June 10, 1958 T. McMASTER 2,838,442

SHAVING STICK COMPOSITION AND METHOD OF USING SAME

Filed Dec. 17, 1954

Fig. 1.

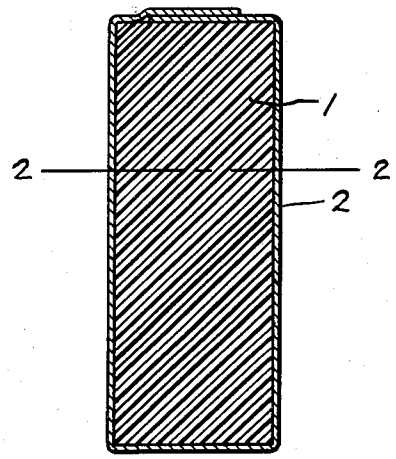
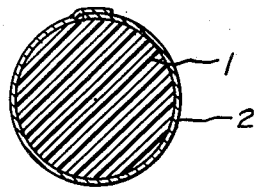


Fig. 2.



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United States Patent Office 2,838,442 Patented June 10, 1958

2,838,442

SHAVING STICK COMPOSITION AND METHOD OF USING SAME

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Application December 17, 1954, Serial No. 476,037

2 Claims. (Cl. 167—85)

The present invention relates to a shaving stick block, its method of manufacture and a novel method of shaving utilizing this block.

It has been found that shaving with the the shaving stick block in accordance to the invention may be readily carried out by wetting the beard with water, applying the block or shave stick to the wet beard, permitting the face to dry for about a half minute to one minute, washing off the coating which is applied to the face from the shave block and thereafter shaving while the beard is wet. In contrast to the usual method of lathering the face to wet the beard and maintaining the lather in the wet condition while shaving, the present invention utilizes the novel residual detergency of the shave block composition during the shaving operation. Due to the presence of a white pigment in the shaving stick composition, the face is covered with a white coating. Upon removal of this coating with water, the beard has already been properly softened and the beard is in proper condition to be cut by the razor.

A feature of the new composition of the present invention is the inclusion of the combination of carboxy methyl cellulose, an alkali metal salt of an alkyl substituted aromatic sulphonic acid and an inorganic binding agent, mainly colloidal magnesium aluminum silicate, these ingredients in combination with talc and a suitable pigment being formulated in a condition for easy application to the beard of the user.

The above mentioned composition is formulated in stick form and preferably covered with a suitable protective cover made of paper, tin foil, plastic or other fibrous material which serves to protect the composition from deterioration by water. The composition in stick form when applied to a wet surface softens and spreads to coat said wet surface with a pigmented coating. Upon washing off the pigmented coating enough residual detergent comprising the sodium carboxy methyl cellulose and alkali metal salt of the alkyl substituted aromatic suphonic acid are left upon said surface to continue the proper wetting action.

Although the use of detergents in organic solvents and water mixture and in water mixtures has heretofore been the basis of the foaming or sudsing action accompanying detergency, it is surprising that the present formulation which avoids the use of an organic binder and which is at least 90% by weight of talc should exhibit such excellent detergency characteristics when used for shaving.

An object of the invention is to provide a new and useful composition for the fabrication of a shaving aid in stick form.

A further object of the invention is to provide a new mode of application of a shaving aid to the face to assist in shaving.

Other and further objects of the invention will be seen in the light of the following more detailed description, in connection with the accompanying drawing, it being understood that changes may be made which will appear from the more detailed description and drawing as are

apparent to those skilled in the art and that these changes are contemplated as being within the spirit and scope of the invention.

In the accompanying drawing.

Figure 1 is a substantially central longitudinal sectional view of the shave stick in accordance with the invention.

Figure 2 is a cross sectional view thereof.

As shown in Figures 1 and 2, the shave stick of the invention consists of a molded block 1 surrounded and protected by a suitable covering 2 which can be removed from the top portion in order to apply the shaving composition to the face. For convenience, it is desired that the stick be circular in cross section as is shown in the drawing. However, other cross sectional shapes may be used, such as rectangular shapes, hexagonal shapes, octahedral shapes and the like. The cross section of the stick is large enough to apply a substantial amount of the shave stick composition to the face. The shave stick is long enough so that it provides a sufficient amount of the shave stick composition for use over at least several months. A desirable commercial embodiment, which is not intended to limit the construction of the present invention, is a shave stick which is about one and a quarter to one and one half inches in diameter and about three to four inches long, the shave stick comprising a cylinder of these dimensions. The shave stick may be placed in a container of substantially the same conformation in order to suitably package the stick for sale.

