

[54] **DEVICE AND METHOD FOR CORRECTING
INGROWN TOENAILS**

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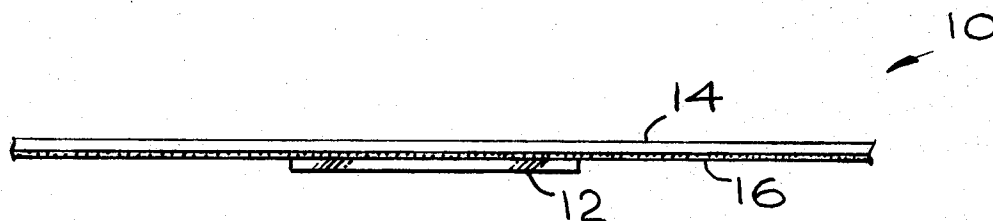
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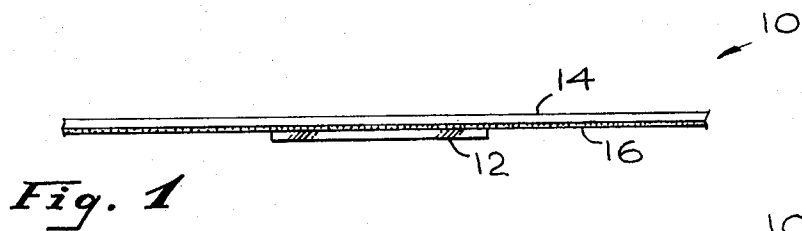
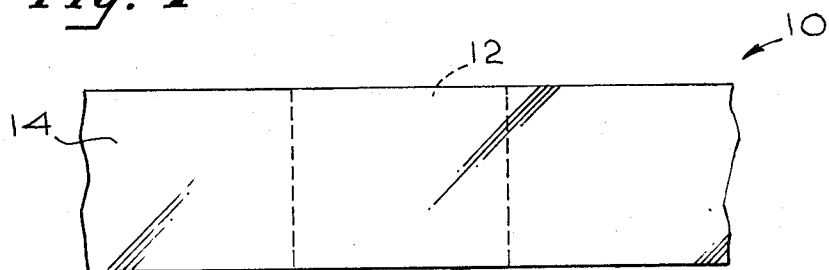
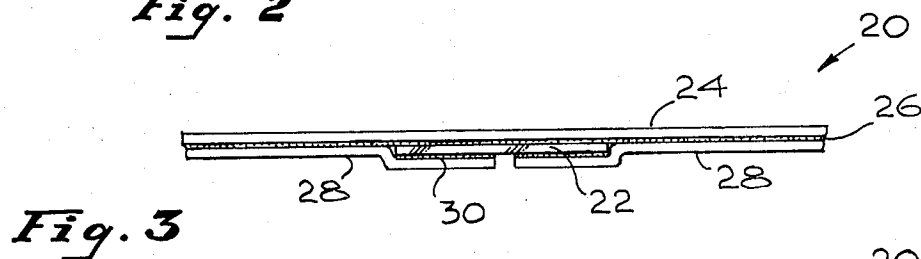
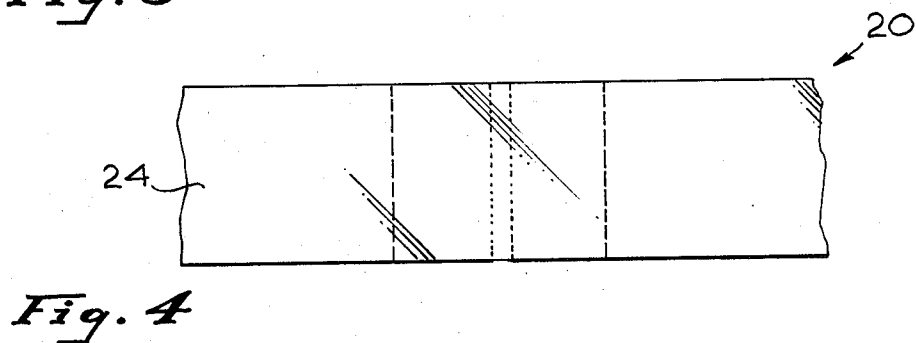
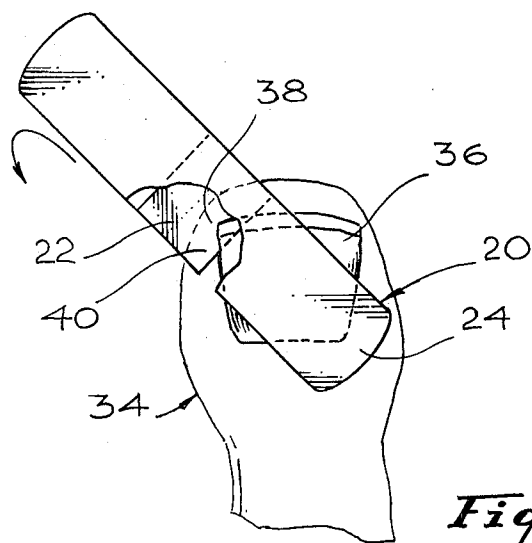
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[57] **ABSTRACT**

