June 8, 1954 W. L. SIMMONS 2,680,318

PAINT APPLICATOR OF THE ROLLER TYPE

Filed Aug. 16, 1951

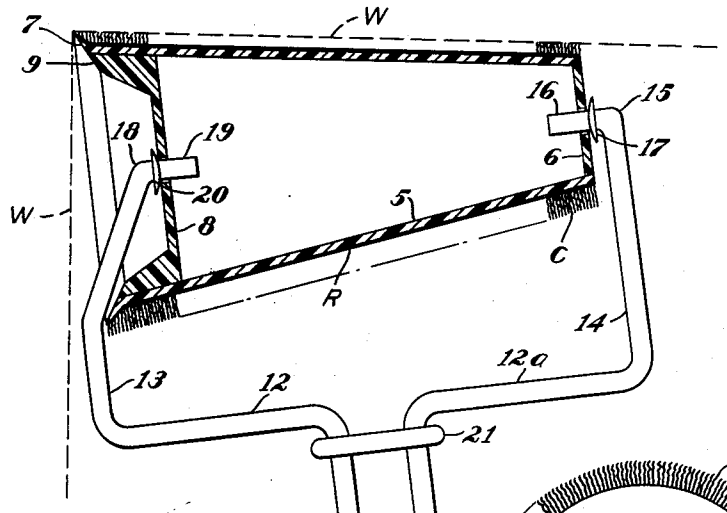


Fig. 1

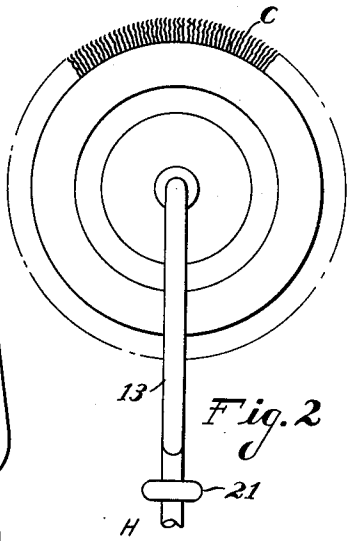


Fig. 2

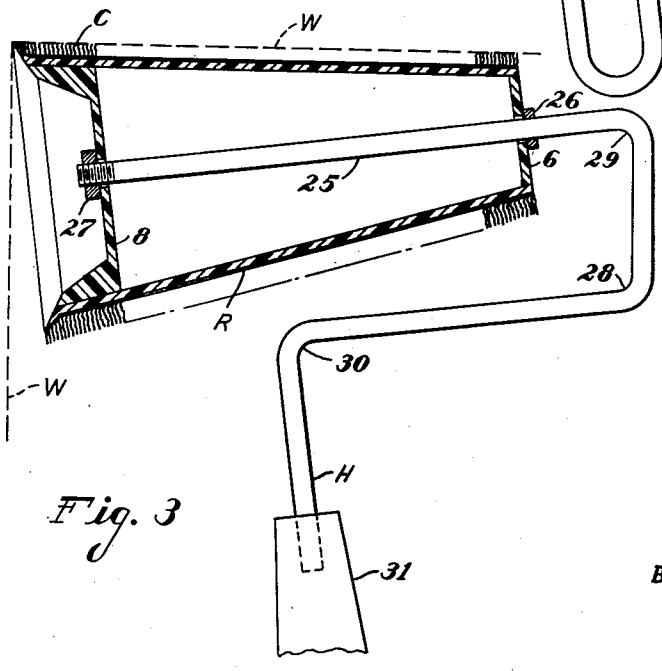


Fig. 3

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Patented June 8, 1954

2,680,318

UNITED STATES PATENT OFFICE

2,680,318

PAINT APPLICATOR OF THE ROLLER TYPE

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Application August 16, 1951, Serial No. 242,070

3 Claims. (Cl. 41—5.5)

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This invention relates to a roller type applicator for paint or the like.

When conventional applicators of the roller type are used in painting the side walls or ceiling of a room, it is the current practice to use a brush to "cut-in" the paint at the several corners or intersecting surfaces of a room. This operation requires the brush painting of a strip on one or both intersecting surfaces along the line of intersection at the corner, after which the remainder of the surface or surfaces are painted by using a cylindrical roller type applicator. Since paint applied by a brush has a different grain from that applied by an applicator, a given surface thus painted does not have a uniform appearance throughout. Furthermore many persons unaccustomed to the use of a paint brush, find it difficult to draw the brush with a straight stroke so that the resulting marks of the bristles in the painted strip appear as wavy lines. Although various substitutes for brushes have been proposed for this purpose, none of them have been widely acceptable.

The main feature of the present invention relates to a roller type applicator which is especially adapted for painting the marginal edges of room surfaces and the like whereby the need for brush painting is entirely obviated.

Other features and advantages of the invention will appear from the detailed description and claims when taken with the drawings in which:

Fig. 1 is a front view of the applicator of the present invention with the roller thereof shown in section and in position to paint a surface at a corner of a room, two walls of which are indicated by broken lines;

Fig. 2 is a view of the left end of the present applicator, the handle thereof being broken away; and

Fig. 3 illustrates a modified form of the invention, a portion of the handle thereof being broken away.

In the drawings, R generally designates a frusto-conical roller of the applicator of the present invention and H generally designating a handle on which the roller is mounted for rotation about its principal axis, while it is being manipulated in painting a surface.

