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**POLISHING COMPOSITION CONSISTING OF A POLYSACCHARIDE AND AN ABRASIVE**

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3 Claims

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**ABSTRACT OF THE DISCLOSURE**

A polishing agent for use in conjunction with the standard paste wax substance for facilitating the buffing operation performed during removal of the wax coating and polishing of the surface to which it is applied. The agent comprises a mixture substantially made up of a wax tension reducing substance such as dextran, and a moisture absorbing abrasive ingredient, as for example, bentonite.

This invention relates in general to a chemical composition, and more particularly, pertains to a polishing agent for use in conjunction with present day cleaning and polishing waxes to assist in facilitating their use in providing a high and lasting brilliance to particular surfaces.

It is an object of this invention to provide a polishing agent which may be used in conjunction with existing standard polishing waxes, preferably of the paste type, to assist in their use in cleaning and polishing the finish of various surfaces of which it is desired to refurbish their normally lustrous appearance.

It has been the practice to utilize various semisolid paste or liquid waxes, or other polishing compositions, upon normally glossy surfaces that have through usage or extended exposure to the elements become rather non-pleasing and unacceptable in appearance and impaired in brilliancy. These compositions as they are readily available upon the market are usually applied manually, or by means of a small common type mechanical or electrical appliance, to the particular surface desired to be polished for the purpose of combinatively attacking and loosening the soiling particles that have adhered to the surface, and for polishing by means of buffing action to renew the lustre of said surface. Ordinarily, the various waxes and liquid polishes as they are used, for example, to refurbish the finish upon the exposed portions of an automobile body or floor of living quarters, are effective and efficient in polishing said surfaces to a degree that is somewhat proportional to the viscosity of the particular paste wax or liquid polish applied and utilized in the process. In other words, the most effective type surface polishes that are presently available upon the market are in the class of the more viscous type wax polishes which in their application and use necessitate extreme strenuous effort upon the part of the user in applying and wiping the same upon the surface to be treated. These heavier waxes generally must be thoroughly "rubbed onto and into" the surface to be polished ordinarily by means of extreme physical exertion of effort on the part of the user. Then, in order to complete the operation, the user must again, as is generally recognized, expend excessive time and physical force in continuous hard rubbing upon the wax coated surface for the purpose of removing the excess wax while simultaneously imparting a pleasingly polished finish to the particular surface. It is generally conceded that the more viscous type paste wax provides not only a more brilliant finish to the polished surface, but furthermore, due to its greater inherent viscosity in body and substance, imparts a beneficial protective and hardened coating to said polished surface.

In more recent years, the manufacturers and suppliers

of polishing waxes have endeavored to produce waxes which in use would alleviate the physical effort that must be exerted on the part of the user when utilizing said wax for its intended purpose. These new type waxes which provide results with less effort are ordinarily manufactured in liquid form which necessarily facilitates their use in polishing a surface. Now, the user need only to gently apply a liquid wax upon the surface to be polished, waiting a sufficient time for said wax to dry, and then rub the coated surface with much less effort than is required with the use of the more viscous type wax in order to polish the surface. But, even though the liquid type wax has eased the work involved in polishing a surface, it is generally recognized that they are not as effective in providing a protective barrier upon the polished surface, and produce results inferior to those acquired by use of the paste wax. Although the glistening appearance that is acquired by the use of the liquid wax may be just as brilliant as that which is provided by the paste wax, the liquid wax fails to provide anything comparable to the hard wax coating that is acquired through the use of the paste wax. Therefore, even though it is obvious that the paste waxes technically provide much more desirable results than those acquired through the use of the present day liquid waxes, consumers more freely purchase and utilize the latter type waxes since they find that they can ostensibly acquire the same outward results as can be acquired through the use of the paste waxes with only having to exert a small percentage of the physical labor.

It should be apparent that it would be more beneficial to utilize the paste type waxes upon surfaces that necessitate periodic polishing so as to acquire not only the equivalent pleasing appearance as achieved through the use of liquid waxes, but more important, to acquire upon the polished surfaces the much more effective protective coating that paste waxes impart. It has been found that through the use of the polishing agent comprising this invention in conjunction with the more effective paste waxes as are presently available upon the market, the physical endeavor that must be exerted upon the hardened paste waxes during the polishing process subsequent to its application is lessened to an amount comparable to the effort that must be employed during use of the common liquid waxes. Hence, through the use of the present invention one may acquire the most effective type coating and appearance for any particular surface, and need no longer expend great time and effort in acquiring the same.

It is, therefore, a principal object of this invention to provide a polishing agent which may be used in conjunction with present day paste waxes for the purpose of facilitating the effort required for acquiring the pleasing appearance and protective coating achieved by the use of said paste type waxes during the polishing process.

