A porous hair roller containing hair drying expediting material, said material comprising a combination of a clay and a silicate.
HAIR ROLLER CONTAINING HAIR DRYING EXPEDITING MATERIAL

SUMMARY OF THE INVENTION

This invention relates to hair drying material and more particularly to hair rollers containing hair drying expediting material.

In the past, one means of drying hair was through the combined use of heat and moving air and generally required that a person whose hair was being dried sit under a noisy mechanized device, termed an electric hair dryer or blower, for long periods of time. Attempts have been made to both decrease the length of time of use of an electric hair dryer and to eliminate its use entirely by using hair rollers containing desiccants, such as silica gel. Such attempts have generally proved to be unsatisfactory, either because the desiccants became watery or for other technical reasons.

The present invention overcomes such problems by providing a hair roller containing a hair drying expediting material which will not become watery and which material is different in composition from previously used materials.

Hair drying tests which have been conducted have proven that hair rollers with the said hair drying expediting material contained therein as pellets have caused wet hair to dry significantly more rapidly than when the hair was similarly dried using hair rollers without the said hair drying expediting material contained within the rollers, both when the hair was dried using an electric hair dryer and when the hair was left to dry naturally with the rollers in place.

One of the objects of this invention is to provide a hair roller containing hair drying expediting material which will facilitate the drying of hair.

Another object of this invention is to provide a perforated or porous hair roller having pellets of the hair drying expediting material of particular composition contained therein, which will aid in the drying of hair.

Still another object of this invention is to provide a hair drying expediting material which may be formed into specified shapes and which will absorb and adsorb water.

Yet another object of this invention is to provide a hair drying expediting material which may be formed into pellets for insertion and containment within a hair roller and which will increase the speed of drying of hair.

Another object of this invention is to provide a hair drying expediting material which has sufficient rigidity so that it may be formed into a hair roller, and which will decrease the time required for drying hair through the absorption and adsorption of water by the material from which the hair roller is made.

These and other objects of the invention will appear from time to time as these specifications proceed, and as shown in the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an orthogonal view of the invention, shown with the component parts separated.

FIG. 2 is a plan view of the invention, shown with the component parts in place.

FIG. 3 is a cross-sectional view of the invention with the cross-section being taken on the planes 3–3 shown in FIG. 2.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The invention, in its preferred embodiment, comprises a plurality of pellets, 14, each about the size of a pea and comprising the hair drying expediting material, enclosed within a porous body member, 11, formed from a substantially rigid mesh of cylindrical configuration, and held therein by end caps, 12 and 13, which fit snugly into the ends of the body member, 11.

Although the preferred embodiment is with an open mesh as shown in the drawings, any porous or perforated structure which will contain the pellets 14 and around which a lock of hair may be placed, may equally be used.

The pellets are comprised of any clay material, such as kaolinite, china clay, bentonite, hectorite, elkonite, or zirconite, mixed with any absorbent natural silicate, such as talc, asbestos, or fuller's earth, or any absorbent synthetic silicate, such as calcium silicate, magnesium silicate, aluminum silicate, zinc silicate, lithium silicate, or zirconium silicate.

Wet clay is mixed with the selected silicate or silicates and formed into the desired shape, which shape would preferably be pellets about the size of peas. A binder of some type, such as vinyl pyrrolidone/vinyl acetate, may be added to aid in holding the materials together. The formed shapes are then heated to withdraw the water from the materials, after which they are inserted into hollow, perforated or porous hair rollers of various shapes and sizes, such as the cylindrical mesh 11.

In experiments the following mixture of materials with their approximate proportions have been found to give good results when used in making the pellets:

a. Clay material, such as Bentonite, approximately 10 parts;

b. Synthetic Calcium Silicate, such as the product having the trademark "Micro Cell E", manufactured by the Johns-Manville Company, approximately 10 parts;

c. Atomized Aluminum, approximately 1 part;

d. A binder, such as the product having the trademark "Cantron H.S. 850," manufactured by the G.A.F. Corporation, approximately 1 part;

e. Water in such quantity as to make a plastic mixture of a wetness sufficient to permit the working and shaping of the mixture.

It should be noted that the proportions may be varied to a very great extent without materially affecting the hair drying expediting ability of the material.

The bentonite and calcium silicate are mixed together. To these the binder and water, which have been combined, are added and the product is mixed thoroughly to form a homogeneous paste, which is then shaped into pellets about the size of peas. The pellets are then thoroughly dried at a preferred temperature of about 180°F. for about 30 minutes.

The atomized aluminum is produced in a number of well known ways, one of which is by blowing molten aluminum through fine atomizing nozzles and collecting the product in a dust collector. The atomized aluminum is not essential to the basic invention, but when added to the mixture seems to result in a product which will have a drying effect somewhat greater than if the atomized aluminum were not added. This appears to be due to the aluminum holding heat, which is applied by a hair dryer, within the pellets. Any granulated or powdered aluminum would have substantially the same effect, as would any other metals having heat properties similar to aluminum, such as copper.

