HAIR WAVING APPLIANCE AND METHOD OF USING THE SAME

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Inventor

By his Attorney

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To all whom it may concern:

Be it known that I, CHARLES NESSLER, a citizen of the United States, and resident of New York, in the county of New York, and State of New York, have invented certain new and useful Improvements in Hair-Waving Appliances and Methods of Using the Same, of which the following is a specification.

In the art of permanent waving of natural hair on the head, it is customary to follow substantially the method of coiling the strand of hair around a curler, either in a wet or dry condition, then applying a lotion or solution to the hair, either by direct application thereto, or by means of a moistened absorbent material acting as a carrier of the lotion, then covering or surrounding this assemblage with a tube or casing of suitable material, and then applying heat to this moistened composite structure by inserting the same in a suitable heater, preferably of the electric type. In following the stated steps, it is the general practice to use a lotion or solution which leaves a residue which frequently finds its way accidentally to the wound hair undergoing the waving operation and this is objectionable as its presence in the hair has a tendency to injure the hair structure and particularly where a comparatively high degree of heat is employed. A lotion in extensive use is that of borax powder and water and it is applied to the wound hair in various different ways, such as wrapping around the hair a strip of absorbent material saturated with the said solution, or encasing the borax in moistened lint, paper, a textile pad, or in a tube, and then the necessary heat is applied to the moistened structure. The heat generates vapor or steam which passes into the hair structure and together with the heat produces the desired wave in the hair in permanent form. In some cases the hair may become damaged by being made brittle and harsh, and also sometimes caused to assume a bleached appearance, should the generated steam or hot water or both accidently carry particles of the borax into the crevices of the hair shaft cells. When this happens it is difficult to dislodge the borax from the hair, even after the waving, because under certain conditions the borax becomes strongly attached to the inner structure of the hair. This possibility may well be appreciated when it is understood that the applied heat causes the borax to give off its water of crystallization, and the continued heating melts the borax while the water escapes and the borax then solidifies and expands into a hard stony mass. It is in the last mentioned state that the borax will adhere to the hair structure in a tenacious manner, if it once reaches the hair.

I have devised an appliance and method in which the steam and hot water which acts upon the hair treating substance, for example borax, or is given off by said substance, is caused to pass through an oily or greasy medium or filter before it can reach the hair wound on the curler. I have found that this means and method will practically prevent the presence of the residue or particles of the hair treating substance, in the wound hair undergoing the moisture and heat waving operation, and that in the event of small particles of said substance escaping to the hair through the greasy filter or medium, such particles will be so affected or conditioned by the adhering grease, as to render them easily removable from the waved hair by a simple rinsing thereof. The interposed oily medium through which the steam or hot water or both, as well as any escaping particles are compelled to filter, is arranged or located in such relative position as to prevent it from coming in contact with the wound hair or being so acted upon as to reach the hair as this is to be avoided. There are other important advantages resulting from the use of my improvements, as herein-after fully described and then pointed out in the claims.

I have illustrated types of my invention as embodied in different forms, in the accompanying drawings, wherein:

Figure 1, is a perspective view of a sheet of absorbent material having two opposite edges folded inwardly to confine the hair treating substance in place, and with a cylindrical former placed across one end for rolling the sheet into tubular form.
Figure 2, is a perspective view of a detached folded inner carrier prepared with a greasy or oily film upon its interior, as used in one form of the invention.

Figure 3, is a perspective view of the improved appliance and shows the exterior or covering tube or housing, partly broken away at its inner end, with the outer carrier of the hair treating substance placed within in said exterior tube and the oily or greasy material carrier folded around and inserted within said outer carrier, and with a curler having a strand of wound-hair thereon located within the bore of said structure, ready to receive the heater.

Figure 4, is a perspective view on a reduced scale of another form of embodiment of the two carriers.

Figure 5, is a perspective view of the combined carriers folded and ready to be rolled up on the former as shown in Fig. 1.

