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HAIR AND SCALP PROTECTORS

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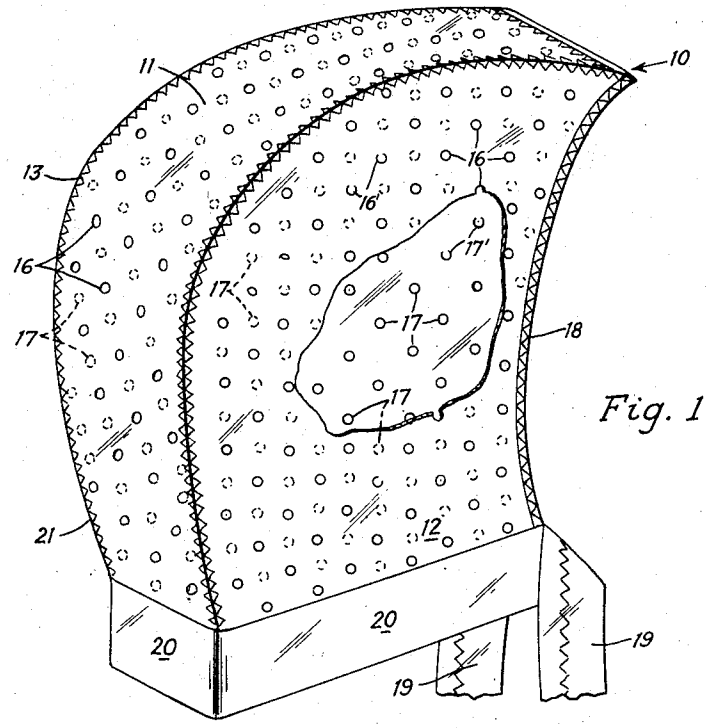


Fig. 1

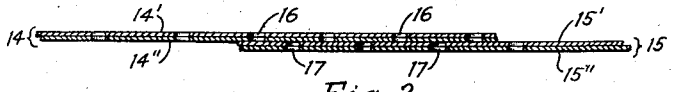


Fig. 2

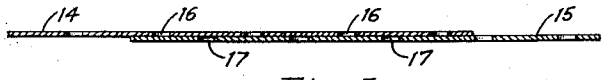


Fig. 3

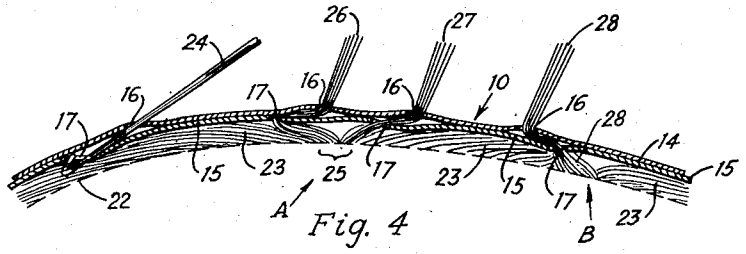


Fig. 4

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HAIR AND SCALP PROTECTORS

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4 Claims. (Cl. 132—9)

The invention relates to improvements in hair and scalp protectors primarily adapted to be worn during a treatment known as streaking, tipping or frosting involving an application of hair bleaching and hair coloring solutions. The principal object of the invention is to provide an efficient and practical device which effectively prevents the bleaching and coloring and other solutions from reaching and wetting the scalp and portions of the hair other than the strand or strands to which the solutions are to be applied, thereby preventing discolorations or damage of the hair which is not to be treated.

Numerous scalp protectors have been developed in the past particularly for permanent wave treatments. Most of these protectors consist of flexible sheet material, for example rubber, and comprise a plurality of apertures, preferably flanged apertures through which strands of hair to be curled can be pulled and which provide a reasonably tight seal, either by compression of the flanges or otherwise. One other known form of scalp protector comprises a plurality of normally sealed apertures through which strands of hair may be pulled. In doing so, the seal is broken, and after use the protector must be discarded because many of its seals are broken. The device is of relatively complicated construction which also makes it expensive considering that it cannot be reused.

The invention provides a hair and scalp protector which is so constructed that strands of hair may be treated on any portion of the scalp without destruction of special seals. The protector is so constructed that it provides a reliable seal about strands to be treated and complete protection for portions of the hair and scalp which are not to be treated.

The various objects, features and advantages of this invention will appear more fully from the detailed description which follows, accompanied by drawings showing, for the purpose of illustration, a preferred embodiment of the invention. The invention also resides in certain new and original features of construction and in the combination of elements hereinafter set forth and claimed.

Although the characteristic features of this invention which are believed to be novel will be particularly pointed out in the claims appended hereto, the invention itself, its objects and advantages, and the manner in which it may be carried out, may be better understood by referring to the following description taken in connection with the accompanying drawings forming a part of it in which:

Fig. 1 is a perspective view of a scalp and hair protector in the form of a shaped cap or hood;

Fig. 2 is a cross section through the two major plies of the protector;

Fig. 3 is a section similar to Fig. 2 of a modified form of construction; and

Fig. 4 is a sectional view illustrating the use of the protector.

In the following description and in the claims various details will be identified by specific names for convenience. The names, however, are intended to be generic in their application. Corresponding reference characters refer to corresponding parts in the several figures of the drawings.

The drawings accompanying, and forming part of, this specification disclose certain specific details of the invention for the purpose of explanation of broader aspects of the invention, but it is understood that the details may be modified in various respects without departure from the principles of the invention and that the invention may be applied to other structures or incorporated in other forms than the one shown.

