Feb. 2, 1954 H. W. BATTLE 2,668,129

PAINTBRUSH CLEANING METHOD

Filed April 17, 1952

FIG. 1

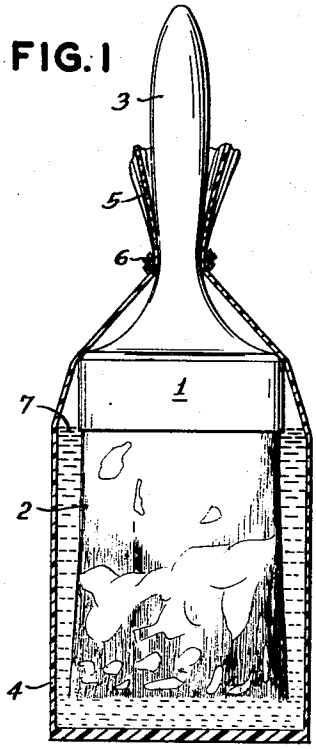


FIG. 2

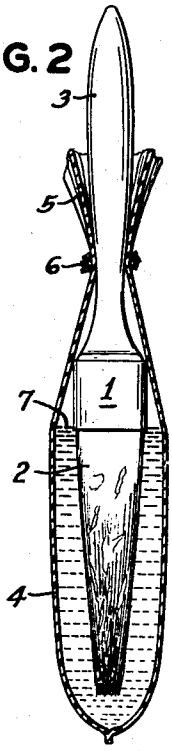


FIG. 3

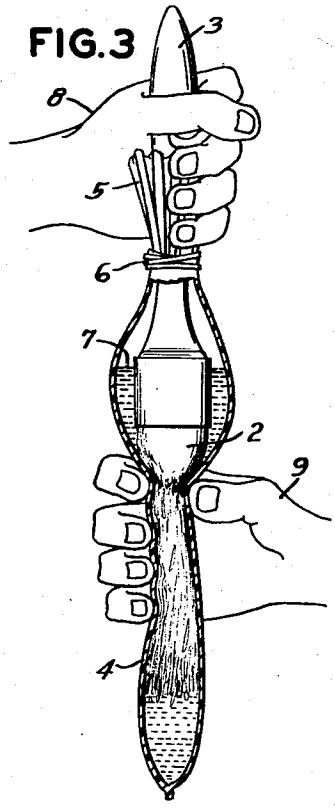


FIG. 4

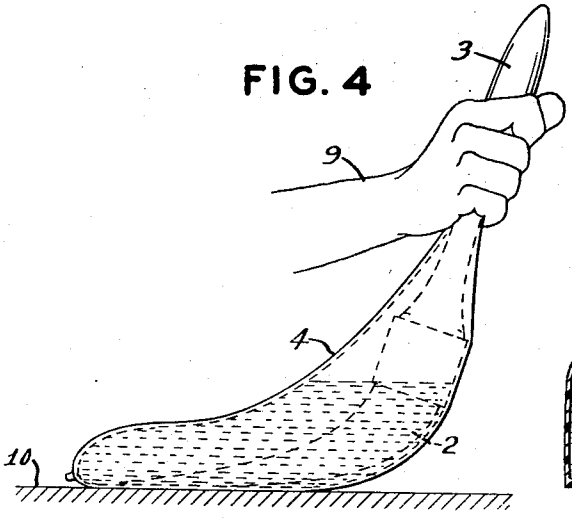
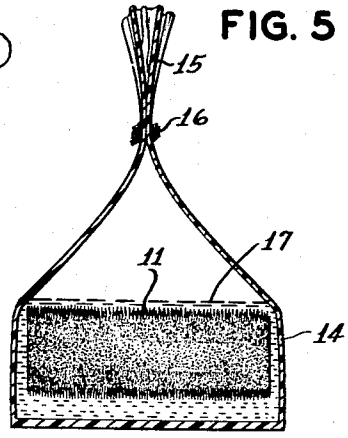


FIG. 5



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PAINTBRUSH CLEANING METHOD

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5 Claims. (Cl. 134—6)

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This invention relates to an improved method of cleaning paint applicators having filamentary paint-applying elements such as paint brushes and paint rollers having a pile fabric surface, whereby the applicators can be repeatedly cleaned without any dirtying of the hands, fingernails, etc.