Figure 6, is a perspective view of the said combined carriers rolled into a tubular body and having a cover or protecting tube placed over the same, and ready to receive the curler with the wound-hair thereon, on the order of the arrangement shown in Fig. 3.

Figure 7, is an enlarged cross-sectional view of the appliance with the hair curler and wound hair, as shown in Fig. 3.

Figure 8, is a side view of an electric heater within which is located the structure shown in Figs. 3 and 7, the right-hand end of the parts being on a longitudinal vertical central section, with parts broken away.

The carriers for the respective materials used in my improved device may be made in different ways and also assembled in different ways. I have herein shown two different constructions and arrangements of the carriers, and it will be noted that the respective parts or elements composing the appliance may be put together or built up at the time the hair-waving is done, or the said parts may be previously assembled into a structure which may be more readily and conveniently applied in the course of the hair-waving operation.

In the said drawings, 1 is a rectangular sheet of suitable absorbent material, such as textile fabric or unglazed paper, with two of its opposite edges folded over at 2, 2, upon one face of the sheet for the purpose of retaining in place the powdered substance when the sheet is rolled up as a tubular body. Upon the upper face of the sheet and to the right-hand of the cross-line indicated at 3—3, I spread evenly a layer of suitable hair treating substance 4, such as borax crystals, which is kept in place at the sides by the flanges 2, 2. I then roll up the sheet from the left-hand end on the cylindrical former 5, so as to form a hollow or tubular body, the free end of which may be pasted or secured in any suitable way, or the unfastened tubular body may be inserted in the exterior cover or protecting tube 6, as indicated in Figs. 3, 7 and 8. The body thus formed of the absorbent sheet with the contained powdered substance makes what may be termed a sandwich of tubular form with its interior wall absorbent so that when the structure is moistened and heated from the exterior the steam and vapors will pass through the layers into the interior bore. I then take another sheet 7, of the same width as the first mentioned one, and fold it on itself cross-wise, and then coat the inner face of the outer fold with a suitable oily or greasy material 8, such as lanoline. This doubled sheet I then fold or roll up into tubular form and insert it as the grease carrier within the rolled up sheet 1, which carries the hair-treating substance. This brings the oily or greasy medium or body between the hair treating substance layer and the wound-hair 9, which is coiled around the curler 10, when the said parts are placed over or around the wound-hair, as shown in Figs. 3, 7 and 8.

While the sheet or carrier of the hair treating substance is capable of absorbing moisture and may be of material having great absorptive power, the material used for the grease carrier is such that the grease or oil cannot pass through it and come in contact with the wound-hair, which result must be guarded against. For this purpose any well known materials such as glazed or sized paper or parchment like material which is quite impervious, may be used, at the same time the steam or hot vapors arising from the outer carrier can penetrate and pass through the material of the inner carrier so as to reach the wound-hair in the waving operation. The interposition of this grease carrier, however, serves to practically exclude particles of the hair treating powder, such as borax, from passing into the wound-hair, and should fine particles of such powder accidentally get through with the steam or vapor, such escaping particles in their passage through the grease medium are sufficiently coated or conditioned by the grease, as to permit of their easy removal from the wound-hair by a mere rinsing operation.

In using the form of the device just described, the outer or borax carrier may be built up at the time of doing the waving and it may be wrapped around the wound-hair on the curler after first wrapping the grease carrier about the wound-hair, the former being placed over the latter, and then the cover tube placed over the outer carrier, as shown in Figs. 3, 7 and 8. Or the outer or borax carrier may be first inserted in the cover tube and then the inner or grease carrier inserted inside of said borax carrier, or said grease carrier may be folded around.
the wound-hair and the cover tube with its contained outer carrier placed over the grease carrier.

My improved greasy or oily medium may be used in conjunction with several forms of devices containing hair treating substances which are now in general use, some of which employ a cover or protecting tube in which is arranged a borax carrier of absorbing material and others use a separate cover tube with a pad or body forming the borax carrier which is covered by said tube when the hair-waving operation is begun, and there are various forms of these devices.