The protector may be produced in any desired form, either as a substantially flat sheet which is then shaped about the head, as in prior permanent wave practice, or in the form of a preshaped cap.

Figure 1 shows the protector in the form of a cap **10** comprising a central crown portion **11** and two lateral side portions **12**, only one side portion being visible. The crown and side portions are secured together along seams **13** either by stitching or by heat sealing of the material of which the portions are composed.

The panels or portions of which the protector is composed comprise two major plies of a plastic sheet material, preferably transparent, slightly elastic, and tear resistant. Many synthetic sheet materials are available for this purpose, some having a synthetic rubber base, such as "Pliofilm," others being composed of vinyls, polyethylene, polystyrene and other synthetic resins. These sheet materials may be adhered together along marginal seams by sewing or by heat sealing in order to secure the various portions of the protector together and also to finish the edges.

The several panels of the protector are composed of two major plies as shown in Figures 2 and 3, one ply being numbered **14**, the other ply being numbered **15**. A thickness of between two and three thousandths of an inch for the major ply was found practical and convenient. If sheet material of that thickness is not readily available, each major ply may be composed of two minor plies as shown in Figure 2. The major ply **14** is composed of minor plies **14'** and **14''** and the major ply **15** is composed of the minor plies **15'** and **15''**. A minor ply thickness of one point three thousandths of an inch was found practical and convenient, resulting in a total thickness of the crown and side portions of the cap of five point two thousandths of an inch, except at the seams.

Each major ply has a plurality of perforations therethrough, preferably produced by punching at regular intervals. The perforations of the two major plies are so arranged that the perforations **16** in the major ply **14** are offset with respect to the perforations **17** in the major ply **15**. In this manner no direct passage exists for liquid to pass through the protector **10** since each major ply acts as a seal or closure for the apertures in the other major ply.

Preferably the punching of the major ply is done in such a way that the punched-out portion is not entirely removed but remains attached to at least one small portion of the circular cut, as shown at **16'** and **17'**. Such punching practices are known in the art. The punched-out disc forms a supplemental seal before removal but the discs may readily be displaced by the application of a suitable tool, for example by a hook of the crochet hook type, as will be explained.

A convenient range of spacing of the apertures in each ply was found to be between 10 and 20 millimeters.

In order to secure the major plies relatively to each other in the position in which their respective apertures are offset, as described, the plies are also secured together along additional marginal seams **18** so that the otherwise unattached and normally somewhat slippery plies do not slide into a position in which the apertures coincide.

The protector may be originally completely flat, or shaped, and may be provided with conventional means for securing it to the head, tie portions **19** of double thickness material being shown for this purpose in Figure 1. In the illustrated example the ties form a continuation of a reinforced lower edge portion **20** along which the material is folded back upon itself and secured along a marginal seam **21**.

The use of the protector is best explained by referring to Figure 4 showing a portion of the scalp protector **10** applied over the hair, the scalp line being represented by **22**. The hair **23** is covered and protected by the protector **10**, but the operator may withdraw individual strands of hair by means of a tool **24** resembling basically a crochet hook. This tool is inserted first through an aperture **16** in the outer major ply **14** and then through the aperture **17** in the inner major ply **15**, whereafter a strand of hair is withdrawn through the two apertures. Location A shows a thick strand of hair **25** divided into two substrands **26** and **27** withdrawn through adjoining apertures **17** in the lower ply **15** and then through adjoining apertures **16** in the upper ply **14**. The two substrands **26** and **27** which emerge through the protector may then be treated, for example by bleaching with, or without subsequent dyeing and, at the end of the treatment, appear as a single thick strand of contrasting color in the wearer's hair. In location B a single strand **28** is withdrawn through the protector. This single strand after treatment represents a thin strand of treated hair. Even thicker strands of hair may be tinted by parting one heavy strand into a greater number of substrands, as is readily apparent. However, a primary use of the protector is in the production of many thin strands of contrasting color.

Due to the elasticity of the sheet material, the sheet material forms a tight seal around each strand of hair. The offsetting of the apertures in the two major plies provides a supplemental seal for the apertures through which hair is withdrawn, as well as a main seal for all the apertures through which no hair is withdrawn.

The diameter of the apertures may be selected according to individual preference. Apertures of the order of 3 to 5 millimeters were found convenient.

Time observations have shown that in the streaking of hair an average time saving of one to two hours is effected per head treatment. The protector may be reused and its initial low cost is practically negligible if divided by the great number of treatments which may be given with the same cap before it needs replacing.

What is claimed is:

1. A protective covering for hair and scalp, particularly for use in the bleaching and dyeing of strands of hair, the covering comprising an inner and an outer sheet of flexible sheet material, each sheet having a plurality of perforations therethrough; and means for securing the sheets together along marginal seams in such a way that the perforations in inner sheet are offset with respect to the perforations of the outer sheet.

2. A device as set forth in claim 1 in which the perforations are incompletely punched so that the punched-out portion normally occupies the space within the hole, unless displaced therefrom.

3. A protective cap for hair and scalp, particularly for use in the bleaching and dyeing of strands of hair, the cap comprising two side portions and a central crown portion, said side portions and said crown portions each comprising two sheets of flexible sheet material, each sheet having a plurality of perforations therethrough; and means for securing the two side portions to the crown portion along seams and for securing together the two sheets of each portion along marginal seams, the two sheets of each portion being so disposed that the perforations in one sheet are offset with respect to the perforations in the other sheet.

4. A cap as set forth in claim 3 in which the perforations are incompletely punched so that the punched-out portion normally occupies the space within the hole, unless displaced therefrom.

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