June 12, 1951 E. C. RYAN 2,556,887

BUNION PROTECTOR

Filed April 25, 1949

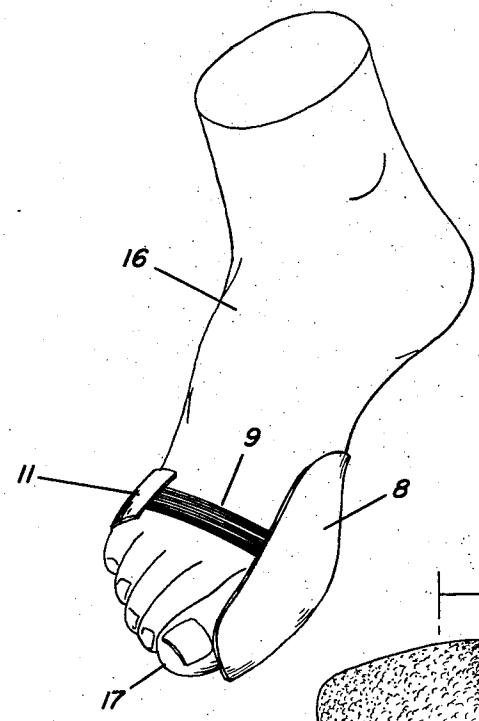


Fig. 1

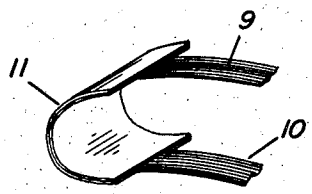


Fig. 7

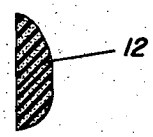


Fig. 6

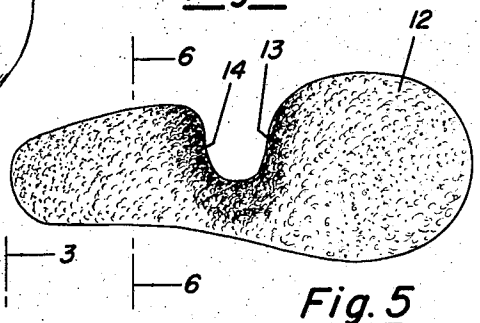


Fig. 5

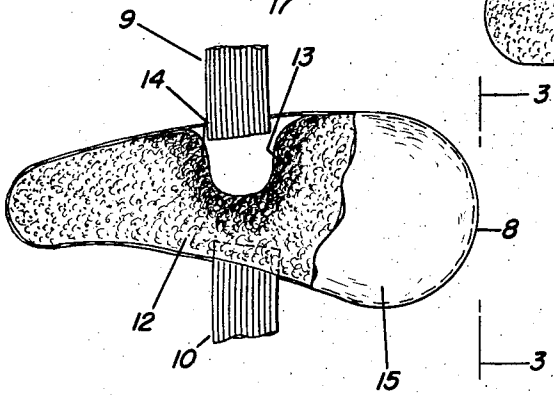


Fig. 2

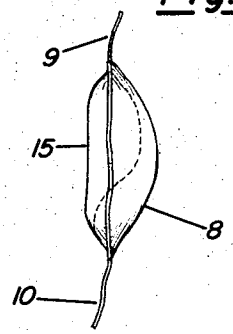


Fig. 3



Fig. 4

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BUNION PROTECTOR

Ella C. Ryan, National City, Calif.

