July 31, 1934. H. H. BECKWITH ET AL 1,968,475

COSMETIC COMPOSITION

Filed Jan. 3, 1930

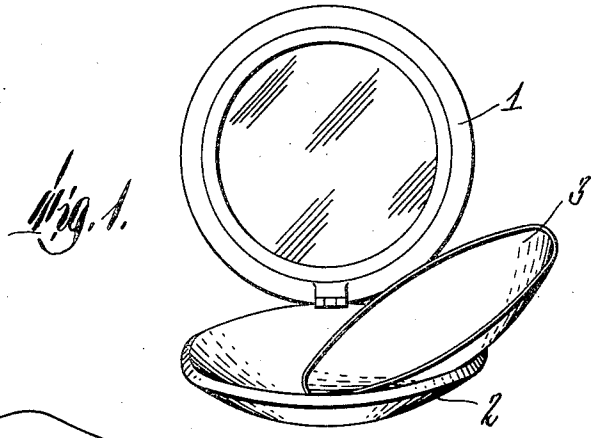


Fig. 1.

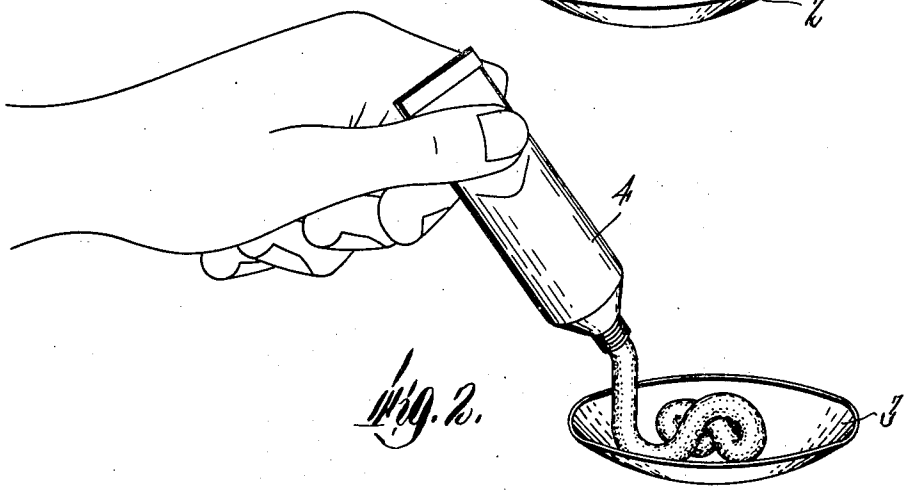


Fig. 2.

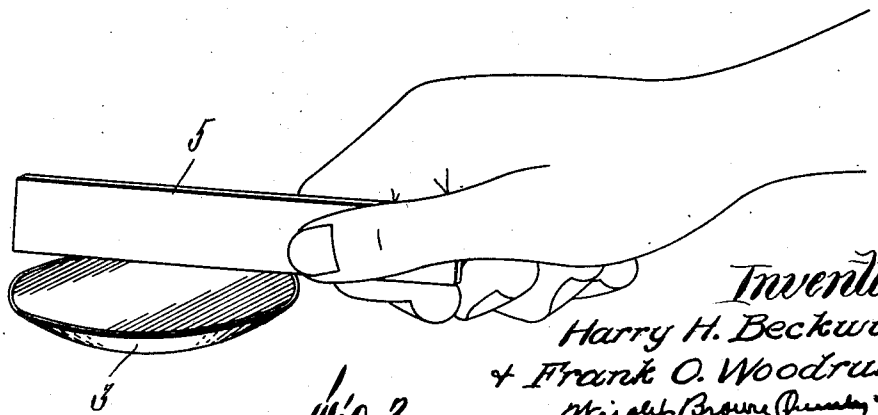


Fig. 3.

Inventors
Harry H. Beckwith
& Frank O. Woodruff
Wright Brown Quinby & May
Attys.

Patented July 31, 1934 1,968,475

UNITED STATES PATENT OFFICE

1,968,475

COSMETIC COMPOSITION

Harry H. Beckwith, Brookline, and Frank O. Woodruff, Quincy, Mass.; said Woodruff assignor to said Beckwith

Application January 3, 1930, Serial No. 418,245

5 Claims. (Cl. 167—92)

This invention relates to cosmetic compositions intended more particularly for facial application, such as powders and rouges. One popular form for so-called "vanity cases" or "compacts" consists of powder which is compacted together under such high pressure that it forms a cake, from which the powder may be removed as desired by rubbing with a puff or other applicator. When the powder has become exhausted, it has heretofore been necessary to insert into the case a new powder cake or "refill", which ordinarily includes a metal base. Because of the small capacities of such cases, refilling is quite frequent and expensive. Moreover, it is sometimes difficult, if not impossible, to purchase refills, in the case of vanity cases of odd sizes and shapes, which are often of ornate and expensive construction and become of little utility after their contents are exhausted.

