ABSTRACT: An appliance to be used in the treatment of human or artificial hair to restrict the application of a treating composition such as a dye or bleach to a selected portion having a predetermined pattern while masking the remainder of the hair from contact with the composition.
This invention relates generally to appliances for treating selected portions of a woman's hair and, more particularly, to an appliance for masking the nonselected portions of a woman's hair from contact with a composition being used to treat the selected portions.

The primary object of the invention is to provide a novel appliance of the above character enabling a hair treating composition to be applied to a woman's hair in predetermined patterns.

Another object is to provide a novel hair treating appliance having interfitting parts which expose a portion of hair to be treated in a predetermined pattern while effectively masking the remainder of the hair from contact with the composition being used to treat the exposed portion.

A further object is to provide a novel hair treating appliance of the above character which is easy to use, inexpensive to manufacture and suitable for many different patterns.

Other objects and advantages of this invention will become apparent from the following detailed description taken in connection with the accompanying drawing in which:

FIG. 1 is a perspective view of an appliance embodying the novel features of the present invention and showing received a portion of a woman's hair to be treated.

FIG. 2 is a sectional view taken along the line 2-2 of FIG. 1. FIGS. 3, 4 and 5 are exploded perspective views of two modified appliances showing different designs.

The invention is shown in the drawings for purposes of illustration embodied in an appliance 10 for treating a woman's hair 11 or a hairpiece such as a wig with a composition such as a liquid or spray type of dye, tint, rinse or bleach and exposing selected portions of the hair in a predetermined pattern while masking contact with the composition.

For this end, the appliance comprises a backing member 12 adapted to be placed behind and support a portion of the hair to be treated and a masking member 13 adapted to lie against the outer side of hair on the backing member and having one or more apertures 14 in the shape of the desired pattern. The two members interfit closely and are held releasably together with the hair clamped between them adjacent the aperture and with a portion of the hair exposed through the aperture in the predetermined pattern to receive an application of the composition while the hair adjacent the aperture is masked from contact with the composition.

While effective masking may be achieved with the members 12 and 13 fitting tightly together and with a smooth surface on the backing member in registry with the aperture 14, it is preferred to provide a rib or projection 15 on the backing member complementary in shape to the aperture and projecting into or through the aperture as shown in FIGS. 1 and 2. The thickness of the projection and the width of the aperture are correlated with each other and the thickness of the hair to be clamped between the members so as to provide a tight fit between overlapping portions of the projection and the aperture wall and the amount and viscosity of the treating composition also are taken into account to block the flow of the composition to both sides of such portions. The height of projection also is correlated with the thickness of the masking member to determine the amount of extension of the projection above the outer side of the masking member and thus the amount of hair which is exposed.

In one form of the invention disclosed in FIGS. 1 and 2, the pattern is a straight line of substantial width extending around the woman's head in a generally horizontal plane. To produce this pattern, the masking member 13 is of rectangular shape curved along its length to lie on a cylinder and the aperture 14 is a straight slot extending throughout most of the length of the member. The backing member 12 similarly is of rectangular shape curved so as to be complementary in shape to the masking member and the rib 15 is flat and projects outwardly from the backing member in a plane normal to the axis of the cylinder on which the member lies. As seen in FIG. 2, the rib in this instance projects from the backing member through the aperture 14 and beyond the outer side of the masking member a distance equal to several times the thickness of the masking member so as to expose a strip of hair of substantial width when the rib is projected through the aperture and the members are connected releasably together.

While the members 12 and 13 may be held together releasably in various ways, preferably this is accomplished by fastening elements on the members. These elements in the present instance are a plurality of lugs 16 with enlarged outer ends projecting from the masking member and received in complementary-shaped recesses 17 on the outer side of the backing member. The outer portions of the recesses have a diameter equal approximately to the shanks of the lugs and the inner portions of the recesses are enlarged to receive the enlarged outer ends of the lugs. The material from which the members are formed is stiff enough to retain the shape of the members while being flexible enough to permit the lugs to snap into the recesses and be easily withdrawn from the recesses. Herein, there are four sets of lugs and recesses adjacent the four corners of the rectangular pattern.

With the backing and masking members 12 and 13 curved to lie on a cylinder, they are adapted to receive a portion of the user's hair 11 spaced downwardly from the head. Where the desired pattern is to be placed closer to the head, however, the members preferably are more spherical in shape to conform to the contour of the hair in that area.

As indicated previously, the thickness of the rib 15 and the width of the slot 14 are correlated with the thickness of the layer of hair 11 to be clamped between the members so as to produce a tight fit between the overlapping portions of the rib and the wall of the slot and prevent the liquid composition for treating the exposed part of the hair from flowing inwardly past such portions and affecting unexposed parts of the hair. This relationship will be self-evident.

