Jan. 11, 1966 H. G. TURNER 3,228,404

METHOD OF PROTECTING, REPAIRING AND LENGTHENING FINGERNAILS

Filed Oct. 18, 1963

FIG. 1

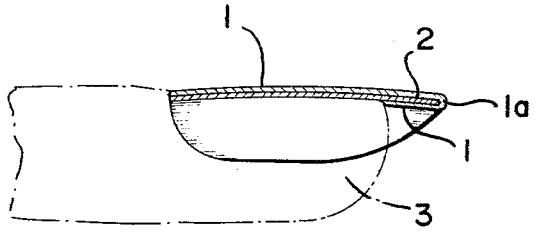


FIG. 2

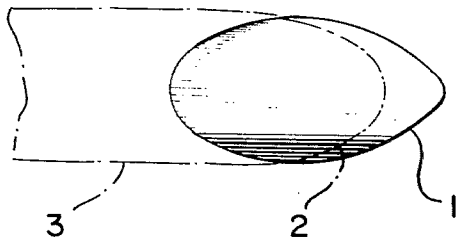


FIG. 3

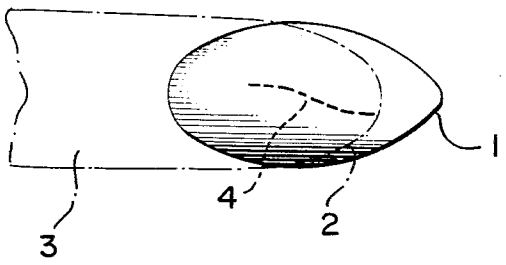
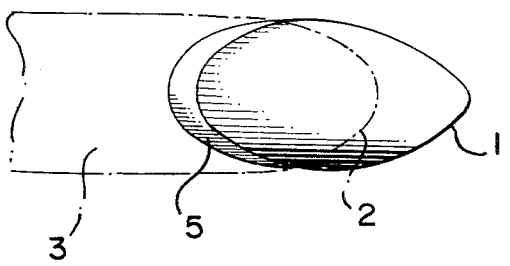


FIG. 4



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METHOD OF PROTECTING, REPAIRING AND LENGTHENING FINGERNAILS

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3 Claims. (Cl. 132—73)

This application is a continuation-in-part of my copending application, Serial No. 242,685, filed December 6, 1962, now abandoned.

This invention relates to an improved method of protecting, repairing and lengthening the life of fingernails and toenails of a human body, enabling them to grow long without breaking.

Much research has been conducted and many methods have been proposed for growing and maintaining long fingernails when exposed to the many elements and activities which are constantly encountered by the human hand and which are extremely harmful to the nails in their natural state. It is a common complaint among women that constant usage causes broken and split fingernails with the consequent discomfort and unsightly appearance.

In addition, one frequently wishes to have fingernails which extend a relatively long distance beyond the ends of the fingers. In this cantilever state the nails are exposed to impacts, abrasions and eroding solutions and liquids. It is virtually impossible to maintain such long fingernails without the aid of artificial devices or methods.

Medical science has attempted to solve the problem by prescribing calcium and gelatin in the diet in order to increase the thickness of the nails. This solution is of long duration and cannot be used indiscriminately by all persons because of possible adverse effects in other areas.

Devices and methods are known which utilize adhesive strips or splints, cushioned sheets or decals in an effort to repair a broken nail or serve as a brace for a long nail. Methods are known which require a rigid element to be attached to the nail by means of a lacquer or some adhesive substance.

Such means or methods fail to solve the noted problems because no provision can be readily made for the exposed areas of a constantly growing nail. In the known methods, the sheets and splints must be constantly replaced and attached to the nail in a new position in order to cover the newly formed area. In addition such sheets and splints are traditionally manufactured from metals or plastics and no bond is formed between the nail and the protective material. The only bond present in such methods is found between the lacquer or other substance and the nail and the entire supporting structure is thereby weakened and subject to accidental displacement or removal.

It is accordingly a primary object of this invention to provide a method whereby a nail of the human body may be lengthened, repaired and strengthened by the simple application of plural layers of substances which form bonds among themselves and with all the exposed nail surface area and offers a protective coating against destructive forces, such as detergents, soaps, abrasion, shock and the like.

It is a further object of this invention to provide a method whereby the additional area exposed on a constantly growing nail may be covered and protected by the same substance which has been used to cover the remainder of the nail area.

It is still a further object of this invention to provide a method whereby the nails, finger or toe, may be grown long and protected against breakage and which may be decorated with a polish or lacquer, the undercoats serving to bond the polish or lacquer to the nail, so that it also does not deteriorate.

It is still a further object of this invention to provide a method whereby the substance used to repair or lengthen a nail serves both as a cushion to absorb physical impacts and as a supporting element for an extended nail, where the nail has been grown long.

Other and further objects of the present invention will be apparent from the following description and claims and are illustrated in the accompanying drawings, which, by way of illustration, show preferred embodiments of the present invention and the principles thereof and what I now consider to be the best mode in which I have contemplated applying these principles. Other embodiments of the invention embodying the same or equivalent principles may be used and structural changes may be made as desired by those skilled in the art without departing from the present invention and the purview of the appended claims.

In the drawings:

FIGURE 1 is a sectional elevational view taken lengthwise through a fingernail and the supporting element embodying the features of this invention;

FIGURE 2 is a top view of the fingernail of FIGURE 1;

FIGURE 3 is a top view of the finger of FIGURE 1; the nail of which is broken; and

FIGURE 4 is a top view of the finger of FIGURE 1; the nail of which has grown or extended from the view of FIGURE 1.