It is another object of this invention to provide a polishing agent which may be used in association with a paste type wax for polishing surfaces which normally were inaccessible and difficult to polish by the isolated use of said paste wax alone since the user had to exert a great amount of physical force and expansive movement to remove said hardened paste wax during the polishing process.

It is an additional object of this invention to provide a polishing agent which may be used in conjunction with a paste wax for polishing a particular surface to a desired lustre without having to exert extreme physical force or require the use of a buffing apparatus.

It is still another object of this invention to provide a polishing agent which may be used jointly with a paste type wax so as to provide a radiant appearance and protective coating upon a particular surface in a very economical manner since reduced time and effort is ex-

pended in performing the polishing process than is necessitated by usage of the paste wax alone.

It is yet another object of this invention to provide a polishing agent which may be used in conjunction with a paste type wax and thereby provide for the application of said wax to a larger area of a particular surface prior to the act of polishing than heretofore allowed, since said polishing agent greatly facilitates the removal of the hardened and dried wax coating during the buffing process.

These and other objects and advantages of this invention will become apparent to those skilled in the art upon viewing the following detailed disclosure.

The invention contemplates a polishing agent which may be used in conjunction with present day paste type waxes which due to their natural high viscosity must be thoroughly rubbed upon a particular surface desired to be polished, such as an automobile body, hard wood or linoleum flooring, or any related surfaces. The polishing agent comprises an homogeneous powdery mixture of dextran and a fine particle abrasive powder, such as powdered bentonite, diatomaceous earth, aluminum oxide, hydrated silicates of metal, or some other suitable abrasive material in powder form.

It is apparent that the undesirable characteristics of present day available paste type waxes that render their use difficult includes the fact that their composition comprises at least in part a combination of various animal, mineral, vegetable, or synthetic type waxes that solidify upon exposure to the air. This makes the rubbing and polishing of paste waxes difficult and time consuming. Also included as ingredients in existing paste waxes are various solvents and oils that assist in producing effective polishing results. When these waxes are applied to a surface to be treated, the various wax ingredients contained in the composition eventually harden upon drying and are extremely difficult to remove during the buffing process. It is this hardened film of wax, that previously had to be thoroughly rubbed onto and partially into the surface to be polished, that provides the lasting protective wax coating barrier upon the polished surface after the excessive wax had been removed by buffing. As previously discussed, present day waxes in liquid form do not provide the desirable enduring protective coating for the polished surface, and ordinarily fail to effectively resist against deterioration, such as through oxidation, particularly after exposure to the elements subsequent to polishing, and in particular through exposure to snow or rain. By use of the polishing agent of this invention, the most beneficial protective coating that can be acquired by use of the paste type waxes may be achieved with the minimum of effort. When the polishing agent is used in conjunction with a paste type wax that has been previously applied to a particular surface desired to be polished, the dextran ingredient that is included in said polishing agent assists in softening the hardened coating of wax and eases the process of its removal during the buffing process. Furthermore, it has been found that dextran, which is rather moist and gummy in its physical construction, assists in softening and partially removing the hardened wax and aids in providing for a lustre appearance of the polished surface and a more lasting protective coating imparted by the residual wax remaining thereon. An ingredient such as dextran is effective in reducing the tension created with the hardened wax during the buffing process. The dextran as used as an ingredient in this polishing agent is a polysaccharide composed of dextrose units, and encompasses a polymer of glucose. This ingredient is further inclusive of dextrin and all starches having the general formula  $(C_6H_{10}O_5)_N$  whether derived from vegetable, or any synthetic source.

Used in conjunction with dextran as an added ingredient within the polishing agent is any finely divided abrasive material such as a diatomaceous earth, aluminum oxide, bentonite, or any hydrated silicate of metal. It has been

found that with the addition of this abrasive material within the polishing agent the hard wax coating that has been formed upon the surface to be polished is much more easily removed during the buffing process since said abrasive material has a tendency to detritate the excessive wax coating into a powdery form which eases its removal. The more preferably abrasive ingredient added to the polishing agent is bentonite, which comprises largely any of a group of colloidal clay like materials or montmorillonite. When bentonite is included as an ingredient within said polishing agent, it not only provides an abrasiveness which assists in removal of the excess hardened wax coating, but it further inherently possesses enhanced absorptive power which aids in removing any undesirable moisture that may be present on the coated surface to be buffed, or which may yet be contained within unpolished wax coating due to its not having sufficiently dried since application. Furthermore, it has been found that bentonite improves the stability of not only the polishing agent in which it is included, but that its use in conjunction with the paste wax increases the stability and lasting endurance of the wax coating that remains upon the polished surface.