The composition of the present invention comprises a suitable powder base, which may be marketed in paste-like condition. The composition sets into cake form when exposed to the atmosphere, this cake being of the proper consistency to permit removal of the powder, as desired, by the usual methods. Such a paste composition may be put up in a collapsible container, from which it may be squeezed in desired amount onto the exhausted metal base of a refill, spread out uniformly on the base, permitted to set thereon into cake form, and the freshly prepared refill inserted into the case from which the base was removed. Or, ordinarily, the paste may be squeezed from the tube directly into the appropriate compartment of the vanity case, then spread and allowed to set. Such a composition not only makes possible the reuse of the same metal base in refilling the case, or the introduction of the paste directly into the case, but is further advantageous in that it may be purchased in bulk at much lower cost than powder cakes or refills, and may be used where it is difficult or impossible to purchase suitable refills.

The composition of the present invention contains an agent which serves to cause caking of the powder to a chalk-like consistency, so that powder may be removed from the cake by light rubbing with the usual puff or pad. We have found glycerine to be especially suitable as the binding or caking agent, since it is colorless, odorless, and non-injurious to the skin, but an equivalent binder may be used which possesses substantially these characteristics. The glycerine should, however, be used in exceedingly small amount, for were it used in excessive amount, the composition would persist in wet condition, not only because of the involatility of the glycerine, but because of its hygroscopicity. The composition also contains a volatile liquid in amount sufficient to produce the desired initially spreadable, smooth, paste-like consistency, and which is quickly volatilized when the composition is exposed to the action of the atmosphere, leaving the set composition sufficiently porous, soft, and chalk-like to permit of eminently satisfactory frictional removal of powder therefrom, as with a puff, in a condition appropriate for application to the skin. The glycerine remains in the composition but, being present in slight amount, imparts no observable wetness thereto, even after exposure to the atmosphere for an indefinite period of time. It is possible to employ various volatile liquids such as fall into the class of organic solvents, but some of these solvents are decidedly more advantageous than others. For example, some organic solvents, such as benzol, toluol, and xylol, are disadvantageous in that they leave residual odors, whereas chloroform and ether have the disadvantages of being anæsthetics and too volatile. Carbon tetrachloride and acetone have none of these disadvantages, but of these two, carbon tetrachloride is preferable, in that it is non-inflammable and less expensive than acetone. Ethyl alcohol, in preference to methyl alcohol, is eminently satisfactory in all respects, particularly when used with water, which not only lowers its inflammability but retards its evaporation sufficiently so that no cracks are produced in the composition during its setting. The ethyl alcohol may be used in suitably denatured condition, in which condition it is inexpensive. For instance, commercial "M—40" denatured alcohol, which contains only a small volume of acetone and a slight amount of brucine sulphate, may be employed.

The powder base may comprise the usual cosmetic powders, such as rice, starch, corn, oatmeal, talc, magnesium carbonate, calicum sulphate, zinc oxide, or the like, in a state of impalpable fineness of particle size. A suitable boquet or perfume may be incorporated into the powder, together with such coloring agents as will give it the desired tint. In order to ensure uniformity in the product, the perfume and coloring agents may be added to and mixed with small portions of a batch of the powder, whereupon these portions may then be added to the batch. The batch may then be mixed and passed through a sieve of the desired mesh. The powder is then

treated with the liquid mixture to convert it to the desired paste-like condition.

When the powder comprises only inorganic solids such as talc and zinc oxide, a mixture of alcohol, water, and glycerine, consisting of 200 parts by weight of alcohol, 150 parts of water, and 12.5 parts of glycerine has been found suitable for treating the powder and producing a paste such as hereinbefore described. The treatment of the powder may be carried out as follows. Five hundred parts of the powder is placed in a suitable mixer, preferably a two-blade mixer of the Day or Werner and Pfleiderer type, as such a mixer is especially effective in causing a uniform distribution of liquid mixture throughout the powder, because of its kneading action. After the mixer is set in operation, the liquid mixture is gradually added in small amounts, so that the liquid is absorbed practically instantaneously by the powder and no free liquid is present during the mixing operation, since otherwise excessive evaporation of the alcohol would take place and it would be difficult to cause absorption of the liquid by the powder. When approximately 200 parts of the liquid mixture has been added, a paste slightly stiffer than the usual tooth paste is produced, at which point no more liquid mixture should be added. The paste may be kneaded for about fifteen to twenty minutes to ensure a physically homogeneous product. The formula of the resulting composition, neglecting the slight evaporation taking place during the mixing operation, is as follows:

	Per cent
Face powder	71.43
Alcohol	15.74
Water	11.83
Glycerine	1.00
Total	100.00

The foregoing formula may be changed somewhat, but in order to ensure the desired stiff, paste-like consistency, one should not depart from the use of about 185 to 200 parts, or 27% to 30%, of the liquid mixture. So, too, one should not use much above 1% glycerine in order to ensure a product which has the proper setting qualities and which when set is dry to the feel and has a soft, chalk-like consistency, substantially like that of the usual powder cakes or refills. If desired, carbon tetrachloride may be substituted for water in the foregoing formula, as this material tends to prevent cracking of the composition during setting. The use of carbon tetrachloride in lieu of water is particularly advantageous when the powder contains starch or when coloring agents such as ochre (yellow), erythrosine (pink), or ponceau (red) have been incorporated into the powder, as carbon tetrachloride does not combine with starch and is a non-solvent of these coloring agents and accordingly when evaporated does not tend to carry them to the surface. A composition such as described may be put up in various kinds of closed containers, but it lends itself admirably to confinement in collapsible tubes, as of tin or aluminum foil, from which it may be squeezed in desired amount, whereupon the tube may be closed with the usual cap to prevent escape of the volatile constituents and the setting of the composition in the tube.

On the accompanying drawing, Figures 1, 2, and 3 are intended to illustrate the successive steps in applying the composition to the metal base of an exhausted refill.

As shown in Figure 1, the vanity case or compact in which the powder cake is used is of circular form and comprises a lid or cover 1 and a dished bottom 2 adapted to receive a powder refill including a dished metal plate 3. It may, however, be of any irregular or ornamental form. When the powder supply is exhausted, the plate may be removed from the case and, as shown in Figure 2, the composition of the present invention may be squeezed thereonto from a collapsible tube 4 filled therewith. After an ample supply of composition has been deposited on the plate, it may be tamped down with the thumb or fingers, and as shown in Figure 3, smoothed off with a spoon, spatula or stick, or other suitable instrument to lie flush with the edge of the plate. The layer of paste is smoothed, ordinarily, to have a concavity adequate to receive the pad, between the formed cake and the lid or cover of the case. When the filled plate is set aside for a suitable period of time, for instance over night, the composition sets into a solid cake of chalk-like consistency substantially free from any odor of the volatile liquid originally present therein and otherwise analogous to powders which have been caked by the use of high pressures.

One of the many advantages possessed by the paste, to which we have already referred but which we desire to emphasize, is that it may be used to fill and refill vanity cases or other receptacles, without the necessity of having the usual supporting plate, as at 3. Irrespective of the shape, design, or ornamentation of the case or receptacle, the paste may be placed in the appropriate compartment of the desired thickness, by an unskilled person. Even if the surface, after the cake is set, is left rough, due to inexpertness of the user, a few applications of the usual pad removes the surface inequalities and leaves a smooth surface.

When the powder or rouge is initially reduced to the desired particle size, and is formed into a paste as herein described, the binder or caking agent does not cause such adhesion of the particles as to prevent their being removed from the surface of the cake, substantially as freely and as an impalpable powder, as in the case of the compacted powder cakes or refills.

We claim:

1. A paste-like composition capable of setting when exposed to the atmosphere into a solid of chalk-like consistency, comprising a physically homogeneous mixture of a cosmetic powder base, a caking agent, and volatile, organic liquid in amount sufficient to wet the powder particles and to impart quick-setting and pore-forming tendencies to said composition.

2. A spreadable cosmetic composition capable of setting when exposed to the atmosphere into a solid of chalk-like consistency, comprising a physically homogeneous mixture of a cosmetic powder base, a small amount of glycerine, and a sufficient amount of volatile, organic liquid to wet the powder particles and to give the composition a paste-like consistency as well as quick-setting and pore-forming tendencies.

3. A spreadable cosmetic composition capable of setting when exposed to the atmosphere into a solid of chalk-like consistency, comprising a physically homogeneous mixture of a cosmetic powder base, a small amount of glycerine, and sufficient alcohol to wet the powder particles and to give the composition a paste-like consistency as well as quick-seting and pore-forming tendencies.

4. A spreadable cosmetic composition capable of setting when exposed to the atmosphere into a

solid of chalk-like consistency, comprising a physically homogeneous mixture of a cosmetic powder base, a small amount of glycerine, and sufficient alcohol and carbon tetrachloride to wet the powder particles and to give the composition a paste-like consistency as well as quick-setting and pore-forming tendencies.

5. A spreadable cosmetic composition capable of setting when exposed to the atmosphere into a solid of chalk-like consistency, comprising a physically homogeneous mixture of a cosmetic powder base, a volatile liquid containing largely an organic liquid more volatile than water and imparting quick-setting and pore-forming tendencies to said composition, and glycerine, in approximately the following proportions:

	Percent
Cosmetic powder	71.43
Volatile liquid	27.57
Glycerine	1.00

HARRY H. BECKWITH.
FRANK O. WOODRUFF.