Aug. 11, 1942. H. E. WETHERBEE 2,292,419

SHAVING PREPARATION AND FORM THEREOF

Filed Jan. 22, 1940

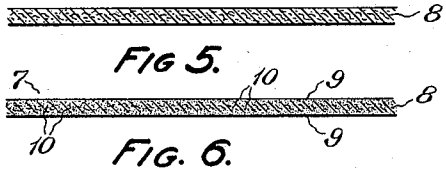


FIG 5.

FIG. 6.

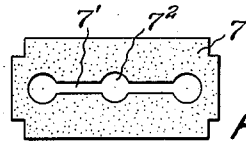


FIG. 3.

FIG. 4.

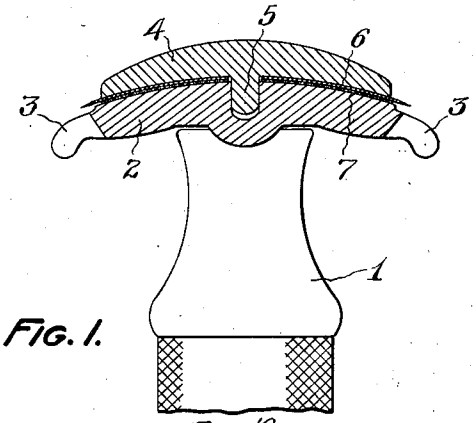


FIG. 1.

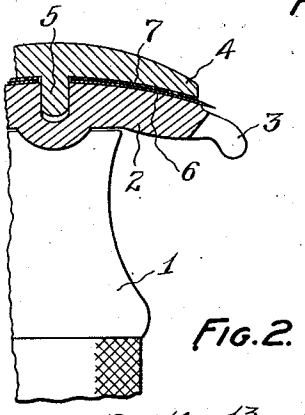


FIG. 2.

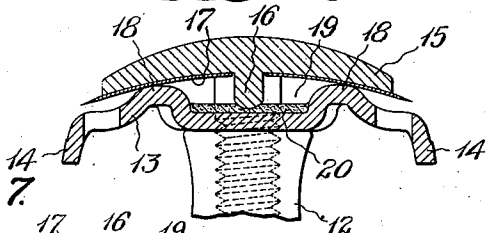


FIG. 7.

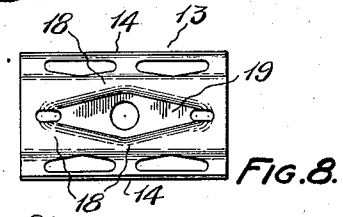


FIG. 8.

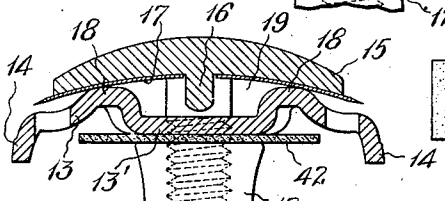


FIG. 7a.

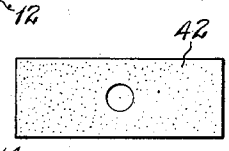


FIG. 7b.



FIG. 9.



FIG. 10.

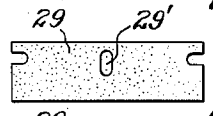


FIG. 12.



FIG. 13.

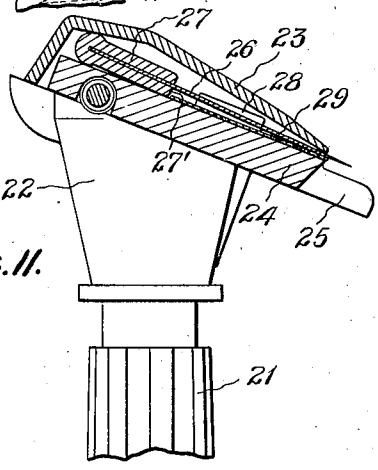


FIG. 11.

