April 21, 1959 W. W. MARTIN 2,882,542

ROLLER-TYPE PAINT APPLICATOR

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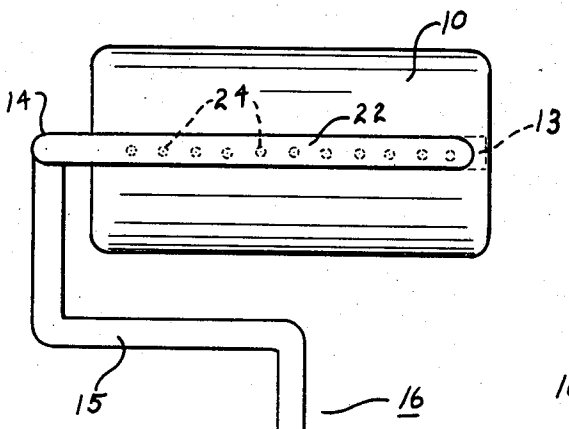


FIG. 1

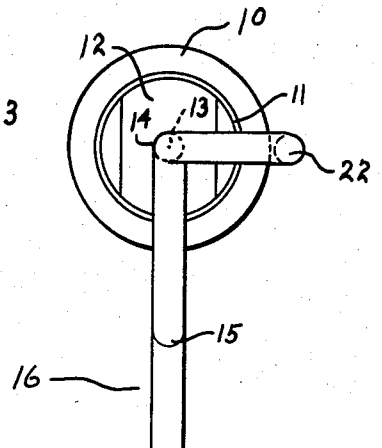
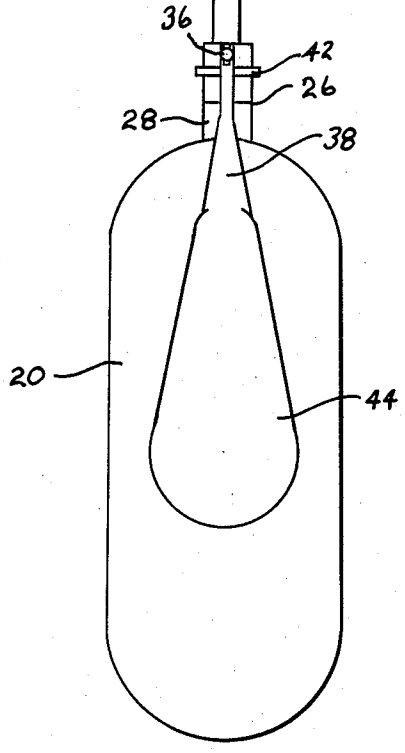
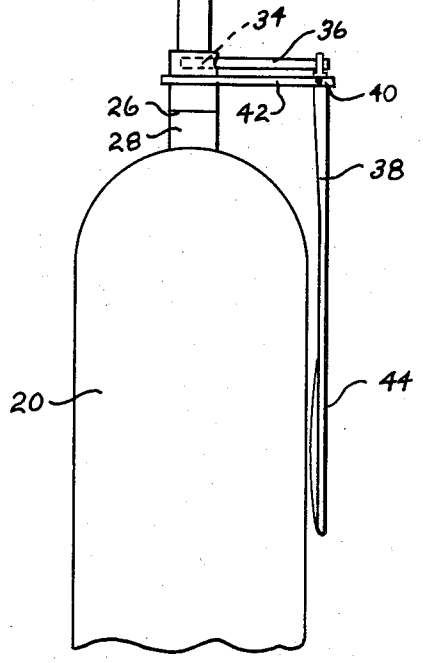


FIG. 2





INVENTOR.

WARREN W. MARTIN

BY

M. A. Hobbs

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ROLLER-TYPE PAINT APPLICATOR

Warren W. Martin, Mishawaka, Ind.

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3 Claims. (Cl. 15—132.5)

The present invention relates to painting devices and more particularly to painting devices having a roller applicator.

In using the conventional roller paint applicator, the painter dips or rolls the roller in paint in a relatively flat pan or trough-like container, usually rolling the roller a few times in the edge of the paint and on the adjacent container surface until the roller is coated and then rolls the roller on the wall or other surface to be painted. In painting hard to reach places, trim and corners where only a small roller can be used, a considerable part of the time required to complete the job is consumed in the frequent and often inconvenient roller recoating or loading operations. An attempt has been made to overcome this difficulty by making the hollow interior of the roller a paint reservoir and feeding the paint through holes to the roller surface. This type of roller applicator has certain inherent disadvantages which prevent it from being satisfactory in a number of applications. For example, when the roller reservoir is loaded, it is unbalanced and heavy and often difficult to use in hard to reach places. Also, feeding of the paint through the roller is uncontrolled and frequently non-uniform. It is therefore one of the principal objects of the present invention to provide a roller type paint applicator which avoids frequent reloading operations, without sacrificing the advantages of the conventional externally coated roller applicators.

Another object of the present invention is to provide a roller type paint applicator having a paint reservoir incorporated therein, which permits controlled delivery of paint to the surface of the roller.

Another object of the invention is to provide a roller type paint applicator which can easily be used in a balanced position in the hand of the painter, thus preventing undue fatigue by the painter during painting.

Still another object of the invention is to provide a roller type applicator for paint and like materials, which can be attached to the container in which the material is delivered and used in connection therewith for painting, without first removing the material from the container.