In use, the pellets are inserted into the hair roller and held therein by the caps. The damp or wet hair is wound around the outer periphery of the roller and held thereon by well known clips or hair pins. The hair is then allowed to dry either without mechanical aid or with the use of an electric hair dryer or blower. After the hair roller has been used and the hair is dried, the roller is removed from the hair and the pellets may be allowed to dry before the next use, either by exposing them to heat or else by letting them sit at room temperature until they are thoroughly dry. However, it has been found that the pellets need not be allowed time to dry between each use when the rollers are in continuous use, such as would be the case in a beauty salon, but that they may be used continuously for several hair dryings before it becomes necessary to allow them to dry to restore their full effectiveness.

An alternate method of using the hair drying expediting material is to fashion it into a hair roller and using the hair roller so formed in the same manner as a hair roller containing the pellets. In such a case, it will generally be necessary to first form the material into the desired shape and then to fire same in an oven to obtain a rigid and hardened structure, in a manner similar to that used in making pottery.

While a number of different embodiments of the invention have herein been shown and described, it may readily be un-
understood that various modifications and variations in the invention may be attained without departing from the spirit and scope of the novel concepts thereof, as defined by the claims appended hereto.

1. A hair roller for aiding in the drying of wet hair, said hair roller containing a hair drying expediting material, said hair drying expediting material comprising a clay and an absorbent silicate.

2. A hair roller as claimed in claim 1 wherein said hair roller comprises a porous body member, hair drying expediting material contained within said body member, and means for retaining said hair drying expediting material within said body member.

3. A hair roller as claimed in claim 1 wherein the hair roller is formed out of the hair drying expediting material.

4. A hair roller as claimed in claim 3 wherein the hair drying expediting material comprises a combination of a clay and an absorbent silicate selected from the group consisting of talc, asbestos, fuller's earth, calcium silicate, magnesium silicate, aluminum silicate, zinc silicate, lithium silicate, and zirconium silicate.

5. A hair roller as claimed in claim 3 wherein the hair drying expediting material comprises a combination of an absorbent silicate and a clay selected from the group consisting of kaolinite, china clay, bentonite, hectorite, elkonite, and zeolite.

6. A hair roller as claimed in claim 5 wherein the absorbent silicate is selected from the group consisting of talc, asbestos, fuller's earth, calcium silicate, magnesium silicate, aluminum silicate, zinc silicate, lithium silicate, and zirconium silicate.

7. A hair roller comprising a porous body member adapted to have a lock of hair wrapped and secured peripherally thereabout, hair drying expediting material contained within said body member, and means for retaining said hair drying expediting material within said body member, said hair drying expediting material comprising a clay and an absorbent silicate.

8. A hair roller as claimed in claim 7 wherein the absorbent silicate is selected from the group consisting of talc, asbestos, fuller's earth, calcium silicate, magnesium silicate, aluminum silicate, zinc silicate, lithium silicate, and zirconium silicate.

9. A hair roller as claimed in claim 7 wherein the clay is selected from the group consisting of kaolinite, china clay, bentonite, hectorite, elkonite, and zeolite.

10. A hair roller as claimed in claim 9 wherein the absorbent silicate is selected from the group consisting of talc, asbestos, fuller's earth, calcium silicate, magnesium silicate, aluminum silicate, zinc silicate, lithium silicate, and zirconium silicate.

11. A hair roller as claimed in claim 7 wherein the hair drying expediting material comprises, in addition, metallic particles.

12. A hair roller as claimed in claim 11 wherein the metallic particles comprise aluminum.

13. A hair roller as claimed in claim 11 wherein the metallic particles comprise copper.

14. A hair roller as claimed in claim 7 wherein said clay is bentonite and said absorbent silicate is calcium silicate.

15. A hair roller as claimed in claim 14 wherein the hair drying expediting material comprises, in addition, a binder.

16. A hair roller as claimed in claim 15 wherein the binder is vinyl pyrrolidone/vinyl acetate.

17. A hair roller as claimed in claim 16 wherein the hair drying expediting material comprises, in addition, atomized aluminum.

18. Hair drying expediting material for use in aiding the drying of wet hair comprising a clay and an absorbent silicate.

19. Hair drying expediting material as claimed in claim 18 wherein the absorbent silicate is selected from the group consisting of talc, asbestos, fuller's earth, calcium silicate, magnesium silicate, aluminum silicate, zinc silicate, magnesium silicate, lithium silicate, and zirconium silicate.

20. Hair drying expediting material as claimed in claim 18 wherein the clay is selected from the group consisting of kaolinite, china clay, bentonite, hectorite, elkonite, and zeolite.

21. Hair drying expediting material as claimed in claim 20 wherein the absorbent silicate is selected from the group consisting of talc, asbestos, fuller's earth, calcium silicate, magnesium silicate, aluminum silicate, zinc silicate, lithium silicate, and zirconium silicate.