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PAINT AND VARNISH REMOVER.

No Drawing. Application filed September 19, 1921. Serial No. 501,644.

To all whom it may concern:

Be it known that FRANK A. VAN NESS, citizen of the United States, residing at Yonkers, in the county of Westchester and State of New York, has invented certain new and useful Improvements in Paint and Varnish Removers, of which the following is a specification.

This invention relates to paint and varnish removers, and particularly to a highly efficient non-poisonous and non-injurious composition for facilitating the removal of coatings from painted or varnished surfaces.

Paint and varnish removers heretofore in use have been composed of volatile and inflammable solvents, and frequently contain waxy materials to retard evaporation of the solvent when the latter is applied to a surface. The fire hazard in the use of inflammable removers is apparent, and numerous fires have in fact resulted from such use. Furthermore, the inclusion of waxy retarders in the compositions results in the formation of a film on the treated surface which must be washed with a solvent generally of an inflammable character after the paint or varnish coating has been removed. To avoid the use of inflammable solvents, the use of corrosive substances such as strong alkalies and acids has been proposed, but compositions containing these ingredients are injurious to the underlying surface, frequently causing swelling of the wood grain, and the workmen using these varnish removers are liable to injury from inadvertent application thereof to the skin.

It is the primary object of the present invention to provide an inexpensive varnish remover which is free from the objectionable features of the compositions above described.

A further object of the invention is the provision of a varnish remover which may be readily applied and easily washed with water from the surface treated, leaving the surface in condition for immediate application of a new paint or varnish coating.

Further objects and advantages of the invention will appear in the following specification wherein I have set forth the preferred embodiments thereof.

I have discovered that an aliphatic alcohol such as ethyl alcohol preferably combined with spirits of turpentine and with a mildly alkaline material provides a substantially non-volatile varnish remover which is very effective even when greatly diluted by the addition of water. Both the alcohol and the turpentine are active solvents for the oils and resins of which paint and varnish coatings are principally composed. I prefer to use grain alcohol although any other aliphatic alcohol would be just as efficient. By the term "aliphatic alcohol" I refer to those alcohols usually included in the class of lower alcohols which are mobile liquids and have marked solvent properties. As an alkaline material, I preferably employ soda ash (sodium carbonate) which acts as a saponifying agent for the oils and resins and does not injure the underlying surface. The water reduces the cost of the varnish remover and serves the highly desirable purpose of rendering it less volatile and non-inflammable.

Evaporation of the alcohol may be retarded by the addition of aqua-ammonia which, because of its alkaline character, aids in softening and loosening the coating. Ordinary soap may also be introduced to the composition to add body to the liquid, the soap acting with the soda ash and ammonia as a detergent to facilitate the removal of the softening coating by the application of water thereto.

I have also discovered that the penetration of the alcohol may be increased by the addition of oil of camphor to the mixture, and that small quantities of coniferous oils such as pine and cedar oils may be added advantageously as penetrating solvents which prevent premature drying of the composition on the wood.

The various components of the liquid paint and varnish remover may be readily mixed by stirring, solution of the solid ingredients being accomplished with or without the aid of heat. The result is a milky non-viscous liquid similar in appearance to an emulsion but separating on standing into three layers. Before application, the liquid should be thoroughly stirred to recombine the separated layers.

When the remover is applied, the solvents attack the oils and resins, bringing them into solution, in which condition they are saponified by the alkali and converted into soluble soaps which are readily removed by washing with water. The proportion and

strength of the alkali employed should be such as to leave the resins in the pores of the wood unattacked, thus preventing raising the grain and leaving the pores filled and ready for recoating.

I find that the liquid paint and varnish remover as hereinbefore described is effective to a high degree. It may be applied to painted, enamelled, varnished and shellaced surfaces. It will also effectively remove carbon from brick fireplaces, will cut grease on wood, iron or cloth. It will also cleanse brick surfaces, cement floors and remove paint and varnishes from cloth, linen, muslin and bristles of brushes. After application the liquid may be readily washed away with water.

A typical illustrative type of paint and varnish remover of this character may comprise—

	Parts.
Soap	75
Soda ash	40
Aqua ammonia	40
Alcohol (grain)	75
Spirits of turpentine	40
Oil of cedar	1
Oil of pine	1
Camphor	1
Water to make	1000

Briefly described, my varnish remover comprises solvents which are non-volatile at the temperature of application of the varnish remover and non-injurious, the action of which may be accelerated by the addition of certain penetrating oils, together with mildly alkaline materials which increase the solvent properties and saponify the oils or resins in the paint or varnish coating. The use of this varnish remover entirely obviates the difficulties experienced with varnish removers heretofore known, since there is no danger of fire, and washing with inflammable solvents to remove residual waxy films is unnecessary. Moreover, the ingredients of my varnish remover cannot injure the workmen.

I have described the preferred embodiments of the invention but the composition may be varied, and essentially consists of a solvent and a saponifying agent for the oils and resins of the paint and varnish and particularly an aliphatic alcohol combined with turpentine and a mildly alkaline material as hereinbefore described.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. A non-injurious paint and varnish remover comprising a mildly alkaline liquid consisting of an organic solvent for oils, resins and gums diluted with water and combined with sodium carbonate, ammonia and soap.

2. A non-injurious paint and varnish remover comprising a mildly alkaline liquid consisting of a lower aliphatic alcohol diluted with water and combined with turpentine, sodium carbonate and ammonia.

3. A non-injurious paint and varnish remover comprising a mildly alkaline liquid consisting of a lower aliphatic alcohol diluted with water and combined with turpentine, sodium carbonate, ammona and soap.

4. A non-injurious paint and varnish remover comprising a mildly alkaline liquid consisting of an organic solvent for oils, resins and gums diluted with water and combined with sodium carbonate and ammonia, the penetrating power of the solvent being augmented by oil of camphor.

5. A non-injurious paint and varnish remover comprising a mildly alkaline liquid consisting of an organic solvent for oils, resins and gums diluted with water and combined with sodium carbonate and ammonia, the pentrating power of the solvent being augmented by oil of camphor, oil of pine and oil of cedar.

6. A non-injurious paint and varnish remover comprising alcohol, turpentine, sodium carbonate, ammonia and soap, all combined and diluted with water, the proprotion of the ingredients mentioned except the water being approximately 270 parts in 1000 parts of the liquid.

7. A non-injurious paint and varnish remover comprising soap 75 parts, soda ash 40 parts, aqua ammonia 40 parts, alcohol 75 parts and turpentine 40 parts combined and diluted with water.

In testimony whereof I affix my signature.

FRANK A. VAN NESS.