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W. A. MATTIE
PAINT APPLICATOR

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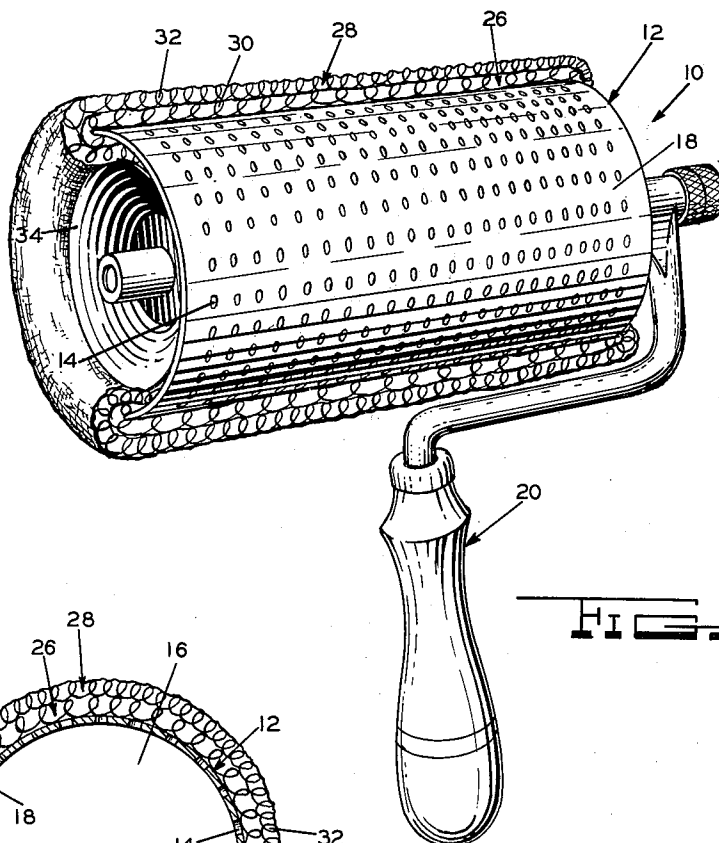


FIG. 1

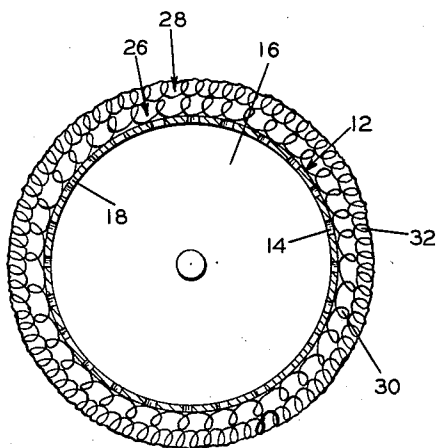


FIG. 2

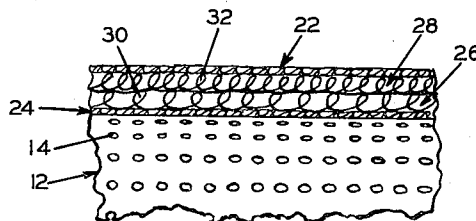


FIG. 4

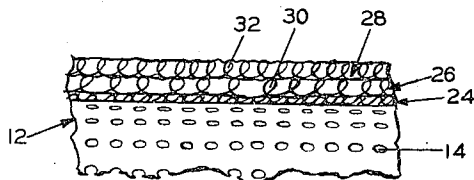


FIG. 3

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2,584,724

PAINT APPLICATOR

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Application September 10, 1949, Serial No. 114,964

11 Claims. (Cl. 15—132.5)

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This invention relates to painting and more particularly to a roller paint applicator.

Broadly the invention comprehends the provision of a self-containing roller paint applicator utilizing a variety of covers or sleeves in different arrangements thereon to accommodate paints of different consistency for predetermined application.

Although several roller type of paint applicators have been developed, none has utilized covers or sleeves of varying weight, coarseness and/or in specific arrangement to permit the use of thick, thin or very thin paints with equal success such as the present development provides.

An object of the invention is the provision of a roller paint applier adapted to carry its own paint supply having sleeves or covers of predetermined texture arranged thereon.

Another object of the invention is the provision of a paint contained roller paint applicator having sleeves of different texture arranged in proper sequence thereon for use with paint of known consistency or viscosity.