An improved device for correcting ingrown toenails comprises a flexible, preferably thin and flat, self-supporting nail support adapted to fit between the free portion of a toenail at the rear corner terminus thereof and the underlying toe flesh and/or cuticle attachment at said corner. The device also includes a flexible protector strip detachably secured to one side of the nail support and attaching means for holding the device in place around a toenail. Preferably, a backing strip is detachably placed on the opposite side of the nail support and, in accordance with the present method, is stripped from a portion of the nail support before the support is positioned at a rear corner terminus of the free portion of the toenail. The device keeps the cuticle and toe flesh in that region from overlapping the growing toenail.

9 Claims, 5 Drawing Figures





DEVICE AND METHOD FOR CORRECTING INGROWN TOENAILS

BACKGROUND

1. Field of the Invention

The present invention generally relates to improved devices and methods for treating toenails and more particularly for correcting ingrown toenails.

2. Description of the Prior Art

Various devices have been provided for correcting ingrown toenails. However, most such devices either are complicated and expensive to buy and use or are of little practical value. Ingrown toenails usually develop when the free portion of the toenail is cut off too short, thereby allowing the cuticle and toe flesh at the corner of the emerging toenail (rear corner terminus of the free portion of the toenail) to overlap the toenail, thus causing inflammation, swelling and pain. Many of conventional corrective devices and methods apply a positive bending force on the toenail at the corner rear terminus of its free portion in an effort to force it up and out of an underlying position with the adjacent toe flesh, but such devices are difficult to place in position and may be extremely painful, particularly where the affected area is already inflamed and swollen. Moreover, in view of the initial expense of many of such devices, they must be reused to make them practical. This may necessitate cleaning and/or resterilization. Accordingly, it would be desirable to provide a simple, inexpensive, but highly effective device for such purposes and a simple method of use of the same.

Preferably, such a device should be easily disposable, so that there would be no need or desire to clean and/or resterilize the same. The device should also have positive means for enabling the user to accurately and painlessly position the same for maximum effect, and should minimize trauma to the affected area.

SUMMARY OF THE INVENTION

The improved device and method of the present invention satisfy the foregoing needs and are substantially as set forth in the Abstract above. In this regard, the present device employs readily available components which are easily assembleable into an inexpensive but effective means of correcting ingrown toenails. The device can easily and instantaneously be removed from a protective package or the like and made ready for application to the affected area. The color of the components of the device enables them to be accurately positioned for maximum effectiveness. The device can be easily applied to the toe each night and removed in the morning for replacement or reuse each succeeding night until the ingrown toenail condition has disappeared. The nail support portion of the device acts as a guide for the growing toenail and adjacent cuticle and flesh attachment to resume their proper anatomical relationship. The nail support prevents the cuticle and flesh at the rear corner of the free portion of the toenail from continuing to overlap and encroach upon the growing toenail. All this is accomplished without the appreciable pain and discomfort associated with the use of hook and lever types of ingrown toenail correction devices.

