

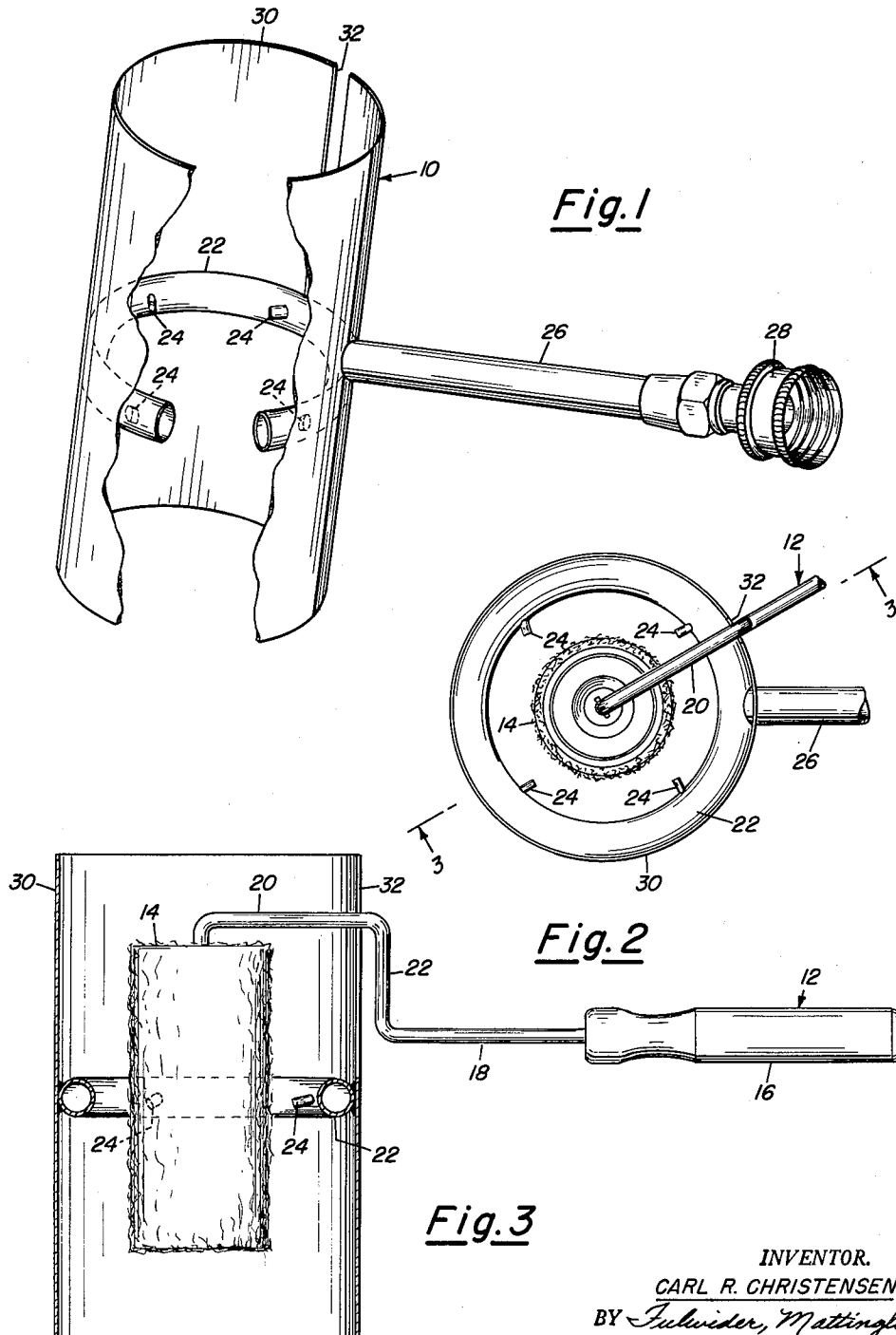
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CLEANER APPARATUS FOR A ROLLER TYPE PAINT APPLICATOR

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CLEANER APPARATUS FOR A ROLLER TYPE PAINT APPLICATOR

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The present invention relates to cleaner apparatus for a paint applicator of the roller type.

According to the present invention there is provided a cleaner apparatus which includes means for forming a fluid passage which defines an annular space within which the applicator roller is receivable. These means conveniently take the form of an annular tube which is provided with a plurality of circumferentially spaced nozzles or orifices. These orifices are tangentially directed so that the fluid is directed tangentially against the surface of the applicator roller, tending to spin or rotate it. The rapid spinning of the roller together with the cleansing effect of the fluid thoroughly flushes away any paint remaining on the roller. Water is most commonly employed as the solvent for cleaning those types of paints applied by a roller, and the present invention includes means for connecting the annular tube to a usual hose or faucet fitting, and water under pressure is thereby conveniently available for effecting the desired spinning of the roller during cleaning.

An axially extending shield is arranged about the annular tube to protect the user from splashed paint and water, and further directs the mixture of water and paint downwardly into a suitable drain or receptacle. The shield includes an axially extending slot at one end which is adapted to slidably receive the rod member of the usual paint applicator, whereby the applicator roller may be manually axially moved in the annular space between the orifices.