In developing the subject invention it was deemed necessary to utilize a method in which a substance could be used and applied in one operation without using any additional sheets, props or splints. It was further deemed necessary to employ a substance which could be stored in a sealable tube and which would form a quick bond with a fingernail. This substance furthermore had to be fast drying and yet malleable before being exposed to air.

Such a substance was found in a synthetic plastic cement, waterproof type, containing ethyl acetate or methyl ethyl ketone with a nitrocellulose and pyroxylin base and forming a cement, sold commercially under the name Duco Cement, sold by E. I. du Pont de Nemours & Company, Inc. and which is removable by application of acetone. This product forms a strong bond with the outer surface of the natural nail and forms a protective layer to cushion shocks and abrasions. After solidification, the substance provides a firm support on either side of the natural nail and may be extended beyond the end of the nail to increase the ostensible length thereof.

The method constituting my invention is illustrated in the accompanying drawings, in which the cement 1 is placed on both sides of a fingernail 2 as shown in FIGURE 1. In addition, cement 1 extends beyond the end of fingernail 2 to form an artificial tip 1*a*. Finger 3 is shown in each view in order to give perspective. FIGURE 2 serves to illustrate the manner in which the cement 1 extends beyond the edges of fingernail 2 shown in dotted outline. Cement 1 thusly serves as a supporting structure to maintain the nail in a relatively rigid state. The layer of cement will also cushion impacts suffered by the nail and harmful solutions such as detergents are sealed from contact with the nail. The plural functions of support, buffer and sealer are thus evident to one skilled in the art. In addition, tip 1*a* provides a decorative appearance and provides the increase in nail length so often desired by women. Other aspects of this invention follow.

The nail must be carefully cleaned, as with conventional nail polish remover, and also carefully dried, before application of the cement. The coating of cement, which extends not only over the entire nail but also extends around the tips and under to the skin, is spread thinly.

The cement is coated, before it is fully dried, i.e. while

it is still tacky, with a cellulose base composition, or buffer, known commercially as Hard As Nails, and widely sold by Sally Hansen as an undercoat for polish. This is allowed to dry for about five minutes, and thereafter a coat of Dura Gloss Crystal, sold by A. R. Winrick, Inc., which is a protective coat of plastic material which hardens into a shiny surface. The latter acts as a sealer for the Hard As Nails. It is basically used as a sealer to keep detergents from the cement. Other cellulosic layer forming coatings, adjacent to the cement, and hardening sealer thereover, can be used, and while I do not know the precise chemical formulations involved for the second and third coats, no chemical action is involved. Any nail polish can then be coated on the Dura Gloss Crystal. All three layers must be applied over the nail tip and under to the skin.

Close observation of the end product indicates that some kind of a physical merger takes place, probably because each of the layers contains solvent, so that the polish eventually takes on some of the characteristics of the cement. It does not peel, and becomes far harder than the same nail polish is when normally applied to the nails, providing a loud click when sharply struck against a hard object.

In the normal practice of cosmetology, when nail polish has deteriorated, it must be removed and replaced. By means of the present invention, this becomes unnecessary and additional cement can be applied directly over the old polish, and thereafter the cellulose buffer and the sealer and additional polish. I have found that I can apply the process as many as forty times without removal. Each layer of cement then cements the upper layer to the lower layer of polish. The ability to repeat the process saves a great deal of time in cosmetology, but also experience has shown that cleaning of the nails with acetone deteriorates them, and sealing of the nails in the manner of this invention enables them to grow strong, without special diets, drugs or applications.

FIGURE 3 illustrates another facet of the subject invention in that method of the invention may be used to mend a crack 4 in fingernail 1 while simultaneously serving the functions outlined with respect to FIGURES 1 and 2.

I have found that either horizontal or transverse cracks can be mended, and that the crack or cut in the nail is not visible, and does not provide a weak spot in the nail. I have tested the invention by cutting off a nail and replacing the cut portions. In one test the nail was about ¼" long when cut off and grew to about 1" long, without evidence to the eye or in the feel of the nail, or in its strength, that it had ever been cut.

I have found, over a long period of time as a cosmetologist, that weak, thin, cracking nails are due to continued

applications of acetone or other cleaners, and the direct or nearly direct application of nail polish to the nails. The present invention permits nails, in the normal, healthy process, to be as firm and strong as nature intended, by avoiding the deteriorating influences.

Thus, while I have illustrated and described the preferred method of my invention, it is to be understood that this is capable of variation and modification, and I therefore do not wish to be limited to the precise details set forth, but desire to avail myself of such changes and alterations as fall within the purview of the following claims.

What I claim is:

1. The method of treating fingernails, comprising applying only a thin layer of synthetic plastic cement in liquid form over the entire fingernail, including its entire upper surface, its end and its underpart where exposed, permitting the cement to dry to the point of tackiness, said cement being waterproof and of the type which hardens to a glassy condition and which has a pyroxylin base, overlaying the cement in its entirety with a cellulosic buffer layer in liquid form while the cement is tacky, overlaying the entire buffer layer with a sealer in liquid form, and thereafter coating the sealer with nail polish.

2. The method according to claim 1 wherein is included the further steps of coating over said nail polish a further layer of said cement in liquid form, applying said buffer and said sealer in liquid form over said second layer of cement, and applying nail polish over said second layer of sealer.

3. The method of repairing broken and split fingernails, comprising applying a thin layer of a synthetic plastic cement in liquid form over the entire fingernail, including the break or split, its end and its underpart where exposed, permitting the cement to dry to the point of tackiness, said cement being waterproof and of the type which hardens to a glassy condition and which has a pyroxylin base, overlaying the cement in its entirety with a cellulosic buffer layer while the cement is tacky, overlaying the entire buffer layer wtih a sealer, in liquid form, and thereafter coating the sealer with nail polish in liquid form.

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