

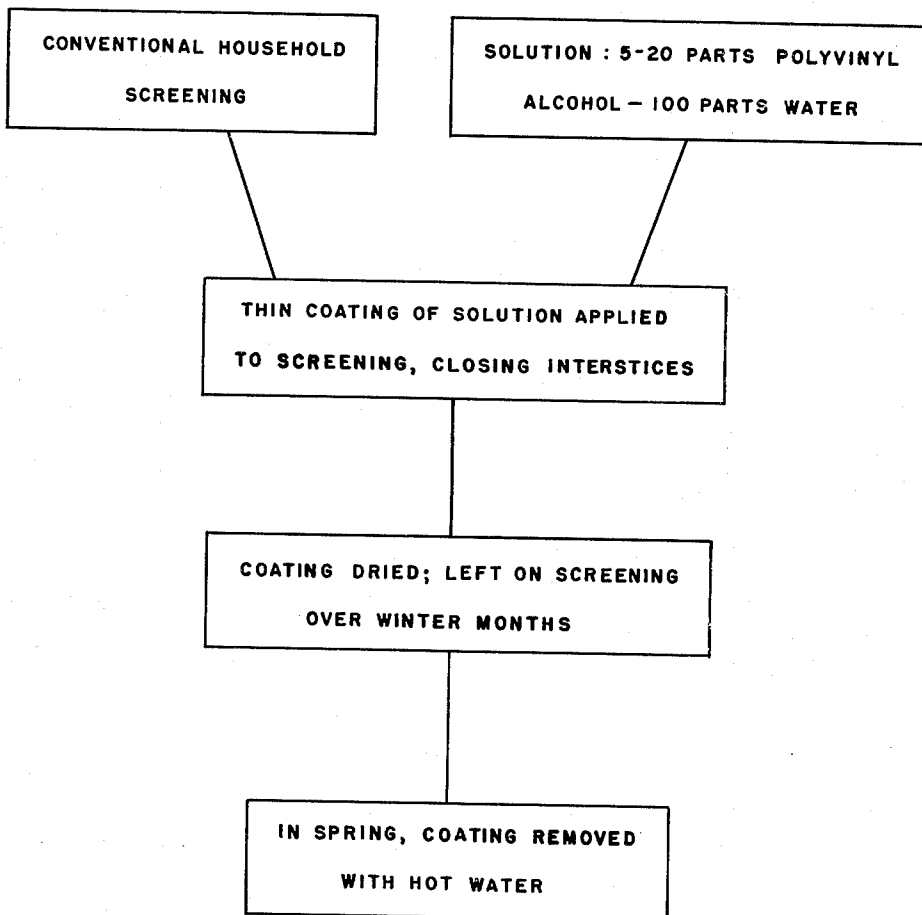
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PROCESS FOR COATING SCREENS

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1

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PROCESS FOR COATING SCREENS

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2 Claims. (Cl. 117—128.4)

This invention relates to a new article of manufacture and to a process for producing such article. More particularly the invention relates to providing a removable closed coating on screens for windows, porches, doors and the like.

Many homes have window, porch and/or door screens for summer time use. However, many of these same houses have no storm windows or doors for use when the screens are taken down. This results from the fact that screens of various types are relatively inexpensive, while storm closures are generally quite expensive. For example, a simple window screen might cost not much more than a dollar while a storm window of the same size would cost many times that amount.

People who have screens but cannot afford or do not wish to invest in storm closures, sometimes use polyethylene sheets over windows and the like during the winter to ward off the cold winds and keep drafts down. Such sheets, while effective up to a point, are unsightly and detract from the appearance of the structure on which they are used. Further, if the sheets are tacked or taped in place they sometimes come loose and flap in the wind.

One object of this invention is to provide a household screening and the like which is "winterized" to provide protection against cold weather and can then be "summerized" when the winter is over to provide common household screens.

Another object of this invention is to provide a method for winterizing screening at a very low cost, the treatment of each screen costing only a few cents.

Another object of this invention is to provide a process whereby a householder can "winterize" screens whereby the necessity for taking the screening down before each winter and putting it up again when warm weather arrives is eliminated.

A further object of this invention is to provide a transparent, or at least translucent, closed coating on household screening or the like to keep air from passing through the screening, without destroying viewing through the screening.

A still further and important object of this invention is to provide a closed coating on household screening, the coating being such that it is substantially unaffected by rain, snow, wind or the like but easily removed without damaging the screening.

Other objects of this invention will be apparent hereinafter from the specification and from the recital in the appended claims.

Briefly stated, the invention involves the application of a closed coating to screens for households or the like, such coating being applied in liquid form using a brush or the like, by spraying it on, or applying it by other means, the material applied being adapted to harden or set upon adequate exposure to the air. Thereafter, the coating may be removed merely by subjecting it to a dissolving process such as the application of heat or subjecting the coating to a stream of hot water which will dissolve the coating and return the screening to its natural state. The drawing refers to a schematic diagram of the process of this invention.