Another object of the invention is the provision of a roller type paint applier adapted to contain its own paint and provide for its application through openings in its peripheral surface having sleeves of various coarseness arranged one upon another over the roller proper permitting of the use of paints of varying viscosity to accomplish a desired paint coating.

A further object of the invention is the provision of a roller paint applier adapted to carry its own paint supply and apply same to a surface to be painted upon pressing the roller into rolling engagement with the surface and adapted to have an assembly of a plurality of sleeves in several known arrangements mounted externally thereon into which the paint is absorbed and by which means the paint is properly applied.

A yet further object of the invention is the provision of a self-containing roller paint applicator that can provide for the application of varying finishes to a surface to be painted through the utilization of paint applying members arranged on the paint roller.

Other objects and advantages of the invention will appear from the following description taken in connection with the drawings, forming a part of the specification and in which:

Fig. 1 is a partially cross-sectional isometric view of a paint roller having a predetermined assembly of sleeves arranged thereon;

Fig. 2 is a cross-sectional view of the cylinder and sleeve assembly shown by Fig. 1 disclosing

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the paint containing chamber of the cylinder;

Fig. 3 is a fragmentary cross-sectional view of the roller paint applier cylinder of Fig. 1 with a modified arrangement of sleeves thereon; and

Fig. 4 is a fragmentary cross-sectional view of the roller paint applier cylinder of Fig. 1 with a further modified arrangement of sleeves thereon.

The present development is predicated upon the provision of a plurality of sleeves of varying texture for use in predetermined arrangements and number upon a paint carrying roller paint applier so as to achieve desired paint applications in the use of paint of thick, thin or very thin consistency.

It has been discovered that through the utilization of four sleeves, two of the sleeves being of heavy wool texture, one sleeve being of finer weave than the other with their loop or coarse side out and two thin cloth sleeves of like, even texture and fine weave three permissible assembly arrangements are possible for use with thick, thin and very thin paints.

In the use of thick paints best results can be obtained through the assembly of the looser weave heavy wool sleeve upon the perforated peripheral surface of the paint roller cylinder, loop or coarse side out and the other lighter weave heavy wool sleeve, upon the first heavy sleeve, with its coarse or loop side out. This arrangement of the sleeves permits of the use of thick paints for heavy bodied undercoats or "one coat" flat.

For light bodied undercoats in the use of thin paints to provide a coating such as "two coat" flat a thin sleeve is used with the preceding arrangements for thick paint with the sleeve arranged on the peripheral surface of the cylinder prior to the heavy sleeves being slipped thereover. This sleeve arrangement permits if satisfactory or desired a slight stippled finish.

In addition to the arrangement of sleeves for use with thin paints it is only necessary to slip another thin sleeve thereover if very thin paints such as semi-gloss, high gloss, synthetic enamels or the like are used. With the thin sleeve on the exterior of the other sleeves a very smooth even coat is achieved.

Referring to the drawing for more specific details of the invention 10 represents generally a roller paint applier of the type more fully described in co-pending application Serial No. 76,832 filed February 16, 1949 assigned to the same assignee as this application comprising basically a hollow cylinder assembly 12 having a

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plurality of radial perforations or openings 14 in the peripheral surface providing communication between a paint carrying chamber 16 internally of the cylinder and the outer surface or periphery 18. The cylinder assembly 12 is supported for rotation upon a handle assembly 20 permitting of the easy manipulation of the paint applicator in the paint rolling operation thereof across a surface to be painted. The cylinder has provided in one end thereof paint filling openings, not shown, permitting of the filling of chamber 16 as required.

The cylinder assembly 12 is adapted to carry in embracing relation upon the outer peripheral surface 18 thereof a plurality of cloth material or the like covers or sleeves 22, 24, 26 and 28 the number or arrangement of sleeves depending upon the thickness and finish of painted surface desired.

The sleeves 22 and 24 are similar in texture and relatively thin weave whereas sleeves 26 and 28 are relatively heavy weave sleeves, sleeve 26 being of finer weave than sleeve 28.

The sleeves are adapted to be arranged on the cylinder assembly in various manners for the purpose of providing a variety of feeds and finishes dependent on the viscosity or grade of paint used, the proper sequence of arrangement being essential to the satisfactory utilization of the paint applicator.