The following examples will further illustrate how the invention may be carried out in practice but the invention is not restricted to these examples as will be seen in the more detailed description which follows. In the examples, parts are parts by weights.

Example 1

Colloidal magnesium aluminum silicate, 1.5 parts, is added to 90 parts of water and the mixture is stirred until a smooth uniform gel has formed. A second mixture is prepared of 90 parts of talc, 3 parts of titanium dioxide, 2 parts of sodium carboxy methyl cellulose, and 2 parts of the sodium salt of dodecyl benzene sulphonic acid. These ingredients of the second mixture are mixed in the dry state and are added to the gel of colloidal magnesium silicate and water. The first and the second mixtures are mulled to a uniform paste and after the ingredients have been homogeneously dispersed in this paste, the paste is mulled to the desired shape. In this example, the mold is a cylindrical mold and the mulled paste is permitted to dry until it is stiff.

The mulled paste in cylindrical form is then baked in an oven at a temperature of about 95° centigrade until the moisture content has been reduced to about 6%—10%.

In the foregoing example, the titanium dioxide used is of U. S. P. grade and the talc used is of the pure cosmetic grade, Superfine.

The colloidal magnesium aluminum silicate is available under the commercial name, Veegum. The dodecyl benzene sulphonate in the form of the sodium salt is available or its equivalent is available, for example, as Kreelon 4–G or as Santomerse No. 1. Kreelon 4–G is a product of the Wyandotte Chemicals Corporation, Detroit, Michigan. Santomerse No. 1 is a product of Monsanto Chemical Company.

The commercially available alkyl aryl sulphonates mentioned in the preceding paragraph are usually mixtures. These mixtures are obtained by condensing an alkyl chloride or halide with a benzene in a Friedel-Crafts reaction. After the condensation, the product is sulphonated to obtain the benzene sulphonates. The alkyl group used for condensation is derived from a petroleum or kerosene fraction and is usually a mixture of aliphatic hydro-

carbons having from 10 to 14 carbon atoms in the chain. Usually, these chains are normal chains. The commercial product, accordingly, is a mixture but the predominant constituent of the mixture is a member of the homologous series, that is the alkyl group having 10 carbon atoms, or the alkyl group having 12 carbon atoms or the alkyl group having 14 carbon atoms and so forth. In the present invention the use of such alkyl substituted benzene sulphonates obtained from mixtures of the alkyl substituted compounds is just as effective as those in which the alkyl groups are substantially pure, 10 carbon or 12 carbon or 14 carbon members. However as mentioned, the preference is for the alkyl substitution having 12 carbon atoms in the chain on the average.

The molded stick of the preceding example is then covered with tin foil and is packaged in a suitable container of the same general shape as the block. The tin foil may be stripped back from the top when the shave stick is to be used.

Example 2

Colloidal magnesium aluminum silicate, two and one half parts are added to 48 parts of water, the mixture is continually agitated for a sufficient period of time to form a smooth uniform gel and to this mixture there are added talc, titanium dioxide, sodium carboxy methyl cellulose, and the sodium salt of decyl benzene sulphonate. The mixture is then mulled to a uniform paste and the paste is molded in cylindrical form as in Example 1. The paste is permitted to dry until stiff and then is baked at a temperature of about 115° C. In contrast to the baking operation in Example 1, the time for baking is shorter in this example. The baking can be continued until 1% to 2% of residual moisture remains in the composition. However the composition tends to become brittle when it is dried too thoroughly.

Example 3

The ingredients are mixed as in Examples 1 and 2 above with the exception that the sodium carboxy methyl cellulose is increased to 4 parts, the alkyl benzene sulphonate is increased to 4 parts, the colloidal magnesium aluminum silicate is increased to 3 parts and the amount of water is increased to 75 parts. The amount of talc is increased to 110 parts. Titanium dioxide is increased to about 4 parts. A resulting paste is obtained, which after drying, to a moisture content of about 5% at an oven temperature of about 85° centigrade, provides excellent shaving results.

Although in the foregoing, the alkyl benzene sulphonate has been exemplified as dodecyl and decyl benzene sulphonate, other substituted benzene sulphonates may also be used, such as xylene sulphonates, or toluene sulphonates, which are substituted by an alkyl group having from 10 to 14 carbon atoms in the chain.