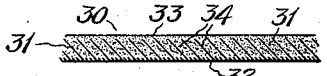


FIG. 14.

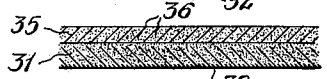


FIG. 15.

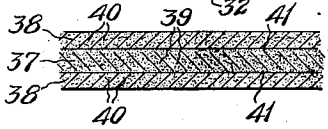


FIG. 16.

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UNITED STATES PATENT OFFICE

2,292,419

SHAVING PREPARATION AND FORM THEREOF

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Application January 22, 1940, Serial No. 315,001

11 Claims. (Cl. 167—85)

The invention relates to shaving preparations and forms thereof adaptable for shaving operations. An important phase of the invention relates to a new form of shaving accessory consisting of a suitable support member provided with shaving material and adapted for incorporation with the shaving head of a safety razor, so that when the shaving blade traverses a wet surface, such as a wet face, the shaving material, due to its surface activity, will be slowly disseminated from the support member and will rapidly spread by its own action as disseminated in a thin film over the face ahead of the cutting blade. The invention also includes new and improved preparations forming shaving material, and new methods of making various forms of these shaving preparations.

This application is, in part, a continuation of my pending application Serial No. 254,132, and, in part, a continuation of my pending application Serial No. 268,768, in which pending applications the characteristics of the shaving material above noted are disclosed; as also, the fact that the material has some constituents slightly soluble in water.

The claims in this application are limited to the new forms of improved shaving accessories and to certain of the improved shaving preparations disclosed in the application.

The claims of the application Serial No. 254,-132 are particularly directed to new shaving accessories consisting of a razor blade coated with a shaving preparation which is solid at ordinary temperatures and substantially entirely tightly-adherent, the blade being adapted for shaving by contact with water. There are also disclosed in the application Serial No. 254,132 new compositions of shaving material suitable for coating a razor blade in the manner described, amongst which shaving materials are beeswax, paraffin wax, carnauba wax, Chinese insect wax, palmitic acid, and stearic acid. Preferably, in order to form the new compositions, these materials are compounded with an ingredient to increase the surface activity of the composition, such as oleic acid, camphor, methol, and thymol. Desirable compositions disclosed in said application include ingredients proportioned as follows:

One hundred parts by weight beeswax, ten parts oleic acid;

Eleven parts by weight paraffin wax, eleven parts beeswax, and one part oleic acid; and

Eleven parts by weight paraffin wax, eleven parts beeswax, and one part camphor.

As disclosed in said application Serial No. 254,-132, the ingredients are added together and then heated to melting temperature over a water bath, which produces a homogeneous solution into which the razor blade is dipped to form the desired coating thereon, or the melted composition can be brushed on the razor blade to form the coating, which is then allowed to cool and thus forms a coating which is solid at ordinary temperatures and which is substantially entirely tightly-adherent. A razor blade so coated can be repeatedly used for shaving operations by merely traversing it over the skin which has been previously wet, the shaving material actively filming over the wet skin ahead of the cutting blade.

In the other pending application, viz., Serial No. 268,768, there are disclosed various forms of razor elements, other than the cutting blade, having shaving material incorporated therewith so that shaving operations with razor heads having such elements result in the filming of the shaving material over the skin ahead of the cutting blade, some of these improved razor elements being of special construction to provide for a desirable mounting of the shaving material in or on the razor head and the dispensing thereof during the shaving operation.

The claims of the application Serial No. 286,-768 are directed to such improved forms of razor elements; and also, broadly to a structure in which the razor itself has shaving material incorporated therewith which is surface active and so will, in the presence of water, film itself over the wet skin ahead of the cutting blade.

The application Serial No. 268,768 also presents additional improved compositions of shaving material, of which the solid compositions are adaptable for adherent application to a razor element and capable in themselves of functioning during the shaving operation in the manner described.