When it is desired to provide a heavy bodied undercoat, or thick paint such as "one coat" flat, sleeve 26 is initially assembled upon the cylinder assembly next to the peripheral surface 18 thereof with the loop or coarse side 30 of the sleeve out, and sleeve 28 upon the sleeve 26 with its loop or coarse side 32 out. Neither of the relatively thin sleeves 22 or 24 is to be used in this assembly. This assembly is shown by Fig. 1 wherein the end extremities of the sleeves 26 and 28 are firmly clamped upon the ends of the cylinder assembly 12 by retaining cup members 34.

For light bodied undercoats, or thin paint such as "two coat" flat, either of the thin sleeves 22 or 24 is initially assembled upon the cylinder assembly next to the peripheral surface 18 thereof, sleeve 26 with its loop or coarse side 30 out is next placed upon the thin sleeve and then sleeve 28 with its loop or coarse side 32 out is assembled upon sleeve 26. This arrangement as shown by Fig. 3 is satisfactory for final finish if a slight stipple finish is desired.

For very smooth even coats wherein very thin paints such as semi-gloss, high gloss, synthetic enamels or the like are used it is only necessary additionally to assemble the other of the thin sleeves either 22 or 24 upon the assembly of Fig. 3, dependent upon which of the sleeves 22 or 24 is placed next to the peripheral surface 18 of the cylinder assembly. This full assembly arrangement is illustrated by Fig. 4.

In the general use of any of the assemblies shown by Figs. 1, 3 and 4, it is essentially necessary that the sleeves be placed in proper sequence and with the coarse or loop side of sleeves 26 and 28 outward radially disposed to the cylinder assembly and that the sleeves are stretched lengthwise so as to overhang the ends of cylinder a predetermined amount. The cylinder assembly with sleeves in place is next mounted upon the handle assembly and the sleeve ends are tucked in upon the ends of the cylinder assembly and held in place therein by retaining cup members 34.

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The full assembly above defined is next utilized for the purpose of priming the sleeves by the method of rolling the roller paint applicator per se through a quantity of paint to be applied, spread on a thick newspaper pad or the like until the paint is absorbed to saturation point of the sleeve and well distributed thereover.

The retaining cup member 34 on the opposite end of the cylinder assembly is next removed permitting the filling of chamber 16 with the paint to be applied and then replaced with the ends of the sleeves tucked in upon the end of the cylinder assembly to effect a sealing of the paint within the cylinder chamber. The paint applicator should then be rolled over the newspaper pad previously used in the priming operation to permit of an even distribution of the paint and the applicator is then ready for use.

During the use of the applicator, requirement for refilling will become readily noticeable as more pressure will be required and for best results an immediate refilling should be made so as to avoid splotchy finish and a possible clogging of the sleeves.

After the completion of use of the paint applicator it is advisable to remove the sleeves and wash well with any of several well known cleaning solvents unless the roller is to be used the following day in which case it is not necessary to remove or clean the sleeves and cylinder but merely to wrap the sleeve as assembled in the cylinder with soaked rags or other suitable material making sure to exclude air. The handle assembly and retaining cup members should be removed preparatory to the wrapping of the cylinder assembly and sleeves.

In the use of the roller the user can readily determine depending upon consistency of the paint used and finish desired whether or not it is necessary to add or remove the outermost thin sleeve, wherein it may require the addition of the outer thin sleeve if the paint is thin and flows fast or the removal of the sleeve if the paint is thick and flows too slowly. The proper and easy use of the roller and the sleeve assemblies for the desired paint finish will be readily learned after an initial use of the roller in a trial paint application.

Although the utilization of the sleeves 22, 24, 26 and 28 is disclosed in connection with a specific form of roller mechanism as more fully defined in co-pending application, Serial No. 76,832 filed February 16, 1949, the invention is not deemed to be necessarily limited thereto and accordingly the instant invention is to be limited only as defined by the appended claims.

What I claim is:

1. A roller paint applicator of the paint self-containing cylinder-type having a plurality of radial perforations in its surface having a pair of thin porous interlaced resilient material sleeves and two heavy porous interlaced resilient material sleeves, each having an external napped surface, arranged in telescoping relation to one another upon the external periphery of the cylinder with the heavy sleeves sandwiched between the thin sleeves.

