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SHOE DRESSINGS

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This invention relates to compositions particularly useful as shoe dressings.

Prior art shoe dressings exhibit many undesirable characteristics. They are frequently aqueous or water containing and consequently exhibit deleterious properties on leather. In addition because of the water present, they require the use of acids, alkalies, or soaps. Further the solid or paste like compositions heretofore known require rubbing to develop luster. The liquid products are non-homogeneous and require agitation or shaking before use. Many other undesirable factors might be mentioned which militate against such prior art products.

Among the objects of the present invention is the production of homogeneous shoe dressings that are anhydrous and free from detergent ingredients, and which exhibit may desirable effects on leather.

Other and further objects and advantages will appear from the more detailed description set forth below, it being understood, however, that this more detailed description is given by way of illustration and explanation only and not by way of limitation since various changes may be made therein by those skilled in the art without departing from the scope and spirit of the present invention.

In accordance with this invention shoe dressings are produced which are homogeneous transparent and compatible, thereby being directly applicable by a cloth or in any other desired way, which dry rapidly giving a lustrous finish without buffing or rubbing. For these purposes a film-forming component is used in an organic vehicle in proportions so that upon evaporation of the vehicle, a very thin, light and delicate film of lustrous character is rapidly deposited, which is resistant to moisture and finger marks.

Of the film-forming components, the phenol formaldehyde resins and shellac used either separately or in combination, give peculiarly valuable results in shoe dressings because of the character of deposit formed. They are used in a light volatile organic cleaning vehicle which constitutes the major portion of the composition, while desirably a minor amount of a liquid organic solvent for the film-forming component is also present particularly one compatible with the vehicle used. The oil soluble phenol formaldehyde resins are particularly useful although the alcohol soluble varieties and especially the shellac also exhibit pronouncedly high luster but require the use of a substantial ratio of alcoholic solvents which are inflammable.

The cleaning vehicle should not be slowly volatile and being organic in character makes relatively inexpensive ingredients directly available. For example, volatile liquid aromatic hydrocarbons such as benzol, toluol, xylol can be used as well as turpentine, the latter giving semi-dull effects; the liquids employed being those capable and suitable for dissolving resin or gum. Or carbontetrachloride and even ethylene dichloride in conjunction with a more rapidly volatilizing solvent may be suitable for use as the cleaning vehicle in high proportion in the composition. The cleaning vehicle may constitute as much as 75 to 80% and higher of the composition. Further the stated vehicles may be replaced at least as far as 50% by light volatile liquid petroleum hydrocarbons such as petroleum naphtha or stoddard. When carbontetrachloride is used to the extent of as little as 50% of the vehicle, the composition is non-inflammable. Various mixtures of the stated vehicles may be used as desired.

As indicated above, there is also preferably used a liquid modifying and solving agent desirably chosen from the following: oil containing esters, i. e. pine oil, essential oils such as pine needle oil, Venice turpentine, both the imitation and the true, thus particularly illustrating terpenic liquids; cellulose ester solvents including such solvents that are usable for nitrocellulose for dissolving and liquifying the same including the lower liquid aliphatic alcohols, esters such as the benzoates, acetates, preferably of secondary and tertiary alcohols, benzyl acetate, benzyl benzoate, etc., liquid aromatic alcohols such as benzyl alcohol; glycol solvents including the glycols themselves such as ethylene glycol and triethylene glycol and the glycol ethers such as butyl Cellosolve, some of which ingredients like triethylene glycol have special properties giving flexibility and acting as a solvent for a water soluble dye or color and for incorporation of saponifiable or sulphonated waxes and also tolerating moisture in the composition; or acetone alone or in combination with another solvent; and volatile liquid chlorinated hydrocarbons both aliphatic and aromatic which are usable as auxiliary solvents with the direct alcoholic or ester solvents in lacquers enabling the use of less direct solvent in such compositions, the chlorinated hydrocarbons including carbon tetrachloride which is the most desirable because of its non-disagreeable odor which may be used in the larger proportions to serve as a diluting cleaning vehicle, also other chlorinated liquids which have higher boiling point and volatilize more slowly than car-

bontetrachloride may be used in smaller proportions for modifying the film-forming agent and any wax present, for rendering the composition lubricous and thus freely distributable on the treated surface, for preventing the cleaning vehicle from drying too rapidly and for enabling incorporation of coloring matter (even water soluble) and preventing precipitation by other liquids present, such other chlorinated liquids including ethylene dichloride, trichlorethylene, tetrachlorethylene and orthodichlorbenzene and including also chlorhydrins such as dichlorhydrin or ethylenechlorhydrin which have solvent properties for cellulose esters, resins, waxes, and petroleum liquids. Any desired mixtures of these components may be used, particularly depending on the solubility of the film-forming component. Lesser quantities of true Venice turpentine should be used as compared with the imitation, and usually in admixture with other modifying liquids.

