

1

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**SHAVING METHOD AND COMPOSITION
THEREFOR**

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This invention relates to the removal of hair or whiskers in a shaving operation to cut the hair at its base from the surface of the skin and relates more particularly to a new and improved method of shaving and its composition for use in same.

It is an object of this invention to provide a new and improved method for shaving and it is a related object to provide a new and improved composition for use in same.

Referring more specifically to the shaving operation as practiced by men for the removal of whiskers from the face skin, the first step includes washing the face with warm water and soap to remove oily constituents from the surfaces of the hair and skin which otherwise prevents water from soaking the whiskers to soften the hair fibers for cutting. After washing, the face is either left as wet as possible with warm water or else, if the face has been dried, it is again wet with water before application of a lather. The lather is then worked into the hairs on the face completely to coat the hair fibers and skin surface and then the hairs or whiskers are cut from the face with a razor. The face is rinsed and dried and then, in some instances, an after-shave lotion is applied to refresh the skin and seal the pores.

Water is believed essential on the surfaces of the skin and hair to function as a lubricant between the cutting edge of the razor and the surface of the skin. The foamed lather applied to the wetted surface of the skin is incapable of preventing vaporization of the water from the surfaces of the skin and hairs such that considerable moisture is lost from such surfaces during normal shaving operations. This is noticeable in the greater difficulty in shaving during the latter stages of the shaving operation by comparison with the beginning. Further, the lather tends to function as a sponge which soaks water up from the surfaces of the skin and hair such that lesser amounts remain for the intended purposes of lubrication.

The lather constitutes a mass of air-entrained bubble which is incapable, in itself, of providing maximum lubrication since the lather provides an interrupted surface incapable of making continuous contact with the surfaces of the hairs and skin. Thus, while the soap in the lather is capable of softening the hair or whiskers, the desired lubrication for smoothly gliding the cutting edge of the razor over the surface of the skin is not available.

It has been found, in accordance with the practice of this invention, that a greatly improved shaving operation can be achieved when the damp surface of the skin is treated with a composition embodying the combination of an oil, a super fatting agent and water repellents in a thin layer on the surface of the skin and hair fibers to provide improved lubrication between the cutting edge of the blade and the surfaces of the skin; which minimizes loss of moisture from the surfaces of the hair or skin, as by vaporization or by absorption into the lather; and

2

which provides improved penetration of the composition into the crevices and at the base of the hair fibers to enhance the shaving operation.

A treating composition representative of the practice of this invention is illustrated by the following examples:

Example 1

- Q.s. mineral oil
- 0.8% by weight octadecanol
- 0.5% by weight silicone fluid (555 Dow Corning fluid)
- 0.5% by weight fragrance
- 0.005% by weight preservative

In the foregoing formulation, the ingredients, other than the mineral oil, are given in percent by weight of the mineral oil.

In use of the foregoing composition in the new and improved method of shaving, the face is washed with soap and warm water as before. Thereafter, the skin is damp dried to leave the skin moist but not wet. While damp, a small amount of the above composition is applied by hand to provide a thin film over the area to be shaved. Lather is then spread over the treated surface of the skin and then the usual shaving operation is carried out. After shaving has been completed, the lather is rinsed from the face and then the face is dried. It is not necessary to apply an after-shave lotion because previously applied composition will leave the face with a softening and protective coating.

It will be noticed that the razor glides much more smoothly over the skin during the shaving operation to cut the hair fibers at their base from the surface of the skin. This is because the constituents present in combination on the dampened surfaces of the skin beneath the layer of lather is capable of improved lubrication between the cutting edge of the razor and the surface of the skin. The lubrication made available from the composition described is greatly improved over water heretofore available as the only lubricant during the shaving operation. Further, the oil, the octadecanol and the water repellent (silicone) protect the moisture originally present on the surfaces of the hair fibers and the skin. Such protection appears by way of a barrier, which is effective even when present in a mono-molecular film, to minimize vaporization of the moisture through the lather and to separate the moisture from the lather in a manner to block transmission thereof for absorption into the lather. Thus, the moisture is retained on the surfaces of the skin and hair fibers to continue to function as a hair softener with the materials of the applied composition to provide improved lubrication between the cutting edge of the blade and the surfaces of the skin and hair. Also, the concentration of free moisture on the surfaces of the skin and hair fibers remains rather constant from the beginning to the end of the shaving operation so that an easy and uniform shave is experienced by comparison of the variations occurred in present practice due to the loss of moisture and drying out of the hair, the skin and the lather as the shaving operation progresses.

The oil constitutes the base of the treating composition. As the oleaginous constituent, it is preferred to make use of an oil which has good lubricating properties and which

is incompatible with water and capable of providing a good barrier to the penetration thereof. Best use is made of liquid petrolatum but mineral oil and other similar stable and preferably saturated hydrocarbon oils can be used.