The roller R in its preferred form comprises an open-ended, hollow frusto-conical shell 5 made of any suitable material, but as herein illustrated it is preferably made of plastic material. This shell has its right end closed by a centrally apertured disc 6 of plastic material or the like adhesively secured therein in flush relation. The left

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end of the shell flares to a rim 7 the inner surface of which makes an angle of substantially 120 degrees with the inner surface of the shell. This rim tapers to a relatively sharp edge which projects outward from the main axis of the roller, a distance substantially greater than the adjacent outer surface of the shell. This sharp edge is adapted to follow the corner at the junction of the two wall surfaces W, W at least one of which is being painted. The left end of the shell is closed by a cup-shaped member 8 also made of plastic material or the like. The bottom of the cup, which is centrally apertured in axial alinement with aperture in disc 6, projects into the left end of the shell with the outside of the cup adhesively engaging a substantial portion of the margin of the inner surface of the shell. The outer edge 9 of the cup is beveled so that its beveled surface is substantially a continuation of the inner surface of the outwardly flaring shell rim 7.

The outer surface of the roller has twisted wool threads, a pile fabric, or sheepskin with the wool C thereon, adhesively fastened thereto.

While the shape and dimensions of the roller can be varied somewhat, the following dimensions have been found to be practical. The length of the conical roller is four inches, while the diameter of its base is two and one quarter inches and its small diameter is one inch. The rim 7 extends one eighth of an inch radially beyond the outer surface of the roller.

The handle H is made of a firm rod of metal bent at its mid-point to provide two spaced substantially parallel members 11 to be gripped by the painter. These members beyond their gripping region, are each formed into outwardly extending right angle portions 12 and 12a which in turn are bent at right angles to provide the legs 13 and 14 respectively. The right leg 14 has its end portion 15 bent inward at right angles to provide an axle 16 which is received in the central aperture in disc 6. A button or stop 17 secured to the axle 16 limits its entrance into the disc. The left leg 13 has its upper part 18 bent at substantially 120 degrees thereto with the extreme end of part 18 bent as an axle 19 to extend parallel to its related portion 12, and in alinement with axle 16. The fixed button 20 at the junction of axle 19 with part 18 serves to limit the amount of entrance of this axle into the aperture in the bottom of the cup 8. Thus the handle is effectively at right angles to the mid-point of the main axis of the roller. In the preferred arrangement all parts of the bent rod lie in a common plane, but the gripping members 11 of the rod can lie

in a plane intersecting the plane in which the remaining parts thereof extend, if desired. A wire loop 21, embraces the members 11 to hold the handle on the roller, with the parts in the relation shown in Fig. 1. When, however, the handle is to be removed from the roller, the loop 21 is slid off the handle so that the axles 16 and 19 can be sprung, from the ends of the roller.

In using the applicator, the rim 7 of the roller enters the corner of the intersecting wall surfaces W, W, which corner acts as a guide. The fibers of that part of the covering at the left end of the roller, in contact with the wall surface being painted, are compressed to the level of the rim 7 so that smearing of the adjacent wall surface is prevented. The handle H is effectively at right angles to the mid-point of the main axis of the roller, so that the roller can be guided accurately. It will be noted that the taper of the conical roller when against one wall surface cocks the opposite part of its rim away from the adjacent wall surface. This provides sufficient clearance for the left leg of the handle (Fig. 1) between the roller and the adjacent wall so that the adjacent part of the handle will not smear it.

In the modified form of the invention shown in Fig. 3, the roller R is identical in construction with that shown in Fig. 1. However, the handle H has been modified. This handle is formed from a single rod to provide a straight axle portion 25 which extends through the central apertures in the disc 6 and the cup 8. A fixed stop 26 on the right end of the axle and a nut 27 threaded on the left end thereof, determines the position of the roller on the axle. The portion of the rod beyond the right end of the axle is bent to provide two angular parts 28 and 29, the latter part being substantially parallel to the axle. At the left end of the part 29 which extends to the mid-point of the axis of the roller, the rod is bent downward at right angles to the mentioned axis, to provide a part 30. A hand grip 31 is provided at the lower end of part 30. The modified applicator is operated in substantially the same manner as that already described.

Although preferred forms of the applicator have been disclosed, it will be understood that there can be variations and other modifications thereof, within the scope of the appended claims, without departing from the spirit of the present invention.

What I claim is:

1. In a paint applicator, a frusto-conical roller having an integral rim at its larger end only and projecting radially beyond the outside surface of the roller, a covering of projecting fibers secured to the outside surface of said roller, and a handle comprising axle portions extending axially of the roller and on which the roller rotates, said handle also comprising a hand grip extending substantially perpendicular to the main axis of said roller.

2. In a paint applicator, a frusto-conical roller having an integral rim at its larger end only and projecting radially beyond the outside surface of the roller, a covering of projecting fibers secured to the outside surface of said roller, and a one-piece handle comprising an axle extending axially of the roller and on which the roller rotates, said handle also comprising a part extending substantially perpendicular to said axle and adapted to be gripped by a painter.

3. In a paint applicator, a roller in the form of a frusto-conical shell, the larger end of the shell extending outward radially thereof to provide an annular flange projecting beyond the outer surface of the shell, a cup-like member at the larger end of the shell to close the same, a member closing the other end of the shell, said members having apertures therein in alinement with the main axis of the shell, a covering of projecting fibers secured to the outside surface of said shell, and a handle comprising a hand grip and two supports extending therefrom and each provided with a part engaging one of said apertures, the support for the large end of the roller being bent inward at an obtuse angle in the region of said rim to extend into said cup.

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