Patented July 25, 1944 2,354,319

UNITED STATES PATENT OFFICE

2,354,319

TOPICAL PREPARATION

Walter Andrew Inman, Waukegan, Ill.

No Drawing. Application January 15, 1942, Serial No. 426,859

3 Claims. (Cl. 167—90)

This invention relates to a topical preparation for use particularly as a hand lotion but capable of many other uses.

When applied to the skin and allowed to dry, the composition of my invention forms a protective film over the skin that may be likened to an invisible glove. Not only does this protective film reduce the tendency of the skin to chap, but it seems to have a therapeutic effect upon skin that is already chapped. Furthermore, the presence of this protective film lessens the degree of adherence of grime, greases, oils and even paints and the like, so that the skin can be washed free of said substances very easily by the simple use of soap and water. The hand lotion of my invention is therefore particularly suited for use by mechanics, painters, and others whose hands frequently come in contact with grease, oils, organic solvents, paints, lacquers, and the like.

It is therefore an important object of this invention to provide a topical preparation which may be applied to the skin and which, when dried thereon, provides a protective film for the skin that facilitates the removal of foreign material therefrom, such as grime, grease, oil, paint, lacquer, organic solvents, and the like.

Other and further important objects of this invention will become apparent from the following description and appended claims.

As the film forming base of my composition, I employ preferably a good grade of gelatine, or animal glue. A gelatine or glue derived from pin skin has been found most suitable for my purposes.

A softening agent, or plasticizer, is used in conjunction with the gelatine, or glue, for the purpose of increasing the flexibility of the film left on the skin or other surface after evaporation of the greater part of the water content of the composition. In the absence of any glycerine, or other plasticizer, the film so formed would be more liable to crack and flake off and therefore would afford less protection. In place of glycerine, other plasticizers may be used, such as other polyhydric alcohols like water soluble glycols.

Alum is another ingredient of my composition. The function of the alum is probably that of rendering the gelatine, or glue, somewhat less soluble after it has been dried into film form. Preferably, a mixture of alums is used, such as a mixture of ammonium and potassium alum. However, other water soluble alums may be employed.

I also prefer to incorporate a harmless acid in my composition, such as one of the fruit acids, like citric acid, maleic acid, tartaric acid, or the like. Alternatively, a weak acid like acetic acid may be employed. The exact function of the acid is not entirely understood, but has been found to increase the effectiveness of my composition when used for the purposes above set forth.

The following will serve to illustrate a preferred composition embodying the principles of my invention, the proportions of the various ingredients being expressed in parts by weight:

	Parts
Gelatine	100
Glycerine	150
Ammonium alum (aluminum ammonium sulfate, crystalline)	45
Potash alum (aluminum potassium sulfonate, crystalline)	45
Citric acid (crystalline)	30
Water	8,000

Expressed percentagewise, the foregoing composition would be as follows:

	Per cent
Gelatine	1.2
Glycerine	1.8
Ammonium alum	0.5
Potassium alum	0.5
Citric acid	0.4
Water	95.6

These percentages may be varied considerably, but I prefer to keep the gelatine within the limits of between 0.5 and 2.5% by weight and the glycerine between the limits of 0.75 and 4% by weight. The other ingredients of the solution may be varied accordingly. The glycerine is preferably present in an amount by weight exceeding that of the gelatine, or glue.

In making up a composition such as the above, the ammonium alum, potassium alum and citric acid are first dissolved in the amount of water to be used, and then the gelatine, in powdered form, and glycerine, are added, after which the whole is heated to a temperature short of the boiling point of the mixture, preferably around 170° F., until a homogeneous, clear solution is obtained. The solution is then allowed to cool and is packaged for use as desired.

In the use of the preparation, it is spread over the hands or other desired surface, and the excess water allowed to evaporate. As the water evaporates, the residue acquires a rather sticky or tacky "feel," but this quickly disappears. The film that is left on the skin, or other surface, is invisible and does not change the appearance or feel of the skin in any noticeable respect. How-

ever, the presence of this film greatly facilitates the subsequent removal with merely soap and water of any foreign dirt, grime, stain or the like.

The use of my composition is not limited to the human skin but extends to the hair and, by analogy, to animal skins, hides, furs and hair, or bristles. The application of my composition to paint brushes, for instance, makes the removal of the paint, lacquer or the like, a comparatively simple matter, soap and water being all that is necessary to clean the bristles.

It will, of course, be understood that various details of the process may be varied through a wide range without departing from the principles of this invention and it is, therefore, not the purpose to limit the patent granted hereon otherwise than necessitated by the scope of the appended claims.

I claim as my invention:

1. A protective preparation for application to animal skin and skin appendages comprising, as originally compounded ingredients, from 0.5% to 2.5% gelatin together with from 0.75% to 4% of a plasticizer selected from the group consisting of glycerine and glycols, such percentages being by weight of such preparation, lesser amounts of an alum and a harmless acid, the residue comprising essentially water, said preparation having been prepared by heating said ingredients to form a homogeneous clear solution capable of drying by evaporation to form a non-tacky film resistant to penetration by grease and oil that can be removed by washing with soap and water whereby such preparation can be applied to skin and skin appendages prior to exposure to grease and oil for facilitating removal from said skin and skin appendages of oil and grease subsequent to exposure to grease and oil.

2. A protective preparation for application to animal skin and skin appendages comprising, as originally compounded ingredients, from 0.5% to 2.5% gelatin together with glycerine as a plasticizer in an amount greater than said gelatin and ranging from 0.75% to 4%, said percentages being by weight of said preparation, lesser amounts of an alum and a harmless acid, the residue comprising essentially water, said preparation having been prepared by heating said ingredients to form a homogeneous clear solution capable of drying by evaporation to form a non-tacky film resistant to penetration by grease and oil that can be removed by washing with soap and water whereby said preparation can be applied to skin and skin appendages prior to exposure of grease and oil for facilitating removal from said skin and skin appendages of oil and grease subsequent to exposure to grease and oil.

3. A protective preparation for application to animal skin and skin appendages comprising, as originally compounded ingredients, the materials tabulated hereinbelow in percentages by weight of said preparation:

	Per cent
Gelatin	1.2
Glycerine	1.8
Ammonium alum	0.5
Potassium alum	0.5
Citric acid	0.4
Water	95.6

said preparation having been prepared by heating said ingredients to form a homogeneous clear solution capable of drying by evaporation to form a non-tacky film resistant to penetration by grease and oil that can be removed by washing with soap and water whereby said preparation can be applied to said skin and skin appendages prior to exposure to grease and oil for facilitating removal from said skin and skin appendages of oil and grease subsequent to exposure to grease and oil.

WALTER ANDREW INMAN.