In the foregoing composition, the silicone functions in combination with the oil as a lubricant and hair softener and operates, in addition, as a water repellent to block the loss of moisture as by dehydration, penetration or evaporation. As the silicone, it is preferred to make use of a low molecular weight, stabilized silicone in its full extent of polymeric growth, referred to in the trade as silicone fluids and which may be represented by the fluids made commercially available by the Dow Corning Chemical Company, of Midland, Michigan, under the trade names DC-200, DC-400, DC-555, DC-600 and DC-1000 and the like fluids. Instead, use can be made, in the small amounts required, of higher molecular weight waxy or solid resinous materials. It is preferred to make use of about 1 part by weight silicone fluid to 100 parts by weight of oil. As little as 0.1 and as much as 4.0 parts by weight of silicone can be used per 100 parts by weight of the oil.

The octadecanol functions as a super fatting agent and also a vapor barrier in the composition and it operates in combination with others of the ingredients to lubricate and to maintain residual moisture. Its principal function in the composition is to enhance the lubricating properties of the treating composition by increasing penetration to achieve more complete coverage of the surfaces and penetration into the crevices. It is preferred to make use of a water miscible material. Instead of octadecanol, use can be made of other saturated fatty and unsaturated fatty alcohols such as octadodecanol, oleyl alcohol, stearyl alcohol and the like. The super fatting agents are effective when present in the composition in an amount greater than 0.1 part by weight per 100 parts by weight of the oil up to about 2.0 parts by weight per 100 parts by weight of the oil. More than 2 parts by weight per 100 parts by weight of the oil can be used but corresponding increases in benefit do not compensate for the increase in cost. Best use is made of the fatty alcohols in an amount within the range of 0.3 to 1.0 part by weight per 100 parts by weight of the oil.

Fragrance and preservatives merely constitute additives to improve the acceptability and the stability of the composition. When employed, a desirable fragrance or preservative can be used. Suitable representatives and combinations are well known.

The foregoing sets forth the principal combination of ingredients in the composition. The characteristics of the composition can be further improved, if desired, by the addition of such ingredients as lanolin and surface active agents. Lanolin functions in a manner similar to the oil and silicone to minimize vaporization and dehydration and it operates with the other ingredients in the conditioning of the skin and hair fibers and in lubrication of the surfaces thereof. When used, lanolin may be present in an amount up to 5 parts by weight per 100 parts by weight of the oil but it is preferred to make use of lanolin in an amount within the range of 0.5 to 2.0 parts by weight per 100 parts by weight of the oil.

When used, the surface active agent functions in the composition to enhance wetting out of the surfaces for lubrication and to retain moisture on the surfaces. For this purpose, use can be made of dioctyl ester of sodium sulfo succinate (Aerosol OT). Instead, use can be made of other sulfonated fatty acid esters such as dibutyl phenylphenol sodium disulfonate, sodium lauryl sulfonate, sodium alkyl naphthalene sulfonate, sodium lauryl sulfonate, sodium alkyl naphthalene sulfonate and the like. An amount of surface action agent up to 2.5 parts by weight per 100 parts by weight of the oil can be used but it is preferred to make use of an amount less than 2 parts by weight down to about 0.5 part by weight per 100 parts by weight of the oil.

The following are representative of other formulations embodying the practice of this invention:

Example 2

Mineral oil
1.5 parts Aerosol OT
1.0 part lanolin
0.5 part octadecanol
.7 part silicone fluid (DC-400)
0.5 fragrance
0.005 preservative

Example 3

Mineral oil
1.5 parts Aerosol OT
0.7 part octadecanol
0.7 part silicone fluid
0.5 fragrance
0.005 preservative

Example 4

Mineral oil
1.2 lanolin
0.8 octadecanol
0.5 silicone fluid (DC-600)
0.5 fragrance
0.005 preservative

In the foregoing examples, the amounts are given in parts by weight per 100 parts by weight of the mineral oil.

The compositions embodying the features of this invention are more miscible with the skin glycerides than is water or other aqueous media heretofore employed in the shaving operation. Thus, the applied composition is capable of more readily wetting out the oily barriers naturally formed on the surfaces of the skin and hair fibers, as by sebaceous excretion.

When ordinary shaving lathers are used alone, the combination of moisture lost from the skin and hair fibers coupled with the incomplete contact between the aerated foamed mass and the surface of the skin results in a relatively dry skin surface. This presents insufficient lubrication for use between the cutting edge of the blade and the surfaces of the skin with the result that difficulties are encountered in a shaving operation such as razor burn, nicking and the tendency of the blade to drag, catch, or cut into the irregularities of the skin surface. Water has some lubricant characteristics when present as a film but not nearly as great as that which is provided by the composition embodying the features of this invention. Thus the considerably reduced friction between the cutting edge of the blade and the skin surface provides for a marked improvement in shaving smoothness, it provides for a safer shave and a cleaner shave since one can apply greater pressure on the cutting edge to depress the skin surface and thereby expose more of the whisker shaft for removal.

The considerably reduced friction and drag between the cutting edge of the razor and the surface of the skin operates further to protect and prolong the life of the extremely thin and sharp edge of the cutting blade with improved and prolonged cutting effectiveness. In addition, the residual film of composition which clings to the cutting edge of the blade tends to prevent corrosion of the cutting edge between usage thereby further to increase the useful life thereof.