Amongst the additional improved compositions

disclosed in said application Serial No. 268,768 are the following:

Beeswax fifty per cent by weight, stearic acid thirty per cent, and thymol twenty per cent; a composition which forms a very satisfactory shaving paste;

Stearic acid seventy to ninety-five per cent by weight, and thymol thirty to five per cent; most suitably, eighty-five per cent by weight stearic acid, and fifteen per cent thymol; a solid composition at ordinary temperatures;

Beeswax fifty per cent by weight, stearic acid thirty-five per cent, thymol five to ten per cent, and a mineral oil, which is viscous, water-white, and tasteless, ten to five per cent; a composition which forms a stiff paste;

Stearic acid seventy-one per cent by weight, thymol twelve and five-tenths per cent, and mineral oil sixteen and five-tenths per cent; a solid composition;

Stearic acid sixty-six and two-tenths per cent by weight, mineral oil thirty-three and one-tenth per cent, and thymol seven-tenths of one per cent; a solid composition;

Also, stearic acid from sixty-five to ninety-five per cent by weight, and mineral oil from thirty-five to five per cent; most suitably, substantially sixty-seven per cent by weight stearic acid, and thirty-three per cent mineral oil; a solid composition.

Said application Serial No. 268,768 also discloses improved processes of making the new shaving compositions either in paste form, or into solid formations having adherent application to a razor element.

The annexed drawing and the following description set forth in detail certain means illustrating the improved wafer-like bodies containing shaving material and adaptable for incorporation in a razor head; as also, the methods of making such wafer-like bodies; and new and improved preparations of shaving material; the drawing, however, illustrating only a few of the various forms of such wafer-like bodies and the ways by which they may be incorporated with a razor head, and the disclosure setting forth only a few of the possible methods of making the wafer-like bodies, and only a few of the more desirable shaving preparations within the spirit of the invention therein.

In said annexed drawing:

Figure 1 is a fragmentary end elevation, upon an enlarged scale, of a safety razor, the head thereof being transversely sectioned, in which a wafer-like body containing coherent shaving preparation is locked between the upper surface of the razor guard and the lower surface of the cutting blade;

Figure 2 is a view similar to a portion of Figure 1, in which the wafer-like body is locked between the upper surface of the cutting blade and the lower surface of the razor cap;

Figure 3 is a plan of the wafer-like body incorporated in the razor heads shown in Figures 1 and 2;

Figure 4 is a side elevation of the wafer-like body shown in Figure 3, the thickness of the body being shown upon an enlarged scale;

Figure 5 is a greatly enlarged section through a portion of a piece of paper suitable as a support for receiving and holding shaving material, to thus form the described wafer-like body;

Figure 6 is a view similar to Figure 5, but showing the completed wafer-like body; in other words, the shaving material has been incorporated with the paper support;

Figure 7 is a view similar to Figure 1, in which another form of razor head is disclosed having incorporated therewith another form of the wafer-like bodies mounted and secured in a different manner and in a different position than is shown in either of Figures 1 and 2;

Figure 7*a* is a view similar to a portion of Figure 7, in which another form of the wafer-like body is locked in position below the body portion of the razor guard;

Figure 7*b* is a plan of the wafer-like body included in the assembly shown in Figure 7*a*;

Figure 8 is a plan of the razor guard in the form of razor head shown in Figure 7;

Figure 9 is a plan of the wafer-like body which is seated in a recess in the top of the guard shown in Figures 7 and 8;

Figure 10 is a side elevation of the wafer-like body shown in Figure 9;

Figure 11 is a view similar to Figures 1 and 7, but showing another form of razor in whose head is incorporated a form of the wafer-like bodies;

Figures 12 and 13 are, respectively, a plan and a side elevation of the wafer-like body shown in Figure 11, the side elevation in Figure 13 showing the body thickness upon an enlarged scale; and

Figures 14, 15, and 16 are greatly enlarged sectional views, similar to Figure 6, of other forms of the wafer-like body.

