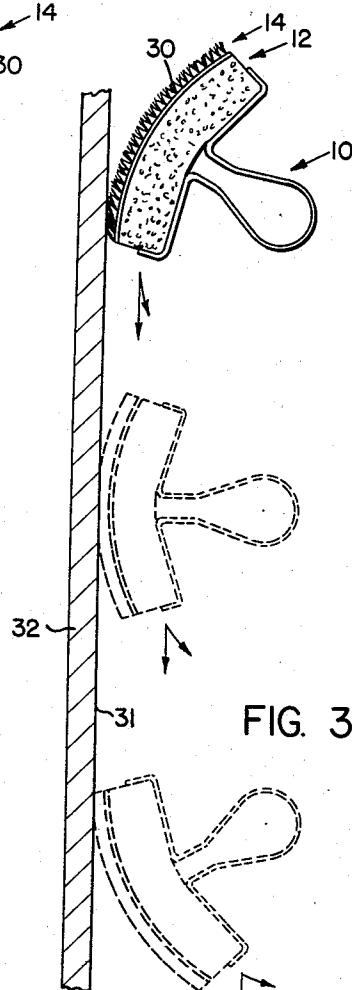
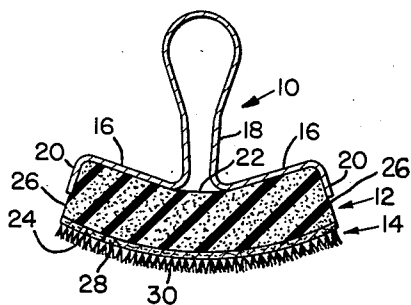
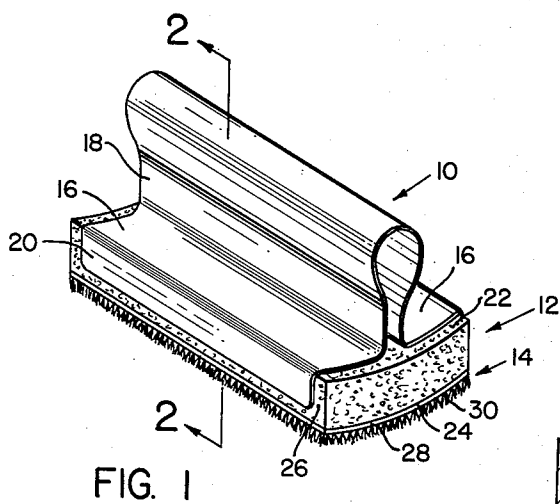


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PAINT APPLICATOR
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PAINT APPLICATOR

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1 Claim. (Cl. 15-210)

The present invention relates to an applicator, and more particularly to an improved paint applicator and the method of making it.

Heretofore, the conventional long-bristled paint brush was the most effective way to apply paint or varnish manually to both smooth and irregular surfaces. However, a considerable amount of training in the proper use of a paint brush and experience in handling a brush is necessary to obtain the desired results. For example, to prevent paint from dripping from the brush, especially when painting overhead or vertical surfaces, it is necessary to get just the proper amount of paint on the bristles. Also, to apply the coat of paint evenly, and to eliminate all the air bubbles, the skillful "brushing out" of the paint on the surface is required. Moreover, to eliminate any brush marks on the surface it is necessary to skillfully manipulate the brush so that among other things the pressure on the brush is gradually decreased towards the ends of the stroke so that the ends of the bristles slightly touch the surface there.

Even in the hands of an experienced painter, a paint brush is deficient in some respects. For example, when covering an uneven surface, excessive paint tends to collect in the recesses or indentations of the surface, and not enough paint covers the raised portions of the surface. Moreover, painting with a brush, even for a skilled painter, is time consuming. Furthermore, a paint brush is relatively heavy, which is tiring to the operator.

In recent years, lambswool covered rollers have become popular for painting large smooth surfaces, such as walls or ceilings. These rollers permit even a relatively inexperienced painter to cover a smooth surface quickly and easily. However, if the surface is a little rough or uneven, the roller is ineffective, and a brush is required to touch up the depressions in the surface which are missed by the roller. Moreover, the roller merely deposits a film of paint on the surface without brushing it into the pores which limits coverage and adherence of the paint to the surface. Also, the air bubbles in the paint can not be removed by applying the paint with a roller.

The purpose of the present invention is to provide an improved paint applicator which incorporates the advantages of both the long-bristled conventional paint brush and the lambswool roller, without having any of their inherent disadvantages. In furtherance thereof, one of the objects of the present invention is to provide an improved paint applicator which will permit even an inexperienced painter to apply paint or varnish evenly and properly both to smooth and irregular surfaces alike with a minimum of effort.