2. A roller paint applicator of the paint self-containing cylinder-type having a plurality of radial perforations in its surface having two heavy porous resilient material sleeves of different texture, each having a napped surface, arranged on the external periphery of the cylinder in telescoping relation to one another with the napped surfaces disposed radially outward.

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3. A roller paint applier of the paint self-containing cylinder type having a plurality of radial perforations in its peripheral surface, having two heavy porous interlaced sleeves of different texture, each having a loop napped surface, arranged on the peripheral surface of the cylinder in telescoping relation to one another with their loop napped surfaces disposed radially outward.

4. A roller paint applier of the paint self-containing cylinder type having a plurality of radial perforations in its peripheral surface, having a thin sleeve of porous interlaced resilient material fitted over the peripheral surface of the cylinder and two heavy sleeves of porous interlaced resilient material but slightly different texture, each having an external napped surface, arranged upon the thin sleeve in telescoping relations to each other and the thin sleeve, with the heavy sleeve of finer texture on the outside.

5. A roller paint applier of the paint self-containing cylinder type having a plurality of radial perforations in its peripheral surface, having a thin sleeve of porous resilient material fitted over the peripheral surface of the cylinder, two heavy sleeves of porous interlaced resilient material but slightly different texture, each having an external napped surface, arranged upon the thin sleeve in telescoping relation to each other and the thin sleeve, with the heavy sleeve of finer texture on the outside and a thin sleeve of porous interlaced resilient material similar to the other thin sleeve fitted in telescoping relation upon the finer textured heavy sleeve.

6. A roller paint applier of the paint self-containing cylinder type having a plurality of radial perforations in its peripheral surface, having two heavy porous interlaced wool sleeves of different texture, each having a loop napped surface, arranged on the peripheral surface of the cylinder in telescoping relation to one another and the cylinder with the finer texture sleeve sandwiched between the cylinder and coarser texture sleeve and with the loop napped surfaces disposed radially outward.

7. A roller paint applier of the paint self-containing cylinder type having a plurality of radial perforations in its peripheral surface, having a thin porous interlaced cloth sleeve fitted in telescoping relation on the peripheral surface of the cylinder, and two heavy porous interlaced wool sleeves of different texture, each having a loop napped surface, arranged on the thin sleeve in telescoping relation to one another and the thin sleeve with the coarser texture sleeve on the outside and with the loop napped surfaces disposed radially outward.

8. A roller paint applier of the paint self-containing cylinder type having a plurality of radial perforations in its peripheral surface, having a

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thin porous interlaced cloth sleeve fitted in telescoping relation on the peripheral surface of the cylinder, two heavy porous interlaced sleeves of different texture, each having a loop napped surface, arranged on the thin sleeve in telescoping relation to one another and the thin sleeve with the coarser texture sleeve on the outside and with the loop napped surfaces disposed radially outward, and a thin porous interlaced cloth sleeve similar to the other thin sleeve fitted in telescoping relation to the other sleeves upon the coarser texture sleeve.

9. A roller paint applicator of the paint self-containing cylinder type having a plurality of radial perforations in its peripheral surface having a thin porous interlaced cloth sleeve fitted in telescoping relation on the peripheral surface of the cylinder and two heavy porous interlaced cloth sleeves, each having a loop napped surface, arranged on the thin sleeve in telescoping relation to one another and the thin sleeve with the loop napped surfaces thereof disposed radially outward.

10. A roller paint applicator of the paint self-containing cylinder type having a plurality of radial perforations in its peripheral surface having two heavy porous interlaced cloth sleeves, each having a loop napped surface arranged on the peripheral surface of the cylinder in telescoping relation to one another and the cylinder with the loop napped surfaces thereof disposed radially outward and a thin porous interlaced cloth sleeve fitted in telescoping relation upon the heavy sleeves.

11. A roller paint applicator of the paint self-containing cylinder type having a plurality of radial perforations in its peripheral surface, having two heavy porous interlaced cloth sleeves of different texture, each having a loop napped surface, arranged on the peripheral surface of the cylinder in telescoping relation to one another and the cylinder with the coarser texture sleeve on the outside and the loop napped surfaces of both sleeves disposed radially outward and a thin porous interlaced cloth sleeve fitted in telescoping relation upon the heavy sleeves.

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