First referring to improved shaving preparations, in addition to those hereinbefore mentioned, which I have found suitable for use in the manner, and having the functions, hereinbefore described, certain desirable ones are compounded as follows:

Beeswax ninety-six per cent by weight, and oleic acid four per cent;

Beeswax eight-five per cent by weight, and thymol fifteen per cent;

Beeswax seventy-five per cent by weight, thymol fifteen per cent, and a viscous water-white tasteless mineral oil ten per cent;

Beeswax eight-eight per cent by weight, thymol seven per cent, and mineral oil five per cent;

Beeswax eight-five per cent by weight, mineral oil ten per cent, oleic acid four per cent, and thymol one per cent;

Beeswax seventy-five per cent by weight, mineral oil twenty per cent, oleoc acid four per cent, and thymol one per cent;

The above preparations are all solids at ordinary temperatures.

A couple of desirable preparations which are of a consistency of a soft paste at ordinary temperatures are:

Mineral oil eighty per cent by weight, beeswax fifteen per cent, and thymol five per cent; and

Mineral oil eighty per cent by weight, beeswax nineteen per cent, and thymol one per cent.

A desirable preparation which is liquid at ordinary temperatures comprises:

Mineral oil ninety per cent by weight, beeswax eight per cent, and thymol two per cent.

All of these preparations are formed by melting the materials together over a water bath into homogeneous mixtures and permitting them to cool, the preparations which are solid at ordinary temperatures being molded into any desired form and if, desired, pulverized when cooled into a

shaving powder. This powder is fine enough so that a small amount of it can be shaken onto the razor part and, in the presence of water, and, during the shaving operation, it quickly spreads from the razor part onto and over the wet face in a film and in advance of the cutting edge of the razor blade. If it is desired that one of the solid preparations be coated on the razor element, the latter is dipped into the hot melted mixture of the preparation ingredients, or is brushed with the hot mixture, and, upon cooling, the preparation forms a solid adherent coating.

The use of the preparations herein disclosed does not induce the formation of any lather on the surface being shaved, since none of the ingredients of any of the preparations is of a soapy nature. Also, the improved preparations are anhydrous, since none of the ingredients entering thereinto contains any water content. The preparations become active, in the presence of water, and serve their purpose on a wet surface, but they do not in themselves contain any water. Furthermore, an additional characteristic of those preparations which are suitable for forming a coating upon a razor element, such as a guard or blade, or suitable for use with a support to form the coherent wafter-like shaving accessories which are incorporated in the razor head, is that they are all solids at ordinary temperatures.

The supports of the various wafer-like shaving accessories shown in the accompanying drawing include any suitable material which will take an adherent coating of the shaving preparation and/or capable of impregnation by the shaving preparation, the complete coherent accessory being also of wafer-like thinness so as to be suitable for incorporation in the heads of standard razors without necessarily revamping the razor design and without injuriously impairing the relative positions of the several razor elements or their functioning during the shaving operation. The manner of incorporating such a wafer-like body is illustrated in the accompanying drawing by application thereof to three different types of razor heads.

Referring particularly to Figure 1, a razor handle 1, guard 2 with protective teeth 3, cap 4 having depending longitudinal retaining rib 5, and a blade 6, are assembled in a well-known manner to form a razor of standard construction. Between the guard 2 and the blade 6 is positioned one of the improved wafer-like bodies 7, Figure 6, comprised of a thin porous paper support 8 forming means for holding in a coherent mass shaving preparation with which the paper support 8 is treated, the treatment forming a skin 9 of the shaving preparation upon the paper support 8 and also impregnating the paper support 8 with the shaving preparation, as indicated by 10, Figure 6. As will be noted in Figure 3, the wafer-like body 7 is of a design similar to that of the blade 6 designed for use with a razor head of the type shown in Figure 1, the body 7 having a longitudinal slot 7' through which the retaining rib 5 is passed, when assembling the razor elements, and a central hole 7^2 through which the threaded post (not shown), depending from the cap 4 and having engagement with the handle 1, is passed.