The term direct solvent is used to cover an alcohol ester or ketone solvent capable per se of dissolving and liquifying a cellulose ester without the aid of auxiliary solvents.

These modifying liquids may be used in the composition in the ratio of from 10 to 30%; those with a nigh density are used in the smaller proportions, those which are light in character being used in the higher ratios. The dense solvents are more suitable in conjunction with a diluting vehicle that is rapidly volatilizing such as carbontetrachloride or benzol; the solvents of lower density being more desirably used in conjunction with more slowly volatilizing vehicles such as xylol and turpentine.

For most purposes, particularly desirable results are obtained with compositions containing from 5 to 10% of film-forming component, from 10 to 30% of modifying solvent, and the balance being volatile cleaning organic vehicle.

The following specific examples illustrate various types of dressings as produced hereunder.

Example I

	Parts
Oil soluble phenol formaldehyde resin	8
Alcohol or pine oil	18
Xylol or turpentine	74–80

One half of the vehicles may be replaced by petroleum naphtha. The ingredients may be mixed in any desired way such as by solution or dispersion of the resin in the modifying liquid and incorporation of the diluent vehicle.

A superior product is produced as follows:

Example II

	Parts
Resin as above	8
Butyl acetate, ethylene glycol or pine oil or a mixture of them	16
Benzol or toluol	76–80

The resin is modified and dissolved by the modifying liquid or mixture and then incorporated with the hydrocarbon. Or an analogous type of composition is

Example III

	Parts
Resin as above	8
Venice turpentine or benzyl acetate	2
Alcohol	2
Pine oil, essential oil or an ester of a secondary alcohol	5
Benzol or toluol	76–80

A high grade, non-inflammable dressing may be made from the following:

Example IV

		Parts
Resin as above		6–10
Venice turpentine	modifying liquid	1
Benzyl benzoate	modifying liquid	2
Pine oil	modifying liquid	3
Alcohol	modifying liquid	4
Butyl acetate	modifying liquid	4
Carbontetrachloride	cleaning vehicle	56
Toluol	cleaning vehicle	30

Alcohol soluble phenol formaldehyde resins may be similarly used. For example, 5 to 8% of the resin may be dissolved in 30% of a direct cellulose ester solvent and then incorporated with 70% of a cleaning vehicle such as benzol, toluol or xylol, or incorporated with 20 parts pine oil and 50 parts carbon tetrachloride. Desirably when the solvent like ethyl alcohol or the cleaning vehicle like carbontetrachloride is not heavy, the other component is chosen to supply that feature so that the composition is readily disseminated on the surface treated. It is desirable in connection with an alcohol soluble resin that 30 to 50% of the dressing consist of sirupy viscous liquids obtainable by a combination of several direct solvents, or of a direct solvent with a heavier modifying agent as an auxiliary solvent, the vehicle consisting of several cleaning liquids including petroleum naphtha. The oil soluble resin is preferred because it permits the use of more economical ingredients.

Coloring agents, for example, 1 to 5 grains per 100 cc. of dressing may be incorporated as desired. Precipitation of oil soluble or alcohol soluble coloring agents by incompatible components if present, may be prevented by means of the chlorinated hydrocarbons in amounts, for example, of 10 to 20% of the composition depending on the amounts of incompatible components present. If the chlorinated hydrocarbon is already a component of the composition no additional amount need be added. If not already present it may be added directly to the color solution, to the oily liquids, or to the color solution in the cellulose ester solvent.

Shellac containing dressings also exhibit unique properties. The shellac may replace the phenol formaldehyde resin either in whole or in part. The shellac dressings give a much higher luster. These compositions generally require a higher percentage of alcoholic or other solvents for the shellac which may run to the order of 40% alcoholic solvent. While the shellac may be substituted for the resin in the examples given above with some adjustment of solvent, the following examples are further illustrative.