My improved grease screen or carrier may be inserted within the interior of the aforementioned prepared borax tubes, or applied first to the wound hair where the pads or other devices are used, or in any suitable way, provided the grease film or body is interposed between the hair treating substance, such as borax, and the wound-hair. The herein above described form of my grease carrier is well adapted for the different applications just referred to.

In the other form of the grease or oil carrier which I herewith show, the same is so combined with the hair treating substance carrier, that they are practically a unit and may be folded or rolled up, to provide an inner carrier of the one and an outer carrier of the other, in carrying out the invention. In Figs. 4, 5 and 6, I show the said combined form of the carriers. The sheet of absorbent material 1', has half of its length covered with the hair treating substance 2', such as powdered borax, and this part is provided with the edge flanges 3', 3' for confining the powder in place. In applying the borax in each of the forms, the powder is made wet with water in the usual way so that the material cakes as it dries and the baking or hardening serves to keep the layer of borax in place and also permits considerable handling of the carrier without the caked borax breaking up into a powder. A form of well known type is used in localizing the borax in its proper place on the sheet and also to somewhat regulate the quantity used.

On the cross-line 3'-3', the absorbent sheet 1', is suitably united with the so-called non-absorbent or slightly absorbent sheet 7', the inner half of the upper surface of which is spread or coated with a suitable animal fat or grease 8', such as the lanoline referred to above. The respective ends of the sheets are then folded over towards the cross-line 3', as shown in Fig. 5, and the side flanges 2', are turned over upon the folded part of sheet 1', thus forming a compact and well encompassed combined carrier of the borax and the grease, which may be fastened at different points in any suitable way to keep the flaps closed snugly in place. This device may be kept by itself for future use together with the covering tube 6', which is used to receive the folded or rolled combined carrier, as shown in Fig. 6, wherein the dotted lines indicate the position of the rolled carriers when the same is used in waving the hair, the wound-hair on the curler being arranged in the center of the folded or rolled carriers, on the order shown in Figs. 7 and 8. Instead, however, of keeping the combined carriers and the cover tube separate until used, or transporting them in such separated condition, the carriers may be placed in the cover tube when made up and kept on hand, or transported in such assembled condition, and this latter arrangement has the advantage of expediting the hair waving process, as it is only necessary to wet or soak the built-up device in water and then place it over the wound-hair on the curler. This also avoids the very messy condition arising from wetting the carriers or pads while separated from the tube and applying them to the hair before encasing them in the tube.

In applying the animal grease or oil to its carrier, I take care to use but little in order that there may be just enough to serve as the filter or screen medium, and thereby avoid a surplus of grease, which under the effect of the heat might flow out of place. The further precaution is taken, of using for the grease carrier a material of such character as to practically prevent the grease from passing through it to the other side, in order that none of the grease may reach the wound-hair, for in this method I seek to avoid the application of grease or oil to the wound-hair in the waving operation, and use said grease only for the purpose herein-above stated. In the doubled or folded grease carrier herein shown, the oily or greasy material is applied to the pane or flap lying furthest from the hair when the carrier is applied thereto, and this serves to prevent the grease from reaching the hair.

In using the appliance, the outer end of the cover or steaming tube, which is usually made of non-absorbent material or material only slightly absorbent, is turned in as at 11, so as to form a complete or partial closure at such point in order to prevent the ready escape of the steam or gases in the waving operation, or this end of the cover tube may be choked in any suitable way in order to impede the exit of said steam.