The form of assembly in Figure 2 is similar to that shown in Figure 1, with the exception of incorporating the wafer-like body 7 between the cap 4 and the blade 6, instead of between the guard 2 and the blade 6, as shown in Figure 1.

Referring particularly to Figure 7, another form of wafer-like body 20 is incorporated in the head of another well-known form of razor comprising the handle 12, guard 13, having the downwardly-projected protective edge flanges 14 and the raised elongated diamond-shape shoulder 18 forming the central recess 19, cap 15, having the longitudinal retaining rib 16, and blade 17. The wafer-like body 20 comprises a blotting paper support member coated and impregnated with a shaving preparation and is seated in the recess 19 and securely held, when the razor parts are assembled, by the depending cap rib 16 and the depending cap post (not shown). This form of wafer-like body 20 is thick as compared with the form shown in Figures 3 and 4, and also as compared with the forms hereinafter fully described and shown in Figures 12 and 13, in Figure 14, Figure 15, and Figure 16. The design of the wafer-like body 20 itself is shown in Figures 9 and 10.

Referring particularly to Figures 7*a* and 7*b*, the wafer-like body 42 is locked between the top of the handle 12 and the bottom surface 13' of the guard 13. This wafer-like body 42 one design of which is shown in Figure 7*b* thus is incorporated with the razor head exteriorly of and below the latter.

Referring particularly to Figures 11, 12, and 13, another form of well-known razor assembly is shown, consisting of a handle 21 having the head block 22, pivotally-mounted cap 23, guard 24 having protective teeth 25, and blade 26. The blade for this type of razor has only one cutting edge, the opposite edge being secured between the leaves of a two-ply clamp 27. The blade 26 is formed with a slot which accommodates a lug 28 upstanding from the body of the guard 24 and serving to position and retain the blade 26. The wafer-like body 29 is mounted on the top surface of the guard 24 under the cutting blade 26, one edge of the wafer 29 being positioned against the shoulder 27' formed by the bottom leaf of the clamp 27. The wafer body is of a design similar to the exposed portion of the blade 26, having a central hole 29' through which the lug 28 passes.

Referring to the form of wafer-like body 30 shown in Figure 14, and designed particularly for use with razors of the types shown in Figures 1 and 11, this body 30 consists of a thin paper support 31 metallic-coated on one side 32, the other side of the paper 31 being of a porous nature so that when the paper 31 is treated with a shaving preparation, the latter will not only form a skin 33 of the shaving preparation on the porous side of the paper, but will also impregnate the paper, as indicated by 34. In the razor assembly, the treated porous side of the paper support 31 is positioned adjacent the cutting blade and, when the razor head is opened to clean the razor elements after the shaving operation, the wafer-like body 30 adheres to the cutting blade.

Referring to the form of wafer-like body shown in Figure 15, the same comprises a support 31 of paper similar to that shown in Figure 14; i. e., thin paper having one resistant side 32, such as a metallic-coated side. However, to the other side of the paper 31 is affixed a thin paper 35, of a tissue nature, after that "other" side of the paper 31 has been treated with a shaving preparation. The shaving preparation impregnates the support 31, and the tissue paper 35, as indicated by 36.

Referring to the form of wafter-like body shown in Figure 16, the same comprises three paper thicknesses consisting of an intermediate

paper support 37 of a porous nature which is first treated upon both sides with shaving preparation and then has affixed to its two sides tissue paper coverings 38. The shaving preparation impregnates the intermediate support paper member 37, as indicated by 29, and, when the tissue coverings 38 are affixed, the shaving preparation impregnates the tissue coverings 38, as indicated by 40. Also, there are thin layers 41 of the shaving preparation between the intermediate paper support member 37 and the tissue coverings 38.

When wafer-like bodies of the character shown in Figures 15 and 16 are used, they will not tenaciously adhere to any part of the razor head, when the latter is opened for cleaning, but can easily be washed off by holding the razor part to which they fortuitously cling, under running water.

