

UNITED STATES PATENT OFFICE.

FREDERICK CHARLES SIMPSON, OF PRETORIA, TRANSVAAL, SOUTH AFRICA.

SOAP OR THE LIKE.

1,408,650.

Specification of Letters Patent.

Patented Mar. 7, 1922.

No Drawing.

Application filed March 16, 1920. Serial No. 366,384.

To all whom it may concern:

Be it known that FREDERICK CHARLES SIMPSON, a subject of His Majesty the King of Great Britain, residing at Church Street
5 Central, Pretoria, in the Transvaal Province and Union of South Africa, has invented certain new and useful Improvements in Soap or the like, (for which I have filed applications in England August 5, 1916,
10 No. 106,197, and in the Union of South Africa December 21, 1917, Patent No. 814¹⁷, and January 21, 1918, patent of addition No. 33¹⁸.) of which the following is a specification.

15 The present invention relates to an improved soap. This soap is applicable for ordinary toilet purposes, or again it may be adapted to the cleansing of wounds in surgical operations, for sterilizing the
20 hands, or again it may be used for a rough cleansing of the hands when particularly badly soiled by work in workshops, garages or the like.

25 The essential ingredients of the soap of the present invention are—soft soap, petrol, and water, to which may be added a small quantity of alcohol. These ingredients have been present in various mixtures of cleansing preparations hitherto known, combined
30 together in varying proportions and with or without other substances.

35 The petrol employed is a petroleum distillate having preferably a specific gravity between 0.68 and 0.715 and a boiling point between 75° C. and 80° C.

40 The peculiar effect of the present invention, by which a foam or lather is automatically obtained on the hand levitating and removing any dirt or foreign matter
45 by simply applying a thin film of the soap preparation of the present invention to the hand without mechanical action or rubbing, will not, however, be obtained in any of the previous known soap compositions.

50 The above ingredients are according to this invention mixed in suitable proportions to obtain the desired effect, as increasing the relative proportions too far as regards one or other ingredient relatively to the
55 other, will prevent or reduce the said automatic foam or lather property of the soap.

According to the present invention therefore, the ingredients should not exceed the following limits of proportion:—soft soap,
55 1 part; petrol 1 to 3 parts; water 1 to 8

parts. In less than the minimum proportions the ingredients would mix badly and the foam or mechanical action would be almost entirely absent. If above the maximum proportions the mixture would be-
60 come weak in cleansing properties, and once again the foam or the property of mechanical action of a thin film of the soap would become negligible.

65 A product is known consisting of a mixture composed of about 10–20% soap, 2.75% sodium carbonate 37 to 27% water and about 50% neutral mineral oil such as heavy mineral oil or fine vaseline.

70 The proportions of the ingredients in the composition of the present invention to obtain the best results are—1 oz. of soft soap; petrol 1½ fluid ozs.; distilled water 2 fluid
75 ozs.; and preferably the addition of 90% alcohol, preferably not exceeding ½ fluid oz.

80 The peculiar effect above mentioned is in no way retarded but rather intensified by the addition of oil of citronella which may be added to the above ingredients in the proportion of 10 minims of the oil.

85 The water may be coloured to any desired shade with aniline dye, and the whole mixture can be effected by means of agitation. Water may be added after the final mixing
as long as the total quantity remains within the above mentioned proportions.

90 The emollient properties of this preparation may be greatly enhanced by the addition of 5 grains each of stearic acid and of borax to every fluid ounce of the basis.
95 This is performed by first mixing the stearic acid in the petrol before adding to the soap and in like manner first dissolving the borax in the water before its final addition to the other ingredients. By adding an excess of
100 stearic acid over and above 5 grains the basis may be converted into a creamy consistence varying according to the quantity added from a milky consistence to that of a thick cream.

105 In cold weather it may be necessary when adding an excess of stearic acid to slightly warm the petrol, soap and alcohol in a water bath and to dissolve the borax in warm water.

To these preparations any desired perfume may be added.

To produce a clear fluid after adding the stearic acid and the borax in the minimum quantities stated, the mixture should be
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allowed to stand for forty-eight hours and should then be filtered through cotton wool or filter paper.

To produce a powerful antiseptic cleansing solution for surgical purposes take of the original basis liquid soap 1 fluid oz. and add to this with agitation 2 drachms of hydrogen peroxide or 5% of liquor cresolis saponatis. Further, the soap may be converted into a paste by the addition of a sufficient quantity of castile or of hard powdered soap and kaolin or kieselguhr powder to a given quantity of the original basis to produce a desired consistence varying from thick cream to an almost solid mass. Or pearl ash may be used to obtain the same effect either alone or with the addition of kaolin.

In localities or countries where the water is exceptionally hard it is desirable to add to the soap compositions from 5 to 20 grains of tribasic sodium phosphate to each ounce of the basis by first dissolving this in the water before adding to the other ingredients, but this should be omitted in the case where the basis is being used for surgical purposes.

In tropical or very hot climates, or in certain other cases, it may be desirable to add an ingredient to obviate danger of inflammability. For this purpose a suitable quantity of carbon tetrachloride may be added in substitution of a similar volume

of petrol before mixing with the other ingredients, that is to say that if it was contemplated to add $\frac{1}{2}$ fluid oz. of carbon tetrachloride to the particular example taken as a preferable one mentioned above, then only 1 fluid oz. of petrol would be used.

What I claim is:—

1. A soap characterized in that when applied in the form of a thin film on the part of the body to be cleansed, it will automatically produce a foam or lather on such part which acts to lift up and remove any dirt or foreign matter; said soap essentially comprising 1 part of soft soap, from 1 to 3 parts of petrol, and from 1 to 9 parts of water.

2. A soap according to claim 1, comprising 1 ounce of soft soap, $1\frac{1}{2}$ fluid ounces of petrol, and 2 fluid ounces of water.

3. A soap according to claim 1, comprising 1 ounce of soft soap, $1\frac{1}{2}$ fluid ounces of petrol, 2 fluid ounces of water, and up to $\frac{1}{2}$ fluid ounce of 90% alcohol.

4. A soap according to claim 1, with the addition of stearic acid and borax to increase the emollient property.

In testimony whereof I affix my signature in the presence of two witnesses.

FREDERICK CHARLES SIMPSON.

Witnesses:

H. W. ADAMS,
W. CHOWLES.