In waving the hair by the use of this appliance, the latter is properly wetted with water. A strand of hair 9, is wound on the curler 10, and tied thereto in the usual way, and the hair may be wet or dry as desired. The appliance being placed around the wound-hair, with the inner end of the cover tube ligatured against the curler, as at 12, an ordinary electric-heater 13, is placed over the
said assemblage and the current turned on for the required period of time to produce the necessary heat for the waving of the hair. While the steam or gases may readily reach the wound-hair in the desired way, any residue or particles of solid material which escape from the outer carrier, can only reach the wound-hair by passing through the greasy or oily medium and thereby become so coated or conditioned by the oleaginous material, as to render said particles readily removable from the wound-hair after it is unwound, by merely tossing or knocking it with the hands, or rinsing it with water, and without requiring a shampoo. It will of course be understood that some part of the structure, usually the carrier of the hair treating substance, is capable of absorbing water in order to provide a source for the necessary steam for waving the wound-hair.

My invention is not limited to the use of the particular materials herein specifically stated, as any well known materials may be used, and likewise the method herein set forth may be differently carried out, without, however, departing from the spirit of my invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. In a hair-waving appliance of the class described, means provided with media of hair treating substance and also media of fatty or oily material, said parts being constructed and arranged so that the said fatty material is disposed between said hair treating substance and the wound-hair when applied to the same in the hair-waving operation.

2. In a hair-waving appliance of the class described, absorbent material carrying hair treating substance and also a body of greasy or oily material, said parts being constructed and arranged so that the greasy or oily material lies between said hair treating substance and the wound-hair when applied to the same in the hair-waving operation.

3. In a hair-waving appliance of the class described, a container or holder having a part that is absorbent and provided with a hair treating substance, and another part thereof provided with a greasy or oily material and of relatively low degree of absorbptive power to prevent passage of said greasy or oily material through the same, said parts being so constructed and arranged that said greasy or oily material lies between said hair treating substance and the wound-hair when applied to the same in the hair-waving operation.

4. In a hair-waving appliance of the class described, a set of carriers more or less absorbent and so constructed and arranged as to be superimposed with respect to each other when applied to the wound-hair in the hair-waving operation, and being alternately provided with hair treating substance and fatty or oily material, with the latter being interposed between a hair treating substance carrier and said wound-hair when used in said operation.

5. In a hair-waving appliance of the class described, a construction and arrangement substantially in accordance with claim 1, and in which the said layers or bodies are disposed around each other with a greasy or oily one innermost when applied to the hair in the hair-waving operation.

6. In a hair-waving appliance of the class described, a construction and arrangement substantially in accordance with claim 1, and an outer covering or member for surrounding or encasing the said structure.

7. In a hair-waving appliance of the class described, a construction and arrangement substantially in accordance with claim 1, and in which the non-oleaginous hair treating substance is alkaline.

8. In a hair-waving appliance of the class described, a construction and arrangement in accordance substantially with claim 1, and in which the fatty or oily material is animal oil or grease.

9. In a hair-waving appliance of the class described, a structure comprising absorbent material encasing a hair treating substance, and relatively non-absorbent material encasing an oily or greasy substance, one being placed around the other so as to cover the wound-hair with the oily or greasy one arranged innermost.

10. In a hair-waving appliance of the class described, an absorbent carrier provided with a hair treating substance, and a relatively non-absorbent carrier provided with an oily or greasy material, said latter carrier being rolled or folded inside of the former into a tubular body with said latter carrier disposed upon the interior thereof.

11. The herein described method of preventing adherence to the waved hair of particles or the residue of the hair treating substance used in waving the hair, which consists in causing the said particles which escape to the hair to first pass through a greasy medium and thereby receive a greasy or oily coating or application, whereby the removal of said particles from the hair is facilitated.

12. The herein described method of preventing adherence to the waved hair of particles or the residue of the hair treating substance used in waving the hair, which consists in placing a fatty or oily medium between the carrier of said hair treating substance and the wound-hair and causing the said particles which escape to the hair to first pass through said medium and thereby receive a greasy or oily application, whereby
the removal of said particles from the hair is facilitated.

13. The herein described method of waving hair, which consists in coiling the hair, then applying to the hair a carrier containing a hair treating substance, with a second carrier containing an oleaginous or greasy material and interposed between said first mentioned carrier and the wound-hair, and then applying moisture and heat.


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