The composition embodies the characteristics of a hydrophilic material and is thus miscible in aqueous or oil media. This unique characteristic permits easy removal, after shaving, by water rinse. Since the shaving foam is positioned over the layer of previously applied composition, removal of the shaving foam is enhanced upon completion of the shaving operation thereby to improve the rinsing of the foam from the face skin and from the implements that are employed. Because the composition is water miscible but not water soluble and

because it embodies described combination of ingredients, a film which remains on the surface of the skin after rinsing operation imparts a pleasant feeling of smoothness, freshness and life to the skin with a very pleasant and lasting sensation.

It is apparent from the foregoing that I have provided a new and improved composition as a supplement to improve and simplify the shaving operation whereby an improved shave can be secured in a more efficient, safe and comfortable manner. The composition formed of water miscible materials can be formulated into compositions which are not subject to separations of ingredients or settling, thereby markedly to improve the appearance and shelf-life of the product.

It will be understood that changes may be made in the details of the formulation, application and use without departing from the spirit of the invention especially as defined in the following claims.

I claim:

1. A pre-shaving preparation for use in shaving as a base between the lather and the skin consisting essentially of the combination of a mineral oil, organo silicone compound present in the ratio of 0.1 to 4 parts by weight of the organo silicone compound to 100 parts by weight of the oil, and a fatty alcohol fattening agent present in the ratio of 0.1 to 2.0 parts by weight per 100 parts by weight of the oil.

2. A pre-shaving preparation for use in shaving as a base between the lather and the skin consisting essentially of a mineral oil, an organo silicone fluid present in an amount corresponding to 1 to 4 parts by weight of the fluid present per 100 parts by weight of the oil, and a fatty alcohol fattening agent present in the ratio of 0.3 to 1.0 part by weight of the fattening agent to 100 parts by weight of the oil.

3. A pre-shaving preparation for use in shaving as a base between the lather and the skin consisting essentially of the combination of a mineral oil as a base, an organo silicone fluid present in the ratio of 1 to 4 parts by weight of the fluid per 100 parts by weight of the oil, a fatty alcohol fattening agent present in the ratio of 0.1 to 2.0 parts by weight of the fattening agent to 100 parts by weight of the oil and up to 5 parts by weight of lanolin to 100 parts by weight of the oil.

4. A pre-shaving preparation as claimed in claim 3 in which the lanolin is present in an amount within the range of 0.5 to 2.0 parts by weight per 100 parts by weight of the oil.

5. A pre-shaving preparation for use in shaving as a base between the lather and the skin consisting essentially of the combination of a mineral oil, an organo silicone fluid present in the ratio of 1 to 4 parts by weight of the fluid per 100 parts by weight of the oil, a fatty alcohol fattening agent present in the ratio of 0.1 to 2.0 parts by weight of the fattening agent to 100 parts by weight of the oil and a surface active agent present in an amount up to 2.5 parts by weight per 100 parts by weight of the oil.

6. A pre-shaving preparation as claimed in claim 5 in which the surface active agent consists essentially of a

sulfonated fatty acid ester present in an amount within the range of 0.5 to 2.0 parts by weight per 100 parts by weight of the oil.

7. A pre-shaving preparation for use in shaving as a base between the lather and the skin consisting essentially of the combination of a mineral oil base, an organo silicone fluid present in the ratio of 0.1 to 4 parts by weight of the fluid per 100 parts by weight of the oil, a fatty alcohol fattening agent present in the ratio of 0.1 to 2.0 parts by weight of the fattening agent to 100 parts by weight of the oil, lanolin present in an amount up to 5 parts by weight of lanolin to 100 parts by weight of the oil and a surface active agent present in an amount up to 2.5 parts by weight per 100 parts by weight of the oil.

8. In the method of shaving comprising the steps of dampening the portion of the skin to be shaved, applying a composition onto the portions of the skin to be shaved to provide a thin layer thereon wherein said composition consists essentially of the combination of a stable hydrocarbon oil, an organo silicon compound present in the ratio of 0.1 to 4 parts by weight per 100 parts by weight of the oil, and a fatty alcohol fattening agent present in the ratio of 0.1 to 2 parts by weight per 100 parts by weight of the oil, applying lather onto the thin layer of composition without working the lather thereon, advancing the cutting edge of the cutting blade over the lathered surface to sever the hair fibers at their base and then rinse the lather from the face.

9. In the method of shaving comprising steps of washing the face with warm water, damp-drying the face, applying a composition as a thin layer over the surface of the skin to be shaved wherein said composition consists essentially of the combination of a stable hydrocarbon oil, an organo silicon compound present in the ratio of 0.1 to 4 parts by weight per 100 parts by weight of the oil and a fatty alcohol fattening agent present in the ratio of 0.1 to 2 parts by weight per 100 parts by weight of the oil, applying lather onto the layer of composition without working the lather therein, advancing the cutting edge of the cutting member over the lathered surface to sever the hair fibers at their base, and then rinsing the lather from the face.

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