The particular coating applied to the screening should have generally the following characteristics: (a) Preferably, although not necessarily, the material to be used for coating should be in liquid form or capable of being made into a liquid whereby it can be brushed or sprayed on; (b) It should have a viscosity and/or suitable sur-

2

face tension which is such that when brushed or otherwise applied to screening it will bridge and close the openings in the screening to make it impervious to air; (c) When applied, the coating is preferably transparent or at least translucent so that a person can see through the screening after the coating is applied, even though visibility may be somewhat impaired; (d) The coating should be rugged enough to stand weathering during the winter without disintegrating; (e) The coating should be such that it will not damage the screening when it is applied, while it is on, or when it is removed, regardless of whether the screening is metal, plastic or some other material; (f) The coating should be dissolvable such as by the application of heat or soluble in hot water so that the user can remove the coating without having to resort to chemicals or the like. The provision of expensive special removal material would defeat the invention, although it is recognized that some inexpensive chemical, such as a detergent might be used in conjunction with the dissolution to improve the removal operation.

There are a number of products presently on the market and composed for use in other environments which have the characteristics specified above. One such product is "Elvanol" polyvinyl alcohol, manufactured by E. I. du Pont de Nemours & Co. "Elvanol" is provided in various grades such as "Elvanol 72-60" which when applied has high water resistance qualities at normal temperatures, is transparent or at least translucent, is resistant to grease, oil and the like, rugged, has considerable tear strength and above all is soluble when rinsed with hot water. Such product may be made into a liquid which is readily applied to screening using a brush, spray, blade or the like and provides a closed coating.

The manufacturer of the insect screening for use in windows, storm doors and the like would apply the liquid "Elvanol" by the particular method least expensive relative to the equipment and manufacturing facilities available. The screening can be sold during the winter to provide householders with protection from the weather. When spring arrives, the "Elvanol" can be washed off with hot water, thereby opening the interstices in the screening to allow the passage of air. The following winter the householder can re-coat the screens with "Elvanol" to obtain another winter's protection. The procedure can be repeated, that is, application and removal, season after season.

While "Elvanol" in liquid form is recited as one product suitable for use in this invention, others may also be employed, keeping in mind the cost of the material and its ease of application and removal. For example, the screening might be provided with a closed coating of synthetic filament as described in U.S. Pat. No. 2,450,948. When desired, such filament may be destroyed by the application of adequate heat or by the application of a solvent for thermoplastic material. It is recognized that some coating may be satisfactory from an application and removal standpoint, but poor from the standpoint of seeing through the screening when the coating is on. However, even such coatings can be used for cellar windows and the like where seeing through the screening is not a consideration.

Different results can be obtained with the same product by varying the mixture. One such mixture would be 5 parts "Elvanol 72-60" and 100 parts water. This results in a thin transparent solution. When applied to ordinary insect screening by means of a paint brush in a brisk manner, a frothy substance is formed over and between the screen openings. Upon drying in air a thin translucent film is obtained.

A screen so treated will resist the passage of air substantially throughout the winter months while being subjected to the normal elements of snow, sleet, wind and

rain. After one winter season, the Elvanol film can be easily removed by hot water and the light action of a scrubbing type of brush. Hot water or steam applied by pressure hose can be used to dissolve away the Elvanol film without brushing.

Another such mixture would be 20 parts "Elvanol 72-60" and 100 parts water. This results in a gelatinous translucent type of solution. This can be applied by pouring it directly over the screen and spreading with a wide bladed hand tool such as that used for removing wallpaper. Upon drying in air a film is formed, less translucent than the first example but more weather resistant.

A screen so treated will winterize for those who wish a permanent air and element resisting film. It, too, can be removed but with somewhat more difficulty than the first example cited.

Although "Elvanol" and a synthetic filament are disclosed as possible coatings, it will be understood that other materials may be used and this application is intended to cover any uses or adaptations of this invention as fall within the spirit of the invention and the limits of the appended claims.

Having thus described my invention what I claim is:

1. A method of providing winter protection for a household having insect screening comprising mixing about 5 to 20 parts polyvinyl alcohol with 100 parts of water to form a gelatinous like solution, then applying said solution to the screening uniformly and in a limited amount to form a thin coating over the screen and closing the interstices in the screening, and then drying the coating to render the screening impervious to air, rain and weather, and then thereafter removing said coating to re-

turn the screening to its original condition, the thinness of said coating being such that it may be readily removed when desired by the application of hot water.

2. A method providing winter protection for a household having insect screening comprising coating said screening with a thin translucent layer of polyvinyl alcohol which closes the interstices in the screening, and then thereafter removing said coating to return the screening to its original condition, the thinness of said coating being such that it may be removed from the screening by dissolving the coating in hot water.

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RICHARD D. NEVIUS, *Primary Examiner*.