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POLISH

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8 Claims. (Cl. 106—8)

The present invention relates to improvements in polishes and more particularly to improvements in emulsified cleansing and polishing compositions for painted, enameled, varnished, lacquered and highly finished surfaces and the like. The composition of the present invention is particularly adapted for use in connection with the finished surfaces of automobile bodies but may be advantageously employed for cleansing and polishing furniture and the like.

The present invention provides a wax polish composition which possesses both cleansing and polishing properties and thereby enables the accomplishment of both results in a single operation. This is highly desirable since it provides a polish which requires a minimum of time and effort to apply. The invention further provides a polish having a relatively high percentage of hard wax and a diatomaceous earth abrasive in a free flowing invert emulsion. Further, our improved polish provides a film of hard wax which can be rubbed to a high finish.

Our improved emulsified wax polish comprises the following constituents in approximately the specified proportions by weight:

	Per cent
Organic salt	20 to 50
Hard wax	5 to 10
Fatty acid	1.25 to 3
Alkali salt of a weak mineral acid	.75 to 2
Morpholine	0 to 1
Water	30 to 60
Abrasive	6 to 10

In the above formula the organic solvent may be a petroleum solvent, and preferably a blend of equal parts of a light petroleum distillate having an initial boiling point not less than about 360° F. and an end point not more than about 500° F. and a petroleum distillate having an initial boiling point of about 300° F. to about 312° F. and an end point of between about 418° F. and 430° F. Inspections on two typical distillates having these requirements are given below:

	Distillate A	Distillate B
Gravity	About 46-49 A. P. I.	46-49 A. P. I.
Flash	Not less than 140° F.	About 102° F.
Distillation:		
Initial	361° F.	304° F
10% off	386° F.	323° F
20% off	394° F.	330° F
30% off	401° F.	336° F
40% off	407° F.	340° F
50% off	414° F.	347° F
60% off	421° F.	354° F
70% off	427° F.	364° F
80% off	438° F.	374° F
90% off	450° F.	391° F
End point	500° F.	427° F

Distillate A is a petroleum distillate commonly referred to as No. 9 refined oil and distillate B is a distillate known as oleum spirits.

The hard wax in the above formula is preferably carnauba wax although it is possible to use other hard waxes, such as montan wax, Japan wax, candelilla wax or ceresin wax. Any of these waxes can be used alone or in admixture with each other or in admixture with carnauba wax. We prefer, however, to use carnauba wax alone.

The fatty acid we prefer to employ is oleic acid although other high molecular weight fatty acids can be used in place of it.

As the alkali salt of a weak mineral acid we prefer to use borax. However, we have obtained satisfactory results using equivalent amounts of alkali salts of other weak mineral acids such as sodium carbonate, tri-sodium phosphate and sodium silicate.

As the abrasive we have obtained best results using a diatomite, preferably of about 200 mesh, such as Semilite. Other mild abrasives, such as other types of diatomaceous earths, colloidal clays and the like may be used, alone or with Semilite. Diatomite is preferred since it removes the surface oxidized film without scratching or removing excessive amounts of the basic paint, as is often the case in usual cleaning and polishing operations.

A typical preferred composition for our improved cleanser and polish is the following:

	Per cent
No. 9 refined oil	18.5
Oleum spirits	18.5
Carnauba wax	7
Oleic acid	1.75
Borax	1.25
Morpholine	.50
Water	44.5
Semilite	8

Another composition which is very effective is the following:

	Per cent
No. 9 refined oil	18.5
Oleum spirits	18.5
Carnauba wax	7
Oleic acid	1.75
Borax	1.75
Water	44.5
Semilite	8

The method of preparing our improved polish consists in adding the borax or the borax and morpholine dissolved in the water slowly to a solution of the wax and fatty acid dissolved in the petroleum solvent while the mixture is continuously agitated. The temperature of the two solutions should be above the solution temperature of the wax in the petroleum solvent. In the case of our preferred composition this temperature is approximately 150° F. After the solutions have been mixed together and emulsified the emulsion is cooled to about 110° F. or lower

and the abrasive added thereto with continuous agitation which is continued until the mass is homogeneous. Our invention permits the incorporation of relatively large amounts of pure carnauba wax into a secondary type of emulsion, that is an emulsion in which the water is in the dispersed phase while still maintaining a perfectly fluid composition.

