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CLEANING COMPOSITION

Frank R. Johnson, Floral Park, N. Y.

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1 Claim. (Cl. 87—5)

The present invention relates, generally, to a cleaning composition for use with or without water; and, more particularly, the present invention relates to cleaning compositions adapted to emulsify quickly with water and to be easily rinsed or washed off with water.

An object of the present invention is to provide a cleaning composition in liquid form which emulsifies easily and quickly with water and which can be used with or without water for various purposes such as cleaning clothing, carpets, and the hands, automobile bodies and other painted or lacquered surfaces, for the de-gumming of silk, wool and so on after weaving and which can be easily and completely washed off after the cleaning process.

Another object of the invention is to provide a cleaning composition for removing dirt and grease.

Other objects and advantages of the present invention will be apparent from the following disclosure and from the accompanying claim.

The cleaning composition of the present invention comprises essentially the following ingredients, each having a purpose or function as hereinafter set forth: water, soap and sulfonated vegetable oil, hydrocarbon chloride, petroleum spirit and trisodium phosphate. The water is used as a solvent for the soap. The soap serves, among other functions, to form a film or scum on the surface of the applied composition to prevent evaporation of the hydrocarbon chloride and the petroleum spirit. The hydrocarbon chloride serves for cutting grease and dirt in the cleansing operation. The petroleum spirit also serves to dissolve greases and cut dirt and further serves to protect the hands, paint and varnish surfaces and so on toning down the action of the hydrocarbon chloride and restricting the action of the latter to the dissolving of grease. The sulfonated oil facilitates the formation of an emulsion of the ingredients named, particularly on the addition of water in a small or large quantity during the application of the composition and during the rinsing or washing of the composition from the clean surface or body. The trisodium phosphate increases the rinsibility of the composition from the washed surface, fabric, and so on by softening the water.

The mixture of these ingredients is usually cloudy, the ingredients separating into layers. The cleaning composition can be used in this state, intermixture being obtained by occasional shaking. To produce a permanently unclouded mixture or solution I add a small quantity of an organic material having an unsaturated carbon conjugation such as oleic acid, red oil, white oleic acid, pine oil, rosin oil, rosin, cotton seed oil or foots, and so on. To get a clear, light colored mixture or solution I use pine oil or white oleic acid. The free fatty acid material can be added after all the other ingredients are put together and is added in small quantities until the mixture clears up to the appearance of a clear solution. With white oleic acid about eight fluid ounces, more or less, are required to clear five gallons of the mixture of ingredients, the exact amount depending on the source and state of the ingredients because of variations in materials from different commercial sources and batches. As the mixture clears up it thickens to a good body but not of too high viscosity. The free fatty acid can be still added, after the clear and bodied state has been reached, through a small practical range after which further addition of fatty acid causes cloudiness which is accompanied by a loss of body or thinning of the liquid and a separation to a state similar to that in which it was before any fatty acid was added. The amount of free fatty acid necessary is about ½% to 2½%, more or less, for example, depending on the actual ingredients used and the quantities of each used. The petroleum spirit can be gasoline, kerosene, crude oil, fuel oil and so on; and the hydrocarbon chloride can be carbon tetrachloride, trichlorethylene and so on.

Example 1.—An example of the composition of the present invention is as follows, the proportions of the ingredients being given in parts by weight: soap about 5 parts, water about 10 to 15 parts, Turkey red oil (75%) about 15 to 25 parts, trichlorethylene about 20 to 35 parts, petroleum spirit about 25 to 50 parts and trisodium phosphate about 2 parts, and sufficient pine oil to clarify the mixture, say about 1½% of the rest of the composition. The composition of this example is suitable for general use.

Example 2.—An example of a composition for use for washing automobiles, buses or other painted or varnished surfaces is as follows: water 12½ parts, soap about 5 parts, Turkey red oil (75%) about 25 parts, trichlorethylene about 35 parts, kerosene about 35 parts and trisodium phosphate about 2 parts, and sufficient pine oil to clarify the mixture, say about 1½% of the rest of the composition.

Example 3.—An example of the composition of the present invention to be used as a liquid hand soap is as follows: water about 12½ parts, soap about 5 parts, Turkey red oil about 25 parts,

trichlorethylene about 20 parts, kerosene about 50 parts, trisodium phosphate about 2 parts, and sufficient white oleic acid or pine oil to clarify the composition.

In using the composition of the invention for cleaning automobiles, buses and other painted or varnished surfaces a given volume of the composition of Example 1 is mixed with 20 to 25 volumes of water, an emulsion being formed immediately and the amount of water determined by the condition of the surface to be cleaned. This mixture is applied with a long haired soft brush, then rinsed off with water by means of a hose. After completely washing the cleaning mixture off the last rinse water can be left to dry by evaporation because a uniform thin film of water is left on the clean surface which will evaporate to dryness uniformly and without leaving streaks or marks. A clean shiny surface will be given without the necessity of wiping dry or polishing with a cloth or chamois. The cleaning mixture will be completely and easily removed by the rinse water because the trisodium phosphate aids in softening the water whereby the cleaning mixture will be taken up and Turkey red oil facilitates and makes possible a spontaneous and permanent emulsion of the cleaning composition with the water.

In the use of Example 3 the higher percentages of soap can be used to give a heavier lather or increase the body of the composition.

Having thus described my invention what I claim and wish to protect by Letters Patent is—

A permanently clear liquid cleaning composition which is adapted for use with water, comprising in parts by weight, soap about 5 parts, 10 to 15 parts by weight of water, Turkey red oil (75%) about 15 to 25 parts, trichlorethylene about 20 to 35 parts, petroleum spirit about 25 to 50 parts, trisodium phosphate about 2 parts, and about ½% to 1½% of the total weight of the above ingredients in free higher fatty acid.

FRANK R. JOHNSON.