A further object of the invention is to provide a roller type paint applicator having a reservoir which can readily be refilled without mess or the use of any additional tool or instrument.

Additional objects and advantages will become apparent from the following description read in conjunction with the accompanying drawings, wherein:

Figure 1 is a plan view of a roller-type paint applicator embodying my invention; and

Figure 2 is a side view of the paint applicator shown in Figure 1.

Referring more specifically to the drawings, numeral 10 designates a roller which, for the purpose of illustration, may be either lamb's wool or mohair secured onto a plastic or metal cylinder 11 mounted on a rotatable hub 12. The hub is supported on a shaft or axle 13

joined at numeral 14 to the forward end of a tubular stem 15 and a paint distributor tube 22 which is closed thereon with the roller as the latter is rolled over the surface being painted. The paint is supplied to the roller surface from a reservoir bulb or tube 20 forming the hand grip of handle 16, through the hollow interior of stem 15 and a paint distributor tube 22 which is closed at one end and connected at the other end to the stem 15. Spaced holes 24 are provided in the tube on the side adjacent the roller through which the paint is discharged onto the roller surface. The distributor tube is preferably not in contact with the roller but is normally positioned as closely as possible without actually contacting the surface. It is also preferable to space the end holes inwardly from the ends of the roller to eliminate any tendency for the paint to run off the painting surface onto the roller ends before it can be used by the painter.

The paint reservoir 20 is secured by any suitable means such as screw threads to the lower end of stem 15 at 26 and is constructed of flexible plastic, rubber or rubber-like material having sufficient resiliently to return to its original shape after being pressed or squeezed out of shape. The reservoir bulb is filled with paint by disconnecting it from stem 15, placing neck 28 under the surface of the paint in a container, squeezing and then releasing the bulb. As the bulb expands in returning to its original shape it sucks the paint into its hollow interior. The bulb is then reattached to the stem and is ready for operation. As paint is needed on the roller, the painter merely squeezes the bulb, forcing paint through stem 15, and distributor tube 22 and outwardly through holes 24 onto the surface of the roller as the roller is rotated on the surface being painted. The paint is evenly distributed over the surface of the roller by lightly rolling the roller at various angles over said surface. The painter then rolls the paint onto the surface with the roller in the same manner as with conventional roller type applicators.

Since it is sometimes desirable or necessary for the painter to press the roller firmly against the surface being painted, a valve 34 is preferably placed in the stem 15 or neck 28. The valve shown consists of a pin 36 of a diameter about the size of the paint passage through the stem seated in a hole intersecting said passage. The pin is moved inwardly or outwardly to close or open the paint passage by a lever 38 pivoted on a pin 40 in a bracket 42 supported by stem 15 adjacent the valve. The lever extends along the bulb and has a flared portion 44 which forms a handle or button which can be used by the painter to squeeze the bulb in applying paint to the roller. As the lever is pushed inwardly it compresses the bulb and simultaneously lifts pin 36 to open valve 34. When the lever is released, the resiliency of the bulb returns it to its original shape and returns the lever to its closed-valve position. If desired, a spring can be used to assist the bulb in returning the valve to its closed position; however, the bulb is capable of performing the function satisfactorily.

The valve just described is also preferably included in the device to prevent highly fluid paint from flowing from the reservoir when the roller is lowered below the level of the reservoir.

Various changes may be made in the foregoing device without departing from the scope of the invention.

I claim:

1. A painting device, comprising a roller, an axle for said roller extending beyond one end thereof, a hollow tubular member joined to the projecting end of said axle and extending from the end of said roller to the center along the outside of the roller and then radially from the roller, a compressible elongated reservoir of flexible material mounted on the end of said radially extending

portion of said tubular member and having a hole in one end connecting the interior of said reservoir with the interior of said tubular member, said compressible reservoir forming the handle for the device, a valve in said tubular member adjacent to said reservoir, a lever for operating said valve extending alongside said reservoir for simultaneously compressing said reservoir and opening said valve, and a tubular means with a plurality of holes therein facing said roller extending longitudinally with the roller and being connected to said tubular member at the end of said roller.

2. A painting device, comprising a roller, an axle for said roller extending beyond one end thereof, a hollow tubular member joined to the projecting end of said axle and extending from the end of said roller to the center along the outside of the roller and then radially from the roller, a bulb-like reservoir of flexible material mounted on the end of said radially extending portion of said tubular member and having a hole in one end connecting the interior of said reservoir with the interior of said tubular member, said compressible reservoir forming the handle for the device, a valve in said tubular member, a lever for operating said valve extending alongside said reservoir for simultaneously compressing said reservoir and opening said valve, and a tubular means with a plurality of holes therein facing said roller extending longitudinally with the roller and being connected to said tubular member at the end of said roller.

3. A painting device comprising a roller, a handle for said roller having a hollow tubular stem, a bulb-like reservoir of flexible material forming the hand grip of said handle compressible throughout substantially its entire length and connected to one end of said tubular stem, a tubular means extending axially along the surface of said roller and having a plurality of holes therein facing said roller, said means being connected to the hollow interior of said stem, a valve in said stem, and a lever for operating said valve extending alongside said reservoir and being adapted to be depressed when said reservoir is compressed.

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