While we have described our invention in connection with certain specific embodiments thereof it is to be understood that these are given by way of illustration and not by way of limitation.

We claim:

1. The method of preparing a free flowing invert emulsion cleansing and polishing composition containing the approximate proportions of the following ingredients:

	Per cent
Petroleum distillate (initial B. P. of about 300° F., end point not greater than about 500° F.)	20 to 50
Hard wax	5 to 10
High molecular weight fatty acid	1.25 to 3
Alkali salt of a weak mineral acid	.75 to 2
Morpholine	0 to 1
Water	30 to 60
Abrasive	6 to 10

comprising dissolving the hard wax in the petroleum distillate, dissolving the alkali salt of a weak mineral acid together with the morpholine in the water at a temperature above the solution temperature of the wax in the petroleum distillate mixing together with agitation the two solutions while maintaining the temperature of the mixture above the solution temperature of the wax in the petroleum distillate, cooling the mixture to about 110° F. after the same is emulsified, adding the abrasive to the emulsified mixture and agitating the mixture until a homogeneous mass is obtained.

2. The method of preparing a free flowing invert emulsion cleansing and polishing composition as described in claim 1 in which the wax is carnauba wax, the abrasive is Semilite, the fatty acid is oleic acid, the alkali salt is borax and the organic solvent is a petroleum naphtha.

3. An improved free flowing invert emulsion cleansing and polishing composition comprising approximately the following weight percentages of the following constituents:

	Per cent
Petroleum distillate (initial B. P. of about 300° F., end point not greater than about 500° F.)	20 to 50
Hard wax	5 to 10
High molecular weight fatty acid	1.25 to 3
Alkali salt of a weak mineral acid	.75 to 2
Morpholine	0 to 1
Water	30 to 60
Abrasive	6 to 10

4. A free flowing invert emulsified composition of matter for cleansing and polishing highly polished surfaces comprising the following ingredients in approximately the specified proportions by weight:

	Per cent
Petroleum solvent (Initial B. P. of about 300° F., end point not greater than about 500° F.)	20 to 50
Carnauba wax	5 to 10
Oleic acid	1.25 to 3
Borax	.75 to 2
Morpholine	0 to 1
Water	30 to 60
Diatomaceous earth	6 to 10

5. An emulsified composition as described in claim 4 in which the diatomaceous earth is diatomite of about 200 mesh.

6. An improved free flowing emulsified composition of matter for cleansing and polishing finished surfaces comprising the following ingredients in substantially the following proportions by weight.

	Per cent
No. 9 refined oil	18.5
Oleum spirits	18.5
Carnauba wax	7
Oleic acid	1.75
Borax	1.25
Morpholine	.50
Water	44.5
Diatomaceous earth	8

7. A free flowing emulsified composition of matter adapted for the cleasing and polishing of automobile bodies consisting of the following ingredients in substantially the following proportions by weight:

	Per cent
No. 9 refined oil	18.5
Oleum spirits	18.5
Carnauba wax	7
Oleic acid	1.75
Borax	1.25
Morpholine	.50
Water	44.5
Semilite	8

8. A free flowing emulsified composition of matter adapted for the cleansing and polishing of automobile bodies consisting of the following ingredients in substantially the following proportions by weight:

	Per cent
No. 9 refined oil	18.5
Oleum spirits	18.5
Carnauba wax	7
Oleic acid	1.75
Borax	1.75
Water	44.5
Semilite	8

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CERTIFICATE OF CORRECTION.

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It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 1, first column, line 27, for "Organic salt" read --Organic solvent--; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 6th day of October, A. D. 1942.

Henry Van Arsdale,
Acting Commissioner of Patents.

(Seal)