It is common knowledge that it is a tedious and dirty job cleaning out the paint from a paint brush after using it for painting and prior to putting the brush away. The common methods of cleaning paint brushes tend to cause the user to let the paint brush get hard, after which it is often thrown away. If the user dips the paint brush in a volatile solvent or thinner and uses his hands for working the liquid into the bristles, the hands, including the fingernails, become dirty and are difficult to clean.

The present invention provides an improved paint brush cleaning process by which a paint brush, after using, can be repeatedly cleaned without any dirtying of the hands, fingernails, etc., and without loss of the solvent or thinner used for cleaning the brushes.

According to the present invention, the paint brush to be cleaned is placed in an envelope somewhat larger in size than the brush, so that it will also hold an amount of liquid several times the volume of the bristles and there is also placed in the envelope with the brush an effective amount of paint thinner or solvent, several times the volume of the bristles of the brush, and the upper end of the envelope is gathered tightly around the brush handle. The paint brush bristles are thus enclosed in the envelope with an effective amount of the cleaning solvent, which is prevented from loss by volatilization. The envelope is of thin, flexible material, which may be opaque, but which is advantageously of transparent material, so that the brush and liquid contained in it can be readily observed by the user. The bristles and envelope are then subjected to a rather vigorous pumping action to cause the solvent or thinner, such as naphtha or water, to go into the voids between the bristles. With brushes used with oil paints, a solvent or thinner such as naphtha can be used; with brushes used with water base paints, water can be used.

As an illustration of one method of carrying out the process, a three-inch paint brush, which has been used for painting with oil base paint, is placed in a thin, transparent plastic envelope somewhat larger than the size of the brush, and there is also poured into the envelope about ½ cup of plain paint thinner or naphtha. The top of the envelope is then closed around the paint brush handle and held firmly in place by

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a strap or band or by simply holding the handle tightly in the left hand. The fingers of the right hand are then run with a firm action over the surface of the plastic envelope, with a squeezing action. The squeezing of the envelope creates with the naphtha in the bag a rather violent pumping action. It appears that this pumping action causes the naphtha to go into the voids between the bristles and in this way a good cleaning of the brush can be accomplished in e. g. approximately 60 seconds, more or less, without any dirtying of the hands, fingernails, etc.

Another method of accomplishing the pumping action is to press the bristles of the brush down sharply on a surface and working it back and forth to force the naphtha between the bristles, thus effectively removing the paint, including that which tends to remain in the heel of the brush.

The plastic envelopes may be made of various plastic materials which are tough and flexible, including envelopes of rubber hydrochloride ("Pliofilm"), neoprene, etc. The envelope, if made of tubular material, should have the bottom end firmly secured together, as by a double seam, or other secure seam which will prevent opening of the seam during the use of the envelope in the process of cleaning the brush.

Since paint brushes vary in size, the envelopes used can similarly be varied in size. They should be larger than the brush, so that they can hold sufficient cleaning fluid to effectively clean the paint from the bristles.

Various methods may be used for securing the upper end of the envelope to the brush handle with a tight seal which will avoid accidental forcing out of the solvent. A strong elastic band can be used; or an elastic tape with fasteners; or the upper end of the envelope may be firmly held by one hand, which grasps the handle of the brush, while the pumping action is being applied to the solvent and bristles to remove the paint from between the bristles.

It is one advantage of the present cleaning process that there is no loss of cleaning solvent, since the cleaning takes place in a closed envelope which prevents loss of solvent by vaporization or by spillage.

Paint applying devices include not only paint brushes but the so-called roller painter with a roller having an outer detachable layer or sleeve of pile fabric by which the paint is applied. Such roller painters, like the paint brushes, are hard to clean in an effective manner. The present process is well adapted for the cleaning of such painting devices, since the pumping action of the solvent causes the solvent to go into the voids

between the fibers and effectively clean such surfaces.

The invention will be further described in connection with the accompanying drawings, which illustrate in a somewhat conventional and diagrammatic manner the use of the envelope and paint solvent and the carrying out of the process.

In the accompanying drawings, Fig. 1 is a side view of a paint brush in a transparent plastic envelope which also contains the cleaning fluid;

Fig. 2 is a similar edge view of the brush, envelope and cleaning fluid;

Fig. 3 illustrates the carrying out of the cleaning process by holding the brush handle in one hand and effecting the pumping action by squeezing the envelope and brush with the other;

Fig. 4 shows the carrying out of the process by forcing the brush, envelope and solvent down on a hard surface to effect the pumping action; and

Fig. 5 shows an envelope containing a roller painter sleeve together with paint solvent, with which the pumping and cleaning operation can be carried out.