Another object of this invention is to provide an improved applicator of the character described which destroys any air bubbles which may be in the paint, and also brushes the paint into the pores of the surface, without the extensive "brushing out" operation required with a conventional paint brush.

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Another object of this invention is to provide an improved applicator of the character described which does not leave bristle or brush marks.

A further object of this invention is to provide an improved applicator of the character described which will not drip paint or varnish when painting.

A further object of this invention is to provide an improved applicator of the character described which requires less time and motion than conventional paint applicators to cover both a rough or smooth surface.

A still further object of this invention is to provide an improved process for making a paint applicator of the character described.

A still further object of this invention is to provide an improved applicator of the character described which is lighter in weight, easier to handle, and less tiring to use than conventional applicators.

Other objects of this invention will become apparent from the specification, the drawing, and the appended claim.

In the drawing:

FIG. 1 is a view in perspective of an applicator constructed according to one embodiment of the invention;

FIG. 2 is a sectional view of the applicator taken on line 2-2 of FIG. 1 and looking in the direction of the arrows; and

FIG. 3 is a diagrammatic view showing the applicator at the beginning of a stroke in full lines, and in dotted lines at the middle, and at the end, respectively of a stroke when painting a surface, such as a wall.

In the embodiment of the invention illustrated in the drawing, the applicator has a working surface which comprises a piece of textile material that is characterized by a thick, soft pile of short, erect threads which are capable of holding an applicable quantity of liquid, such as paint. This textile material is preferably mohair, having the short hairs of the Angora goat positioned to project at right angles from a fabric backing material. These short, erect hairs of the Angora goat positioned to project at right imately one-eighth of an inch in length, and are close enough together so that a liquid such as paint or varnish will be retained between them.

The back of the mohair material is cemented to a compressible plastic block which is preferably made from a piece of soft, resilient foam plastic such as polyurethane. The glue or cement which fastens the mohair to the compressible plastic block is a type which is not affected by paint, water or solvents, and also provides an impervious coating between the mohair fabric and the plastic block, which prevents the paint from soaking into the plastic block during use. The foam plastic supplies to the short, erect fibers of the mohair a resiliency similar to the long bristles of a conventional paint brush.

The plastic block is cemented to the contiguous convexly curved surface of a metallic backing plate. Because of the curvature of the contacting surface of the backing plate, the operative surface of the mohair itself is convexly curved. A handle is attached to the backing plate for manipulating the applicator.

Referring in detail to the drawing by numerals of reference, the applicator is made up of a combined sheet metal backing plate and handle generally referred to at 10, a compressible plastic cushion or block generally referred to at 12, and a piece of mohair generally referred to at 14.

The member 10 is preferably stamped from a single blank of sheet metal, and bent into the shape of a T having two laterally-extending portions 16 and a looped portion 18. The portions 16 form the backing plate and the loop 18 forms the manipulating portion or handle. The handle 18 is shaped so that the painter can grip it with all his fingers. It is much less tiring to hold and manipulate, therefore, than the handle of the ordinary paint brush. The portions 16 of the backing plate are bent to form a convexly curved undersurface. The lateral edges of the branches 16 are bent over to provide marginal flanges 20.

The block 12 is generally rectangular in configuration and has an upper surface 22, an undersurface 24 parallel with the upper surface, and sides 26. Attached to the convexly curved undersurface of the block 12 is a piece of mohair 14 which comprises a textile backing portion 28 and a thick pile of short, erect threads 30.

The mohair material 14 is first wetted with water, and then cement is applied to the textile backing of this wet material. This wetting of the material insures that the cement which fastens the mohair material 14 to the convex surface 24 of the block 12 runs into all the interstices of the material 28 to provide an impervious coating. Moreover, applying the glue to the wet mohair backing causes the material 28 to better adhere to the surface 24 of the block. Furthermore, this wetting operation decreases the odors which accompany the application of the cement. After the mohair 14 has dried on the surface 24 of the compressible plastic block 12, the block is cemented on its upper side 22 to the backing plate portions 16 of the member 10. This bends the block 12 so that the applying surface 30 of the mohair is convexly curved. The layer of cement between the mohair backing 28 and the surface 24 of the block 12 is impervious to liquid when it is dry, thus preventing any of the paint from being absorbed by the block 12 through the mohair material.