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2 Claims. (Cl. 128—153)

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My invention relates to bunion protectors, particularly those employed for giving comfort to the bunion while shielding the same from rubbing contacts with the shoe of the wearer, and its objects are to provide a better means of disguising, masking and protecting the bunion while eliminating discomfort to the patient; to form and apply the protector to the human foot to cover a bunion thereon in such a manner as to cause the foot to assume an undistorted shape and the shoe in which such foot is confined a normal appearance, without said protector pressing upon and acting as a reducer of the bunion and without unsightly bulges being formed in the upper of the shoe; to hold said protector securely in place without undue tightness to the foot or any compression of the bunion, and without requiring the employment of a wider or specially constructed shoe on account of said protector; to effectually prevent any abrasion of the skin or cutting of the flesh of the foot brought about through the displacement or implacement of elastic bands used in anchoring the protector; to permit the wearer of the protector to wear smaller normal sized shoes than he or she would ordinarily choose because of the presence of the bunion, and to guard against the wrinkling of the shoes because of its presence; to prevent or remove callouses formed under the ball of the foot; to allow the protector to be easily fitted to the foot over the bunion in the required position and readily to be removed therefrom, and generally to provide a device which is simple and economical of construction, efficient in action and of prolonged life and durability. These and other objects will appear from the drawing and as hereinafter more fully set forth and described.

I am aware that there are at the present time on the market bunion reducers consisting of shells or husks, the hard inner walls of which contacting and pressing against the bunion tend to compress it so as to flatten or reduce the curvature of its contours, and thereby to cause the foot to assume a less unsightly appearance; but such reducers are open to the serious objection that when applied and worn the compression of the bunion causes pain or discomfort, the foot is distorted, and the bunion exposed to rubbing and abrasive contacts. My improved device, however, is not in any sense a bunion reducer, though it does make a foot appear smaller, but is employed to shield, mask and guard the bunion but not to press down upon or against it to any material extent, while at the same time allowing the foot to be introduced into a normal

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shoe without distortion of the shoe or change in the appearance thereof. Such bunion protector, as herein described, is the outcome of intensive study, development and continued experimentation by myself in accomplishing and arriving at the present results, including its successful application and use upon the bunions of my own feet as well as upon the feet of others where such employment was indicated and desired.

Attention is hereby directed to the accompanying drawing, illustrating a preferred form of my invention, in which similar numerals of designation refer to similar parts throughout the several views, and in which,

Figure 1 is a perspective view of a human foot, showing the application thereto of my improved bunion masking protector;

Fig. 2 is a view of the shell-like cover looking downwardly upon the outside thereof, and showing part thereof cut away for the purpose of better illustration of the recessed sponge rubber pad and elastic attachment bands;

Fig. 3 is an end view of the shell-like cover shown in Fig. 2, looking in the direction of the arrows 3—3;

Fig. 4 is a view of the shell-like cover, looking at the inside thereof, the lining, pad and attachment bands being removed;

Fig. 5 is a view of the recessed sponge rubber pad showing the same removed from the cover and adjacent parts;

Fig. 6 is a section of the inner end of the pad 5 on line 6—6 of Fig. 5 looking in the direction of the arrows, and

Fig. 7 is a perspective view of the curved sheath employed for anchorage of the outer ends of the attachment bands.

Referring to the drawing, the form of my bunion protector there shown comprises, the shell-like cover 8, elastic attachment bands 9 and 10, and the anchorage sheath 11.

For the shell-like cover 8, I preferably employ a thin walled strip of leather forming a shield and shaped to conform with the edge of a perfect human foot 16 adjacent to the big toe 17 thereof, the wall of said shield being made sufficiently rigid to maintain its shape at all times, and particularly after being introduced into a shoe as hereinafter set forth. To accomplish such rigidity, the leather may be sized, or treated in any way well understood in the art, or there may be applied to the inner face of said cover a coating of cement, plastic, adhesive or other stiffening material. Also, if desired the said shield may be made of plastic or other suitable

stiffened material in place of leather, preferably perforated to release perspiration. Inserted within said shield and shaped to fit the adjacent wall thereof is the pad 12 of sponge rubber, foam rubber or similar material of like properties, and having in the lower side thereof the recess 13 whose wall is shaped to clear the bunion while allowing the protrusion thereof into said recess, and allowing the adjacent parts of the foot, merging into said bunion, to make contact with the slopes 14 of the pad leading into said recess. Covering the face of the said pad 12, is fitted the lining 15, preferably of white suede leather, but may be made of chamois skin, soft cloth or other suitable material, and is carefully depressed and shaped to conform to the shape of the pad 12 and recess 13 thereof; the edges of said lining being cemented, glued, stitched or otherwise secured to the edges of said shield.