In the use of the improved device shown in FIGS. 1 and 2, first the backing member 12 is placed behind the portion of the hair 11 to be treated and such hair distributed uniformly across the member and the rib 15. Then, the masking member 13 is placed on the backing member so that the rib with its covering of hair is forced through the slot 14 as shown in FIG. 2, and the members fit closely enough to allow the lugs 16 inserted into their cooperating recesses 17 so as to secure the members releasably together. The treating composition then is applied to the exposed portion of the hair on the exterior of the rib and permitted to remain there for the normal period of time. Due to the sizes of the rib and the slot and the tight fit where the rib and the slot wall overlap, the composition is prevented from flowing into the slot and only the exposed hair is treated. The material from which the members are formed is impervious to the treating composition, a suitable material being polypropylene which may be molded easily into the desired shapes. Once the prescribed treating time has passed, the members are disconnected from each other.

It will be apparent that the desired pattern may take various forms. FIGS. the pattern of the appliance 10 in FIGS. 1 and 2 is simply a single straight strip, a plurality of strips may be treated in the hair by using such appliance in various applications or additional ribs may be provided for treating several strips of hair in a single application. As shown in FIGS. 3 and 4, other patterns also may be used, the pattern of FIGURE 3 being an outline of a five-pointed star, and that of FIGS. 4 being an outline of a fish. The parts of Figs. 3 and 4 which correspond to parts in FIGS. 1 and 2 bear similar reference characters with the addition of a suffix 'a' in FIG. 3 and 'b' in FIG. 4.

Where the patterns are hollow or are outlines as in FIGS. 3 and 4, the inner portion of the masking member within the outline may either be formed as a separate piece 18 as in FIG. 3 or, as in FIG. 4, the pattern is interrupted to leave parts 19 at spaced intervals to connect the interior part 20 of the pattern to the remainder of the masking member 13b. Where the inner
portion of the pattern is a separate piece as in FIG. 3, separate connecting elements 21 and 22 are provided to secure that part of the masking member 13a to the backing member 12a.

Another modification is shown in FIG. 5 where parts corresponding to parts in the other forms bear similar reference numerals with the suffix c. In this modification, a tight fit between the members around the aperture is provided by forming a groove 23 on one member and a complementary rib 24 on the other member to force hair into the groove and form a dam preventing liquid flow past the rib. Herein, the aperture 14c is round and the rib is formed on the masking member 13c with the groove in the backing member.

Obviously many other patterns may be utilized without departing from the scope of the invention. Also, other means may be provided for releasably connecting the members together and the members may have other shapes. The members may be formed easily by plastic molding processes and are easy to manipulate while being adaptable to patterns of different sizes and shapes.

I claim:

1. A hair treating appliance having in combination, a sheet-like backing member adapted to be placed on the inner side of a body of human hairs to be treated and having an outer imperforate surface of predetermined contour with a raised portion of a predetermined pattern projecting outwardly from the surface to underlie portions of said hairs intermediate their ends, an outer sheetlike member having an inner surface of a contour complementary to said predetermined contour of said outer surface of said backing member and an aperture complementary in shape to said projecting portion, and fastening elements on said members securing the same releasably in interfitting relation with said inner and outer surfaces in closely adjacent opposed relation and with said projecting portion extending into said aperture and pressing said intermediate portions of said hairs into the aperture, said intermediate portions of said hairs in said aperture being exposed through the aperture in said predetermined pattern to receive a hair treating composition for treating said exposed hair while the remainder of said hairs between said surfaces is masked from contact with the composition.

2. The combination of claim 1 in which said shape of said aperture is an outline and said outer member is formed as two separate parts each releasably connected to the backing member with the outer periphery of the aperture defined by one of the parts and with the inner periphery of the aperture defined by the other part.

3. A hair treating appliance having in combination, a backing member adapted to be placed on the inner side of a body of hairs to be treated intermediate their ends and having an outer imperforate surface of predetermined contour, an outer member having an inner surface of a contour of said outer surface of said backing member and an aperture having a predetermined shape, and fastening elements on said members securing the same releasably in interfitting relation with said inner and outer surfaces in closely adjacent opposed relation and with said hairs clamped between said surfaces and having portions intermediate their ends exposed through said aperture in a pattern the same as said predetermined shape to receive a hair treating composition while the remainder of said hairs between the surfaces are masked from contact with the composition.

4. The combination of claim 3 in which the parts of said members adjacent said aperture are impervious to said hair treating composition and the spacing between the members is correlated with the amount and viscosity of the composition to restrict the application of composition to a pattern of said hair corresponding to said predetermined shape.

5. A hair treating appliance having in combination, a backing member adapted to be placed on the inner side of a body of hair to be treated and having an outer imperforate surface of predetermined contour and an outer member having an inner surface of a contour complementary to said outer surface of said backing member and an aperture having a predetermined shape, said members interfitting with each other with said inner and outer surfaces in closely adjacent opposed relation to receive between said surfaces strands of hair having portions intermediate their ends exposed through said aperture in a pattern the same as said predetermined shape to receive a hair treating composition while the remains of said strands are masked from contact with the composition.

6. The combination of claim 5 in which one of said members is formed with a groove adjacent said aperture and the other member is formed with a rib of complementary shape fitting in said groove and forcing hair into the groove to form a dam to block the flow of said composition.