The various forms of wafer-like bodies shown in Figures 3–4, 12–13, 14, 15, and 16, differ amongst themselves somewhat in thicknesses, as will be readily understood from the aforegoing description, but they are all comparatively thin as compared with the blotting paper type, shown in Figures 7, 7b, 9, and 10, and they are all adaptable particularly for assembly in razor heads of the types shown in Figures 1 and 11.

Many forms of paper other than those of a blotting paper nature, or metallic-coated papers, or thin tissue; as also, materials comprised of other vegetable fibers, such as cloth of various sorts, or even thin materials not of a vegetable nature, but capable of being locked to a razor head, in the manner illustrated by the accompanying drawing, can be used as supports for holding the shaving material in coherent form and permitting its self-dissemination and rapid spreading in the manner and under the circumstances described.

The paper or other support simply forms a medium by which a thin mass of the shaving preparation can be held together in a manner suitable for handling it without breaking, and for application to and securing to the razor head, and for its gradual dissemination in the form of a flashing film upon a wet surface during shaving operations.

When the wafer-like body contains enough shaving preparation to serve for a plurality of shaves, it is easily cleansed after each shaving operation, in like manner as other razor parts, and can be replaced with the other parts to form the assembled clean razor head, the shaving material being only gradually dispensed during the shaving operations, and serving for such operations until the shaving material has been so completely dispensed as not to leave on the support sufficient of the material for effective and quick shaving.

The wafer-like bodies are preferably made from paper which is punched in strip form so as to provide a plurality of the wafer supports of the desired configuration and then the strips are pulled through a bath of the shaving preparation, the strips thus treated being withdrawn from the bath vertically so as to drain. Then the strips are subdivided into a plurality of individual wafers after the shaving preparation coating has solidified. Also the wafer-like bodies may be made by treating a comparatively large sheet of the support member with the shaving preparation, or by brushing the support member, either one side thereof or both sides, according to the particular wafer-like body desired. The treated support members have then affixed to them the one or two thin paper coverings, if the wafer-like body has such coverings, according to the various forms of wafer-like bodies hereinfore described, such coverings being also in comparatively large sheets. Then, after the shaving preparation has set, the treated supports, or the treated supports with their coverings, are subdivided in any suitable manner and by any suitable apparatus into a plurality of the individual wafer-like shaving accessories.

When using a razor within whose head is incorporated one of the wafer-like supports impregnated and/or coated with a shaving preparation, the face is washed in the usual manner and left wet. Then the razor head is dipped into water and shaving started in the usual manner, the face being kept wet, if, for any reason, it dries before the shaving is finished. The razor head is occasionally dipped into water during the shaving operation. The effect of the shaving preparation is to produce a minute film on the wetted skin, which is formed with so great rapidity as properly to be termed a "flash-film," so that it is always in advance of the cutting edge of the razor blade. The net result of the operation is to afford a quick clean shave which leaves the face non-irritated, smooth, and soft.

The improved shaving preparations also afford a flash-filming thereof over a wet face, and a quick, clean shave which leaves the face non-irritated, smooth, and soft, even if they are applied to the face in manners other than from the razor head. For instance, a small portion thereof, either in solid, paste or liquid formation, may be added to a bowl of warm water, and the razor head dipped into such water and the shaving operation effected upon the wet face. The shaving preparation immediately forms a film thereof over the entire surface of the water and is picked up by the dipping of the razor head therein in ample quantities to form a flashing film over the wet skin ahead of the cutting blade, when the razor head is applied to the skin for the shaving operation. Or, the shaving preparation may be transferred from the film on the surface of the water in the bowl to the wet skin by the fingers, which will result in the immediate formation of a film upon the wet skin so that an effective pleasing shaving operation can be effected with an untreated razor head.

Other methods of applying the improved shaving preparations to a wet skin will readily suggest themselves, any application of the improved preparations to a wet skin resulting in a flash-filming of the preparation over the skin, it being an inherent characteristic of the improved preparations that they are highly surface-active and will immediately form a film over a wet surface upon being brought into contact with such a surface.