Example V

	Parts
Shellac	6–8
An alcohol solvent	40
Toluol or xylol	55

Example VI

	Parts
Shellac	6–8
An alcohol solvent	30
Secondary butyl acetate	10
Toluol or xylol	30
Carbontetrachloride	56

Example VII

	Parts
Shellac	6–8
Alcoholic solvent	35
Pine needle oil or pine oil	10
Toluol or xylol	55

The resins or shellac in the examples herein may be combined with a saponifiable wax or a sulfurized wax, and in such cases the amount of wax should not be sufficient to interfere with the luster desired unless a dull or matte effect is desired, so that generally the amount of wax used will not exceed the amount of resin or lac present. Inclusions of wax are particularly applicable to cracked leather.

Dressings as produced herein may be readily applied by a cloth, for example, and remove accumulated grease, dirt, residues of paste shoe polish, stains and spots from brown or light colored shoes. At the same time there is deposited a uniform, very light delicate lustrous film. The dressings are homogeneous, transparent, compatible liquids requiring no shaking or agitation before use. They may be neutral in tone or colored or dyed as desired. While oil soluble or spirit soluble dyes may be used, they are generally fugitive, so that the light stable water soluble dyes are desirably employed in organic solvents like the glycols and glycol ethers even though substantially no water is present. The absence of detergents like acids, alkalies, and soaps is particularly valuable in preventing cracking of leather. Oils and other viscous or dense components present in the compositions are highly beneficial. The deposited film is comparable in flexibility with a carnauba wax film but being lustrous in and of itself requires no buffing or rubbing. On fairly clean leather a single application gives an excellent finish of substantial durability. On porous and greasy leathers a few applications may be required at first. The dressings are beneficial to the leather, and are resistant to water and moisture.

For treating white shoes there may be added to any of the compositions illustrated above about 5% titanium dioxide, either dry or suspended in water in which a small amount such as 1½ to 2% of a mild alkali such as borax is dissolved. The white shoe dressing creates a delicate white film that does not spot the clothes and has substantial resistance to rain. It may also be used for white belts.

This application is a continuation-in-part of application Serial No. 76,079, filed April 23, 1936, entitled Cleaning and polishing compositions.

Having thus set forth my invention, I claim:

1. A leather dressing capable of removing accumulated layers of polishes, dirt and dark spots without affecting the tannery finish and without resulting in solid accumulations even upon repeated occasional application of the dressing, said dressing containing shellac in an amount not over 10% of the composition but sufficient to give a light flexible film only, from 10 to 45% of a volatile organic liquid non-hydrocarbon non-chlorinated-hydrocarbon solvent for the shellac differing from the diluting vehicle hereinafter set forth and compatible therewith, the balance of the composition being a diluting, cleaning vehicle selected from the group consisting of a volatile liquid hydrocarbon and a volatile liquid chlorinated hydrocarbon.

2. A dressing as set forth in claim 1 in which the diluting cleaning vehicle is a volatile liquid aromatic hydrocarbon.

3. A leather dressing capable of removing accumulated layers of polishes, dirt and dark spots without affecting the tannery finish and without resulting in solid accumulations even upon repeated occasional application of the dressing, said dressing containing shellac and an oil soluble phenol formaldehyde resin the combined amount of which is not over 10% of the composition but is sufficient to give a light flexible film only, from 10 to 30% of a volatile organic liquid non-hydrocarbon non-chlorinated-hydrocarbon solvent for the shellac and resin differing from the diluting vehicle hereinafter set forth and compatible therewith, the balance of the composition being a diluting, cleaning vehicle selected from the group consisting of a volatile liquid hydrocarbon and a volatile liquid chlorinated hydrocarbon.

4. A dressing as set forth in claim 3 in which the diluting cleaning vehicle is a volatile liquid aromatic hydrocarbon.

5. A leather dressing capable of removing accumulated layers of polishes, dirt and dark spots without affecting the tannery finish and without resulting in solid accumulations even upon repeated occasional application of the dressing, said dressing containing an oil soluble phenol formaldehyde resin in an amount not over 10% of the composition but sufficient to give a light flexible film only, from 10 to 30% of a volatile organic liquid non-hydrocarbon non-chlorinated-hydrocarbon solvent for the resin differing from the diluting vehicle hereinafter set forth and compatible therewith, the balance of the composition being a diluting, cleaning vehicle selected from the group consisting of a volatile liquid hydrocarbon and a volatile liquid chlorinated hydrocarbon.

6. A dressing as set forth in claim 5 in which the diluting cleaning vehicle is a volatile liquid aromatic hydrocarbon.

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