Figs. 1–4 show a paint brush 1 with bristles 2 and handle 3 enclosed in an envelope 4 of transparent plastic material such as Pliofilm and with the upper end of the envelope firmly gathered together around the handle at 5 and fastened with a fastener 6 which is tight enough to give a fluid-tight closure. Inside the envelope is a liquid 7, such as paint thinner or solvent, e. g., naphtha, in amount sufficient to immerse the bristles and fill the envelope with sufficient fluid to effect the cleaning operation.

In Fig. 3, the device is held with the left hand 8, while the right hand 9 presses the envelope together to effect a pumping action of the solvent and cause the solvent to go into the voids between the bristles. By running the fingers of the right hand with a firm action over the surface of the envelope and applying pressure at successively different portions, the pumping action is made effective throughout the bristles. A three-inch paint brush has thus been effectively cleaned in approximately 30 seconds without any dirtying of the hands, fingernails, etc.

Fig. 4 shows the device pressed down on to a surface 10 to effect the pumping action of the solvent. By moving the brush up and down in opposite directions over the surface, the solvent is pumped first in one direction and then in the other through the bristles, so that even the paint that is contained in the heel of the brush can be effectively removed by this pumping action.

In Fig. 5, a roller painter sleeve 11 is enclosed in the envelope 14 with the upper end of the envelope gathered together and secured by the fastener 16. This envelope contains the cleaning fluid or liquid 17. By a similar pumping action to that above described, the solvent is effectively forced throughout the fabric surface of the roller sleeve, thus effectively cleaning this surface.

When the paint brush has been effectively cleaned, which may require only about 60 seconds, more or less, of active pumping in the manner described, the excess naphtha is readily removed from the brush by simply pressing the fingers against the plastic and against the bristles as the brush is removed from the envelope.

The use of a transparent plastic enevlope has the advantage that the bristles can be readily observed as the cleaning operation progresses. So also, the plastic material can readily be printed with directions for carrying out the cleaning process, so that the user can follow the directions in carrying out the process. The directions may thus indicate, for example, that half a cup of naphtha should be used for a three-inch brush in an envelope somewhat larger than such a brush and capable of containing the brush and this amount of solvent; and the printed directions may then indicate that the plastic should be squeezed to force the naphtha into the bristles with a pumping action; and that, when the cleaning operation is finished, the envelope and bristles should be squeezed as the brush is removed.

The present process has proven an effective paint brush cleaning process which avoids loss of cleaning solvent, which gives a rapid washing of the brush to remove paint therefrom, and which has marked advantages of cleanliness as compared with common paint brush cleaning processes.

I claim:

1. The process of cleaning paint applicators having filamentary paint-applying elements, after using the applicators for painting and before putting the applicators away, which comprises inserting the paint applicator in a flexible plastic envelope somewhat larger than the applicator and adapted at its upper end to close around the paint applicator handle, placing in the envelope an effective amount of paint removing liquid and, while holding the applicator handle in one hand with the upper end of the envelope closed around the applicator handle exerting pressure on the envelope repeatedly and at different places to effect a thorough pumping of the liquid into the spaces between the filamentary elements of the applicator.

2. The process of cleaning paint applicators having filamentary paint-applying elements, after using the applicators for painting and before putting the applicators away, which comprises inserting the paint applicator in a flexible plastic envelope somewhat larger than the applicator and adapted at its upper end to close around the paint applicator handle, placing in the envelope an effective amount of paint removing liquid and, while holding the applicator handle in one hand with the upper end of the envelope closed around the applicator handle, exerting pressure on the envelope repeatedly and at different places to effect a thorough pumping of the liquid into the spaces between the filamentary elements of the applicator, and removing the cleaned applicator from the envelope with pressure against the plastic envelope and filamentary elements to remove excess cleaning fluid from the applicator.

3. The process according to claim 1 in which the enclosure is a transparent envelope so that the progress of the paint removing operation can be observed by the operator.

4. The process according to claim 1, in which the paint applicators are brushes having bristles held by the brush handle.

5. The process according to claim 1 in which the paint applicators are roller painters having a pile fabric surface.

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