The combination of the alkyl aryl sulphonate and the carboxy methyl cellulose, these in the form of their water-soluble salts, such as alkali metal or ammonium salts, provides effective residual detergency on the skin in a preferred concentration of about 3% to 5% for the combination based upon the weight of the inert mineral carrier, talc. Substantially equal parts of the just mentioned detergent materials provide maximum effectiveness. To properly disperse this combination of detergents in the inert talc carrier, an amount of from about 1½% to about 3% of colloidal magnesium aluminum silicate is effective. The amount of the inorganic binder, colloidal magnesium aluminum silicate, which is used is thus seen to be about one half of the combined total of the two detergents used in the preferred composition. The total amount of binder and the two detergents employed is from about 6% to 10% of the total weight of the inert inorganic carrier, talc. If desired, up to 5% of a pigment, by weight of the total, may make the remainder.

Thus, the composition comprises as its essential ingredients, the inert inorganic carrier, talc, present in an amount of at least about 90%, the remaining 10% to 5% of the composition being the combination of the inorganic binder, magnesium aluminum silicate in an amount of about 1.5% to about 4%, and the detergent materials, from about 2% to 2.5% of carboxy methyl celluose and from about 2% to 5% of the alkyl benzene sulphonate. Using more than 2.5% of the water-soluble salt of carboxy methyl celluose in the composition causes an unsightly condition to develop in the shave stick on storage; after three to four weeks the shave stick scales or flakes, and no improvement in shaving is noted by the use of the larger amount. Hence the maximum of 2.5% for this ingredient should be carefuly observed. The use of larger amounts than 4% of the detergent combination is somewhat wasteful of the material and is not preferred for this reason. The use of larger amounts of the colloidal binding agent, magnesium aluminum silicate, is likewise somewhat wasteful of the material. However, the invention contemplates the use of such larger amounts in those instances where the nature of the inert carrier requires more effective peptization of the inorganic carrier.

It has been found that the residual detergency or persistency of the detergent is improved after the white coating has been removed from the skin with water, when the alkyl group of the sulphonates is limited from 10 to 14 carbon atoms and preferably from 10 to 12 carbon atoms. The exact reason for this persistency of the detergent is not known, but it has been found that sodium carboxy methyl cellulose and the alkyl aryl sulphonate in combination with magnesium aluminum silicate provides an after softening of the beard after the white coating due to the talc, or pigment or both is washed off, which after softening is not obtained with other detergent compositions. This is surprising since the inert carrier, talc, is mineral in nature and comprises more than 90% of the composition. The sulphonate alone is not effective nor is the carboxy methyl cellulose, by itself, as effective as the combination of ingredients.

To the above examples, there may be added perfume and coloring matter, if desired. The perfume added is quite small in amount, one-sixteenth of a part of a perfume oil, such as rose, lilac, lavender or the like may be added to the composition of the examples in order to provide a desirable cosmetic product.

While other pigments may be used, such as zinc white or the like, titanium dioxide is preferred because of its inert characteristics. Zinc oxide and other white pigments might tend to dry out the skin and prevent the desired detergency action.

Various modifications and changes are contemplated and may obviously be resorted to, without departing from the function or scope of the invention as hereinafter defined by the appended claims.

Having thus disclosed the invention what is claimed is:

1. The method of preparing the skin for immediate shaving comprising applying to the skin which is wet with water a composition consisting of 90% talc, a detergent composition consisting of about 2% to 5% by weight of a water-soluble salt of an alkyl substituted benzene sulphonic acid having from 12 to 14 carbon atoms in the alkyl group thereof and about 2% to 2.5% of a water-soluble salt of carboxy methyl cellulose, about 2% to 4% by weight of titanium dioxide as a white pigment, and at least about 1.5% of colloidal magnesium silicate as a dispersing agent for the talc, pigment and detergent composition, permitting the face to dry for at least a half minute after application of the composition, and thereafter washing the coating of said composition from the skin by the application of water to leave the skin and beard in a soft and moist condition ready for immediate shaving.

2. A molded shave stick adapted to apply a coating of a beard softening composition to the skin and which coating is removed with water immediately before shaving, said stick consisting of a composition comprising essentially 90% of talc, a detergent composition comprising about 2% to 5% by weight of a water-soluble salt of an alkyl substituted benzene sulphonic acid having from 12 to 14 carbon atoms in the alkyl group thereof and about 2% to 2.5% of a water-soluble salt of carboxy methyl celluose, 2% to 4% of titanium dioxide as a white pigment, and at least about 1.5% of colloidal magnesium aluminum silicate as a dispersing agent for the talc, pigment and detergent composition.

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