BRIEF DESCRIPTION OF THE DRAWINGS

A better understanding of the present invention may be had from a consideration of the following detailed

description, taken in conjunction with the drawings, in which:

FIG. 1 is a schematic fragmentary enlarged side elevation of a first embodiment of the device of the present invention;

FIG. 2 is a schematic fragmentary enlarged top plan view of the device of FIG. 1, portions of underlying components being illustrated in dotted outline;

FIG. 3 is a schematic fragmentary enlarged side elevation of a second embodiment of the device of the present invention;

FIG. 4 is a schematic fragmentary enlarged top plan view of the device of FIG. 3, portions of underlying components being illustrated in dotted outline; and

FIG. 5 is a schematic top plan view of the device of FIG. 3 on a toe and in position to perform correction of an ingrown toenail, portions being broken away and other portions being shown in dotted outline to illustrate certain features thereof.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

First Embodiment

An improved device for correcting ingrown toenails is provided in accordance with the present invention. As shown in FIGS. 1 and 2, a device 10 is depicted which comprises a flexible self-supporting nail support 12 in the form of a thin flat plate, preferably formed of non-allergenic material such as plastic, heavily calendered paperboard, thin wood, rubber or the like. Most preferably, support 12 is fabricated of polyethylene sheet or similar thermoplastic sheet material, which is very inexpensive, but is attractive and has the described requisite properties. At least a portion of nail support 12 is releasably secured to a protective strip 14 by an adhesive layer 16 preferably carried on strip 14, as shown in FIG. 1.

Strip 14 can be fabricated of any suitable flexible material, such as cellulosic or plastic web material or the like to which layer 16 is applied. Preferably, layer 16 comprises a permanently tacky material such as a rubber base adhesive or the like. Layer 16 on strip 14 functions as attaching means for releasably holding device 10 in place around a toe.

When device 10 is to be used, an end portion or corner of nail support 12 is separated from protective strip 14 and adhesive layer 16 and the detached portion is then fitted between the free portion of a toenail and the adjacent underlying cuticle and/or toe flesh to abut a rear corner terminus of said free toenail portion. The remainder of nail support 12 is reflected (bent) around the front of the toe and device 10 is then releasably held in place on the toe by adhesive layer 16 on protective strip 14. Strip 14 acts to protect the toe and nail support 12 from relative movement and from ingress of dirt, etc. Usually, device 10 is applied each night before going to bed and is removed upon arising in the morning. Device 10, due to adhesive layer 16, can be reused or can be replaced each night with an identical unit utilized in the described manner in accordance with the present method. Placement of nail support 12 in the described manner exerts a guiding effect on the growing toenail and adjacent cuticle and toe flesh at the point (corner) where the toenail is overlapped by the cuticle and/or flesh. Thus, it acts as a barrier against the cuticle and/or flesh continuing to grow around and over the emerging toenail, and thereby corrects the ingrown

condition of the toenail. Device 10 is simple, effective, economical and easy to use and is easily replaceable. Second Embodiment

FIGS. 3, 4 and 5 schematically depict a second embodiment of the device of the invention. As shown in those figures, a device 20 is provided which comprises a nail support 22 releasably connected on one side thereof to a protective strip 24 by means of an adhesive layer 26 carried on strip 24. Support 22 is releasably connected on the opposite side thereof to one or a plurality such as a pair of spaced backing strips 28 by means of adhesive layers 30 carried by strip 28 on one side thereof. The spacing of strips 28 is to facilitate peeling of one or both strips 28 partially or wholly from nail support 22. As an alternative, the strips 28 may overlap if desired and the adhesive layer 30 between the support 22 and strips 28 may be omitted to facilitate removal of the strips 28 in preparation for use. Also, although the support 22 or 12 (FIGS. 1 and 2) is shown disposed transversely of the strip 24, it may as well be mounted longitudinally thereof and extending only partially across the width of the strip 24. In either case, use of the device of the invention is essentially the same.

