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COMPOSITION FOR THE REMOVAL OF PAINT, VARNISH, ENAMEL, GREASE, ETC.

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To all whom it may concern:

Be it known that I, FRANK P. SCHMIDT, a citizen of the United States, residing at Quincy, in the county of Adams and State of Illinois, have invented certain new and useful Improvements in Compositions for the Removal of Paint, Varnish, Enamel, Grease, Etc., of which the following is a specification.

This invention relates to compositions for removing paints, varnishes, enamel, grease, etc., and for cleaning glassware, cooking utensils, and for wet washing and for dry cleaning; and the object of the invention is to provide a paint, varnish, enamel and grease remover in liquid form, which may be applied to the paint, varnish, enamel or grease desired to be removed with a brush or other soft material, and which will permit the paint, varnish, enamel or grease to be rubbed off with a dry cloth in from five to fifteen minutes, and which has been found to be of particular value in removing paint, varnish, etc., from clothing without injury to the cloth, and which will remove all forms of dirt from the clothing without bleaching the color or injuring the fabric and which when mixed with water constitutes a perfect cleaning agent which can be used without the aid of soap or bluing and bleaching agents and without diminishing the luster of the goods.

A further object is to provide a paint, varnish, enamel, or grease remover which will not act to bleach the wood or other material to which it is applied, and which is not injurious to persons using it.

The paint, varnish, enamel or grease remover consists of a solution of a dibasic acid, preferably oxalic acid, dissolved in grain alcohol which has been denatured with pyridine, lysol or benzol. Preferably the composition consists of the following ingredients in or about the following proportions:—

A dibasic acid, preferably oxalic acid CO_2H or CO_2H+2H_2O	8 oz.
Pyridine or lysol or benzol	3%
Alcohol C_2H_5OH	1 gal.

These ingredients are thoroughly mixed cold by agitation.

The solution constitutes a chemical solution and physical mixture of the ingredients referred to and the chemical reaction produced by this mixture forms free ethyl oxalate and water. Ethyl oxalate, unlike calcium oxalate and other inorganic oxalates, is an organic compound and is known in chemical sense as an ester. This compound is obtained by dissolving oxalic acid in ethyl (grain) alcohol and heating slowly to 100° C. or the boiling point of water, the heat being applied to hasten the reaction. When the mixture has evaporated, the crystals of free oxalic acid as well as ethyl oxalate are obtained. The presence of the oxalic acid is evidence that the mixture is physical and the presence of the ethyl oxalate indicates a chemical reaction takes place, which is as follows:—

$$2C_2H_5OH+C_2H_2O_4+C_2O_4(C_2H_5)22H_2O.$$

(Alcohol+oxalic acid+ethyl oxalate water).

This solution composed of the ingredients above referred to produces a liquid and in the solution, the acid loses its bleaching power. After the acid has dissolved, oil of sassafras or any other perfuming ingredient is preferably added to the solution.

In use, the liquid is applied to the paint or varnish desired to be removed by a brush or other saft material, and after it has been allowed to stand from five to fifteen minutes the paint or varnish can be rubbed off with a dry cloth. This solution remains in liquid form, does not take the form of a paste or cake, and will not act to bleach the wood or other material to which it is applied, as most paint removers do.

In addition to the composition being used for the removal of paint, varnish and the like, the composition also constitutes an excellent wet wash cleaner and sterilizer and dry cleaner, as it does not injure fabrics nor shrink woolens. When used for washing clothes, about ⅓ of an ounce of the composition is added to 8 or 10 gallons of water.

It will be seen that the composition is a mixture containing alcohol, preferably denatured, an ester (ethyl or methyl oxalate, depending upon which alcohol is used) and free oxalic acid. Where a compound of this character is heated, the heating converts all of the oxalic acid to an ester, but where the mixing is done cold, as in the present case, only some of the acid is concentrated at the time of the mixture, leaving free alcohol

and free oxalic acid and, therefore, no other thinners or solvents are necessary. Where this mixture is diluted with water, the free oxalic acid has bleaching powers which makes bluing unnecessary in wet washing, the free oxalic acid having bleaching powers when mixed with water which it loses when converted into an oxalate.

While I have stated the preferable ingredients and the preferable proportions, I do not wish to be limited to this, as these proportions may be changed and other denaturing agents than pyridine may be used without departing from the spirit of the invention.

I claim:—

1. A paint or varnish remover consisting of an alcohol, and alcoholic oxalate, and free oxalic acid.

2. A composition of the character described consisting of oxalic acid, alcohol and a denaturing agent, and wherein the oxalic acid is partially converted into an oxalate, leaving free oxalic acid.

3. A paint and varnish remover consisting of the following ingredients in approximately the following proportions:

Oxalic acid	8 oz.
Alcohol	1 gal.
Denaturing agent	3%

In testimony whereof I hereunto affix my signature.

FRANK P. SCHMIDT.