Thus, the wall of the contoured recess 13 and slopes of the pad 12 leading thereto, together with the fitted lining 15, are carefully shaped to shield, mask and confine the bunion free of abrasive contacts and at the same time effectually to guard against compression and reduction thereof; such pressure as may be applied to or encountered by the outer face of the cover being diverted from the bunion and transferred to the extended portions of such cover in actual contact with the side of the foot on either side of the bunion. Accordingly, as will be observed from the drawing, the rear portion of the shell-like cover 8 is elongated and contoured to extend backwardly for a substantial distance so as to conform with the adjacent contacting side of the foot, while the front portion is broadened and thickened and contoured to conform with the contacting sides of the shoe and foot adjacent to the big toe 17; care being taken to have the forward end of such front portion to swing away from said toe so as laterally not to contact and press against the same and to distort and force said toe against the other toes, all of which toes are thereby freed from squeezing contacts.

It is therefore apparent that upon so confining the bunion within the hard shelled cover and attaching said cover to the foot as above set forth, and upon the inserting of the foot so equipped within the shoe of the wearer, the said cover will not only protect the bunion from rubbing contact with itself and with the wall of the upper of the shoe, but then, because of the exterior flowing contour thereof, will also serve to prevent the formation of unsightly bulges in the said wall adjacent to the bunion.

For anchorage of the cover 8, I preferably employ the sheath 11, formed from a strip of sheet material which is curved to fit the outside edge of the foot back of the little toe thereof and to which is cemented, glued, stitched or otherwise secured, top and bottom, the outer ends of the elastic bands 9 and 10, whose inner ends are likewise secured to the top and bottom of the inside wall of the cover 8. The sheath 11 is preferably of leather, but may be of any suitable material, and is lined with a layer of material similar to

the lining 15 to insure smooth contact with the adjacent side of the foot. The elastic bands 9 and 10 are located so as to cross the top and bottom of the foot at its widest point, and are carefully positioned so as not to make possible contact with the big toe 17, and so at all times to avoid displacement or distortion of the same. Care should also be taken to avoid the crossing of the foot by either of said bands in the area between the bunion and the heel portion of the foot, since in such case the bands would not serve to hold from displacement the protector in the position required for shielding and anchoring the bunion and for giving normal appearance to the shoe in which it is employed.

My invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiments, as above set forth are therefore to be considered in all respects as illustrative and not restrictive, the scope of my invention being indicated by the appended claims rather than by the foregoing description, and all changes which may come within the meaning and range of equivalency of the claims are therefore intended to be embraced therein.

What I claim and desire to secure by Letters Patent is:

1. A bunion protector, comprising a hard protective shell-like cover, a recessed pad of sponge-like rubber secured within said cover, a soft non-abrasive lining covering the face of said pad and attached to said cover, both said recessed pad and lining being shaped and adapted to cover and mask, a bunion of the human foot, and said shell-like cover being shaped to engage with said foot on each side of said bunion and to conform with the general shape of said foot and adapted to prevent the formation of unsightly bulges in said shoe, and elastic means for securing said shell to said foot in said position.

2. A bunion protector, comprising a protective shell-like cover contoured to the shape of the inner wall of a normal shoe, a recessed pad of sponge-like rubber material installed within said cover, a soft non-abrasive lining covering the face of said pad and attached to said cover, both said recessed pad and lining being shaped and adapted to cover and mask a bunion of said human foot; an anchoring sheath shaped and adapted to engage with the side of said foot to the rear of the little toe thereof, and elastic bands extending between and affixed to said shell adjacent to said recess and to said sheath and serving releasably to anchor said shell upon said foot.

ELLA C. RYAN.

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The following references are of record in the file of this patent:

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