To use the paint applicator, a small quantity of paint is first poured onto any smooth flat surface such as cardboard, a pan such as used with roller applicators, etc. and the applicator is dipped into the paint deep enough to fill the spaces between the mohair threads 30 only.

To apply paint on a surface 31 such as that of a wall 32 (FIG. 3), the applicator is first positioned against the surface as shown in its full line position in FIG. 3. The applicator is then swung downwardly by merely swinging the arm naturally downwardly in one direction, so that the applicator assumes successively the dotted line positions shown in this figure. This stroke of the applicator applies the paint evenly on the surface 31 without the necessity of brushing out the paint and without having to eliminate any brush marks. In painting downwardly as shown in FIG. 3 any excess paint is confined at all times between the portion of the applicator which is in contact with the wall and the following portion of the applicator. Since the curved surface of the applicator has theoretically line contact only with the wall, this means that the excess is trapped between the line of contact and the curved portion of the applicator above the line of contact. This prevents dripping and prevents the paint from running down the wall, and utilizes the paint to maximum, economical degree.

It is apparent, that during this motion of the convexly curved surface of the applicator across this wall surface, a portion of the fibers 30 are depositing paint thereon while another portion of the fibers on the convex surface are practically perpendicular to the surface thus giving it a brushing out action similar to a conventional brush. It has been found in actual practice that the applicator herein spreads the paint further in less time and with less effort and with better results than the conventional paint brush. For example, in painting rough surfaces such as striated shingles, the surface of the shingle can be covered properly with one stroke of the applicator instead of requiring many back and forth strokes as would

be needed with an ordinary paint brush. In covering any surface having grooves or indentations, the compressible cushion 12 permits the fibers to enter the grooves or indentations in the proper position to apply paint thereto, as contrasted with the action of a conventional paint brush whose bristles merely slide over the top of the groove and deposit excessive paint therein.

The applicator of the present invention also gives better coverage than an ordinary paint brush because it flattens out the pigments by the pressure of its applying-wiping action. The paint is not merely laid on.

This applicator works equally well with both regular oil base and water base paints. In using the applicator with the latex water base paints, the paint may be applied even though it is replete with air bubbles, inasmuch as the fibers of the applicator are so close together as to break up these bubbles during use of the applicator. The applicator herein described uses less paint than a conventional paint brush in that it applies practically all of the paint that is held between the fibers as contrasted with a conventional paint brush. In a conventional paint brush a portion of the paint is always retained near the base of the bristles.

Furthermore, the surface area of the mohair for an applicator of a particular width can be made much larger, than is practical with a conventional paint brush, because mohair of a given area is light as compared with the weight and mass of the bristles of a conventional paint brush. The conventional paint brush is definitely limited as to its applicative area because it soon becomes too heavy and unwieldy for anything but professional use. In an applicator made according to the present invention, the quantity of paint stored in the applicator is retained over a large surface area which renders it practically dripless.

Thus, I have provided an improved paint applicator wherein the convexly curved working surface of the mohair material permits the operator to apply paint properly and easily during the natural swing of the arm with one stroke. This curved working surface also prevents excessive paint from dripping during painting, assists in removing the air bubbles from latex paints, and spreads the paint further and with less effort than conventional applicators.

While the invention has been described in connection with a specific embodiment thereof, it will be understood that it is capable of further modification, and this application is intended to cover any variations, uses, or adaptations of the invention following, in general, the principles of the invention and including such departures from the present disclosure as come within known or customary practice in the art to which the invention pertains and as may be applied to the essential features hereinbefore set forth, and as fall within the scope of the invention or the limits of the appended claim.

Having thus described my invention, what I claim is:

An applicator for applying a liquid such as paint to a surface in a swinging back and forth stroke, comprising a one-piece sheet of flexible metal having a handle formed integral therewith by bending up the sheet between its opposite lateral marginal side edges, said sheet being shaped laterally outwardly from opposite sides of said handle to have an arcuately curved convex lower surface which terminates in spaced, marginal flanges that depend downwardly from and are transverse to said convex surface, said handle being positioned to extend in the direction of the axis of said lower surface, a generally rectangular block of compressible, resilient plastic material and of overall uniform thickness but of greater thickness than the depth of said flanges having its upper side cemented between said flanges directly to the convex lower surface of said backing plate so that the lower surface of said block is convexly curved, and a piece of mohair having the upper face thereof cemented by a layer of non-absorbent cement to the convexly curved lower sur-

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face of said block, said piece of mohair being substantially coextensive with said block and being of substantially uniform thickness throughout and having on the lower face thereof a pile of short, erect threads for holding a quantity of the liquid.

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