The best known composition for the purpose of the present invention is prepared as follows:

A finely pulverized abrasive material having a particle size averaging about ten (10) microns in diameter is combined into a mixture with a similarly granulated amount of dextran. The percentages of each of the ingredients that are combined into the mixture may be within the range of seventy-five percent (75%) to ninety-eight percent (98%) by weight of dextran, with the remaining percentage for completion of the mixture consisting of one of a suitable abrasive material or a combination of said abrasives. It has been found that if the abrasive ingredient content is included in an amount less than two percent (2%) of the total mixture, the results acquired during the buffing process are rather deficient since the paste wax coating as applied to the surface remains rather gummy in substance either as a result of its own inherent moisture content which has not sufficiently been dried out by the absorptive abrasive material, or because of use of the wax in combination with an excess amount of the dextran material. On the other hand, if the dextran content of the polishing agent is maintained lower than the seventy-five percent (75%) level, insufficient surface tension will be effected between the polishing agent and the hardened wax coated surface, and as a result said agent will fail to facilitate the removal of the excess wax coating during the buffing process. Also, a certain amount of the surplus granulated abrasive material present in such a mixture may remain embedded within the buffed final wax coating remaining on the polished surface if the percentage content of said abrasive material present within the polishing agent exceeds twenty-five percent (25%) and the dextran content is maintained below the seventy-five percent (75%) level. The more preferable and efficient combination of ingredients as contained within the polishing agent includes a mixture of dextran in an amount of about ninety percent (90%), and bentonite maintained in content at about ten percent (10%). With this mixture, when the polishing agent is applied to the wax surface, the abrasive material such as bentonite effectively assists in drying any remaining moisture existing in the wax coated surface, and additionally is very efficacious in use as an abrasive to assist in removal of the excessive hardened wax coating. Also, the ingredient dextran when present at this level within the polishing agent, efficiently assists in conditioning the wax coating for ease of removal during the buffing process while enhancing the wax's inherent ability to provide a high and lasting brilliance to the polished surface. Furthermore, this level of the dextran ingredient has substantially no detrimental effect of making the wax coating become gummy or moist in texture, hard to remove during the buffing process, and does not unduly impair the polishing results. Therefore, the pre-

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ferred mixture of about ninety percent (90%) dextran and ten percent (10%) bentonite as a polishing agent develops a very effective surface tension with the hardened paste wax coating and aids in easing the removal of excess wax during the buffing process.

The polishing agent of the present invention when prepared in its preferable mixture and utilized in combination with a paste type wax material for assisting in polishing a particular surface, greatly facilitates the overall polishing process. Normally, the paste type waxes will be applied to the surface to be polished over a particular size area. The polishing agent of this invention will next be applied to the waxed surface area preferably before the coated paste wax has completely dried of moisture. The polishing agent, in its powder or granulated form is applied, as by sprinkling or dusting on the already waxed surface and it can also be applied by applying it to a polishing cloth if desired. The final polishing step is then performed by buffing the powder coated waxed surface manually by means of a clean, dry soft cloth, or through the use of a mechanical buffing device. After the buffing step is completed, the polished surface may be rinsed with cold water to remove any excess polishing agent or residual loosened wax coating that may remain. The exposure of the polished surface to cold water is desirable since the protective wax coating that remains is more greatly solidified and tempered to act as a more effective barrier against the elements.

Due to the coaction between the ingredients of the polishing agent and the hardened wax coating, the removal of any excessive wax is eased to such an extent that the hard labor previously required for the removal of paste wax during the buffing process is now totally eliminated. In addition, the waxed surface is now properly conditioned for providing an effective and lasting barrier against deterioration caused by destructive elements normally exposed to polished surfaces, so that said surfaces are now protected in a more high and lasting brilliance for a much greater length of time enhancing and sustaining their useful duration. For this and the foregoing reasons, the polishing agent of this invention provides numerous advantages over heretofore known compositions.

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Thus there has been described novel means for polishing waxed articles which fulfills all of the objects and advantages sought therefor. Many changes, modifications, variations, and other uses and applications of the subject material will, however, become apparent to those skilled in the art after considering this specification. All such changes, modifications, variations and other uses and applications which do not depart from the spirit and scope of the invention are deemed to be covered by the invention which is limited only by the claims which follow.

What is claimed is:

1. A polishing composition consisting essentially of a homogeneous powdery mixture consisting of from about seventy-five percent (75%) to about ninety-eight percent (98%) by weight of a wax reducing substance selected from the group consisting of dextran, dextrin and starch and from about two percent (2%) to about twenty-five percent (25%) by weight of an abrasive substance selected from the group consisting of diatomaceous earth, aluminium oxide, bentonite, metal hydrated silicate, and montmorillonite.

2. The polishing composition described in claim 1 wherein said mixture comprises approximately ninety percent (90%) by weight of the wax tension reducing substance and approximately ten percent (10%) by weight of the abrasive substance.

3. The polishing composition described in claim 1 wherein said abrasive substance comprises finely divided particles having a particle size averaging about ten microns.

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