What I claim is:

1. A shaving preparation which is solid at ordinary temperatures and is comprised of a preponderant portion of beeswax and a minor portion of mineral oil, by weight, together with substances which are surface-active and promote a rapid self-spreading of the preparations in a film upon a wet surface when the latter is contacted thereby, said surface-active substances including oleic acid in an amount substantially four percent of the whole preparation, and a modicum of thymol.

2. A shaving preparation which is comprised, by weight, of substantially eight-five parts bees-

wax, ten parts water-white mineral oil, four parts oleic acid, and one part thymol.

3. A shaving preparation which is solid at ordinary temperatures and is comprised of a major portion of stearic acid, a minor portion of mineral oil, and a modicum of thymol.

4. A shaving preparation comprised of substantially sixty-six per cent stearic acid, by weight, thirty-three per cent mineral oil, and about one per cent thymol.

5. A shaving preparation comprised of a substantially homogeneous anhydrous mixture of base or primary shaving material selected from a group consisting of beeswax, paraffin wax, carnauba wax, Chinese insect wax, stearic acid, and palmitic acid, and of surface-active material which is slightly soluble in water and which acts as a distributing medium for the preparation by promoting a slow exhaustion of the latter and a rapid spreading thereof as exhausted in a film over the surface of water when the latter is contacted by the preparation.

6. A shaving preparation which is solid at ordinary temperatures and is comprised of a substantially homogenous mixture of a preponderant portion, by weight, of beeswax constituting a base, and a minor portion of thymol constituting distributing material which promotes a slow exhaustion of the preparation and a rapid self-spreading of the preparation as exhausted in a film over the surface of water when the latter is contacted by the preparation.

7. A shaving preparation which is solid at ordinary temperatures and is comprised of a substantially homogeneous mixture of a preponderant portion, by weight, of beeswax and a minor portion of mineral oil, constituting a base, together with a minor portion of thymol constituting distributing material which promotes a slow exhaustion of the preparation and a rapid self-spreading of the preparation as exhausted in a film over the surface of water when the latter is contacted by the preparation.

8. A shaving preparation which is solid at ordinary temperatures and is comprised of a substantially homogeneous mixture of substantially eight-eight parts beeswax, by weight, seven parts thymol, and five parts mineral oil.

9. A wafer-like shaving accessory for mounting in a razor head comprising a thin support member carrying in coherent formation a mass of shaving preparation tightly-adherently incorporated therewith, which shaving preparation is comprised of base or primary shaving material selected from a group consisting of beeswax, paraffin wax, carnauba wax, Chinese insect wax, stearic acid and palmitic acid, and of surface-active material which is slightly soluble in water and which, when the preparation contacts a water surface, acts as a distributing medium for the preparation by promoting a dissemination thereof from the support member and a rapid spreading thereof as disseminated in a film over the water surface.

10. A wafer-like shaving accessory for mounting in a razor head comprising a thin porous member having an impervious face and impregnated with a shaving preparation comprised of base or primary shaving material selected from a group consisting of beeswax, paraffin wax, carnauba wax, Chinese insect wax, stearic acid and palmitic acid, and of surface-active material which is slightly soluble in water and which, when the preparation contacts a water surface, acts as a distributing medium for the preparation by promoting a dissemination thereof from the porous member and a rapid spreading thereof as disseminated in a film over the water surface.

11. A wafer-like shaving accessory for mounting in a razor head comprising a porous member and a relatively thin porous facing member mounted on each side of the first mentioned porous member, said members being impregnated with a shaving preparation comprised of base or primary shaving material selected from a group consisting of beeswax, paraffin wax, carnauba wax, Chinese insect wax, stearic acid and palmitic acid, and of surface-active material which is slightly soluble in water and which, when the preparation contacts a water surface, acts as a distributing medium for the preparation by promoting a dissemination thereof from said members and a rapid spreading thereof as disseminated in a film over the water surface.

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