A preferred way of utilizing devices in accordance with the present method is schematically illustrated in FIG. 5. Thus, in FIG. 5 a toe 34 is shown, with toenail 36 ingrown in the area 38. Device 20 has had one of backing strips 28 removed so as to expose one end 40 of nail support 22. End 40 is placed between toenail 36 and the adjacent flesh and cuticle in the area 38, as shown in FIG. 5. Layer 26 on strip 24 acts to releasably hold device 20 in place around toe 34 with the remainder of nail support 22 bent around the front end of toe 34. Strip 24 acts to protect nail support 22 and toe 34, and particularly area 38, from dirt and infection while holding the portion 40 of nail support 22 in the desired therapeutic position in area 38 to obviate the ingrown toenail condition.

Accordingly, devices in accordance with the invention provide simple, effective and inexpensive means for correcting ingrown toenails in accordance with the present method. Components of device 20 similar to those of device 10 can be fabricated of the same or similar materials. The backing strips 28 can be fabricated of any suitable material, such as those described for strip 24 and strip 14.

It is also contemplated as part of the present invention preferable to provide nail supports 12 and 22, and most preferably also strips 14 and 24, with one or more colors contrasting with the colors of the toenail, toe cuticle and toe flesh to facilitate proper alignment of nail supports 12 and 22 with the ingrown areas of the toe. Strips 28 can also be provided with contrasting colors. Where one's toenail is ingrown on both sides, two separate devices such as 10 or 20 may be applied to the respective corners of the nail 36. Since devices 10 and 20 are relatively flat and flexible, portions thereof can overlie one another very easily in a double application without discomfort and without impairing their effectiveness. Further advantages of the device of the present invention and the present method are as set forth in the foregoing.

Various modifications, alterations, changes and additions can be made in the present device and its compo-

nents and in the present method, its steps and parameters. All such modifications, alterations, changes and additions are within the scope of the appended claims form part of the present invention.

What is claimed is:

1. An improved device for correcting ingrown toenails, said device comprising, in combination:

a. a self-supporting generally planar flat flexible nail support adapted to fit between the free portion of a toenail and the underlying adjacent toe flesh and/or cuticle;

b. a flexible adhesive protector strip detachably secured to at least a portion of said nail support along a side thereof; and,

c. attaching means connected to at least one side of said nail support and said protector strip and extending beyond the area of attachment of said nail support and protector strip for detachably securing said device in place around a toenail.

2. The improved device of claim 1 wherein said device includes a backing strip releasably secured to said nail support on the side thereof opposite that to which said protector strip is attached.

3. The improved device of claim 2 wherein said attaching means comprises said backing strip and wherein said nail support is thin and flat.

4. The improved device of claim 3 wherein a pair of backing strips are releasably secured to said nail support in spaced relation to each other to facilitate peeling of each backing strip from said nail support.

5. The improved device of claim 3 wherein said device is disposable, wherein said nail support comprises plastic and said strips comprise webs bearing tacky adhesive surfaces, and wherein the color of at least said protector strip and nail support contrast with those of the toenail and toe flesh and cuticle.

6. An improved method of correcting ingrown toenails, which method comprises:

a. disposing a portion of a self-supporting generally planar flat flexible nail support between the free portion of a toenail and the adjacent underlying toe flesh and/or cuticle at a rear corner terminus of the free portion of said toenail;

b. bending the remainder of said nail support around the front of the toe; and

c. releasably holding said nail support in place while protecting the same.

7. The improved method of claim 6 wherein said nail support is flat and thin and wherein said holding is effected by a flexible adhesive protector strip detachably secured to one side of said nail support and to attaching means releasably secured to the toe.

8. The improved method of claim 7 wherein a backing is stripped from a portion of said nail support to expose the same before placement thereof at said corner, and wherein said attaching means comprise a portion of said backing.

9. The improved method of claim 8 wherein said device is disposable, wherein said backing comprises a pair of spaced backing strips, wherein said support comprises plastic and said strips comprise webs bearing tacky adhesive surfaces, and wherein the color of at least said protector strip and nail support contrast with those of the toenail and toe flesh and cuticle.

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