slits or openings of each pair are spaced to be on opposite sides of the concavity of the shield member. Elastic band members 6 and 7 are threaded through the slits or openings 4 and 5, and at their ends are stitched or otherwise secured to the ends of the body strip 3, the elastic band members being threaded through the slits in such a manner that the bight of each is on the outer side of the shield member. As stated, the body strip 3 of the fastening band is preferably made wider at one end than at the other, and thus when the elastic band members 6 and 7 are connected therewith these members are

spread under the ball of the foot and are branched in Y-formation from the upper end of the band where the same fits over the top of the foot. This spreading of the elastic bands under the sole of the foot, through securement at the corners of the widened end of the band body, places the bands in more effective bearing upon the shield member and better supports and restrains the bones of the metatarso-phalangeal joint.

While the shield member has been heretofore spoken of as of a yielding material, in the treatment of some cases and in some adaptations a more rigid and less yielding shield structure may function with greater efficiency, and in such connections the shield member can be constructed substantially as illustrated in Fig. 4, where the outer shield member 8 shaped to the proper concave form and provided with slits or openings for the flexible band portions 6 and 7 is made of sole leather or of some less yielding material. In this adaptation it is preferable that a lining or cushion 9, of felt or other suitable material be provided within the outer member 8.

From the foregoing it will be seen that I have provided a shield structure to be fitted over an enlarged bunion joint, and a fastening band which will secure the shield in place, the fastening band being constructed with elastic portions by which the shield member is held to resiliently bear upon the foot, and that by constructing the fastening band in the manner set forth this band will hold firmly upon the foot through contact of the body member 3, while exerting the resilient retaining force upon the shield member.

While, in the foregoing, I have described specific embodiments as to construction and materials, and have mentioned only certain possible modifications, it will be appreciated that in the carrying out of my invention and in the accomplishment of the objects thereof

modifications can be resorted to, in view of which I wish to be limited only to such points as are set forth in the appended claims.

I claim:

1. A bunion shield comprising with a shield member to fit a bunion joint, a band to hold the shield member in place comprising a non-elastic body portion to fit around the foot and a pair of elastic members connected with the body portion in branched relation and having their middle portions associated with the shield member to exert resilient holding force against the same on opposite sides of the joint.

2. A bunion shield comprising with a shield member shaped to fit a bunion joint and having openings through its upper and lower edges spaced on opposite sides of the joint, a fastening band comprising a non-elastic body to be fitted around the foot and a pair of elastic members passed through the openings of the shield member and connected in branched relation with the body member to draw resiliently upon the shield member on opposite sides of the bunion joint.

3. A bunion shield comprising with a shield member made concave to fit a bunion joint and having a pair of slit-like openings through its upper and lower edges, the openings of each pair being spaced on opposite sides of the extreme concavity of said shield member, a fastening band including a body member to be fitted around the side of the foot opposite the bunion joint and widened out on that end received on the sole of the foot and a pair of elastic band members having their ends passed through the openings of said shield member attached in branched relation with the narrow end of the body member and having their remaining ends secured adjacent the sides of the widened end of said body member.

In testimony whereof, I affix my signature.

NATHAN V. LEVITT.