Actual use of the present apparatus has demonstrated that rapid and thorough cleaning of paint rollers is accomplished. The apparatus is inexpensive and simple to fabricate, and completely avoids any necessity for removing the roller from the paint applicator to clean it, and further avoids the necessity of providing a container or receptacle for immersing the roller.

Other objects and features of the present invention will be readily apparent to those skilled in the art from the following specification and appended drawings wherein is illustrated a preferred form of the invention, and in which:

Figure 1 is a perspective view of the cleaner apparatus of the present invention, a portion of the shield being broken away for clarity;

Figure 2 is a plan view of the apparatus of Figure 1; and

Figure 3 is a cross sectional view taken along line 3-3 of Figure 2.

Referring now to the drawings, there is illustrated a cleaner apparatus 10 which is particularly adapted for cleaning a paint applicator 12 of the type having an applicator roller 14, a handle 16, and a rod member 18 disposed therebetween. As is well known, roller 14 is rotatably carried by rod member 18, and rod member 18 is formed into an offset lateral portion 20, and an axially extending portion 22 to facilitate use of applicator 12. It will be apparent, of course, that various forms of

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paint applicators may be cleaned through the use of apparatus 10, and the invention should not be limited to the particular form of applicator 12 which is illustrated.

Apparatus 10 comprises, generally, means forming an annular fluid passage which bounds a space within or through which roller 14 is receivable or disposable. This means conveniently takes the form of an annular tube 22 which is provided with a plurality of circumferentially spaced, tangentially directed nozzles or orifices 24. Orifices 24 are directed tangentially in order that fluid or water emanating therefrom may impinge tangentially against the surface of roller 14, thereby spinning it at a rate which is roughly dependent upon the fluid or water pressure available. In addition, orifices 24 are preferably also directed downwardly so as to direct the spray of fluid or water away from the user.

A pipe or tube 26 is connected at one end in fluid communication with tube 22, and at its other end is provided with a faucet or hose fitting 28 whereby it is adapted to serve as a means for connecting tube 22 to a source of fluid under pressure. Fitting 28 may easily be connected to a water hose or the like so that water under pressure is directed through orifices 24 downwardly and tangentially against the surface of roller 14. Tube 26 forms a convenient handle for the user of apparatus 10. As will be obvious, a valve (not shown) may be incorporated in tube 26 to permit the water to be quickly shut off or turned on.

A cylindrical, axially extending shield 30 closely receives tube 22, and tube 22 is secured to the inner wall of shield 30 by any suitable means, such as by brazing. An opening is provided in the wall of shield 30 to permit entry of tube 26 for connection to tube 22.

Shield 30 is open at both ends, and includes a slot 32 which extends axially from the upper edge of shield 30 downwardly to approximately the midportion of cylinder 30. Slot 32, as best seen in Figure 3, is adapted to slidably receive the transverse portion of rod member 18 to permit the full axial length of roller 14 to be moved axially through the annular space between orifices 24 so that cleaning water can be directed against the entire surface of roller 14.

In operation of apparatus 10, the applicator 12 to be cleaned is grasped by the handle 16 in one hand, the water is turned on, and tube 26 is grasped in the other hand. Next, roller 14 is inserted within shield 30 with rod member 18 disposed through slot 32 to permit roller 14 to be manually axially moved through the spray area created by orifices 24. The action of the tangentially directed streams of water tends to rotate roller 14 at a fairly high rate of speed, spinning off the mixture of water and paint against the inner walls of shield 30 from whence it drains downwardly into any suitable drain or receptacle (not shown). It is noted that by reason of the substantially uniform circumferential spacing of orifices 24, roller 14 is maintained in the center of the annular space between orifices 24. That is, the operator of apparatus 10 does not need to exert any effort to keep roller 14 centered since the natural action of orifices 24 will accomplish this.

Actual use of apparatus 10 has demonstrated that after a short cleaning period, a roller 14 is thoroughly cleaned and may be immediately used for painting with another color of paint without any trace of the previous paint color being evident. Thus, it will be seen that a simple and convenient apparatus 10 has been provided which permits the cleaning of rollers 14 without first having to remove them from their applicators 12. Further, the novel construction of shield 30 permits the full length of a roller 14 to be cleaned. Further, the components of

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apparatus 10 are relatively inexpensive and easy to fabricate. Such components may be made of any suitable material, including both metals and plastics.

While a certain preferred embodiment of the invention has been specifically disclosed, it is understood that the invention is not limited thereto as many variations will be readily apparent to those skilled in the art and the invention is to be given its broadest possible interpretation within the terms of the following claims.

I claim:

1. Cleaner apparatus for a paint applicator of the type having an applicator roller, said apparatus comprising: means forming an annular fluid passage which bounds a space within which the applicator roller is receivable, said means including a plurality of circumferentially spaced orifices tangentially directed toward said space; means for connecting said first-mentioned means to a source of fluid under pressure; and an axially extending shield for receiving said first-mentioned means, said shield being open at one end and including an axially extending slot adjacent said one end affording relative axial movement of the roller of the paint applicator within said space.

2. Cleaner apparatus according to claim 1 and characterized in that said first-mentioned means is an annular tube, and said orifices are formed by smaller tubes in fluid communication with said annular tube.

3. Cleaner apparatus according to claim 2 and characterized in that said smaller tubes are each directed both tangentially and downwardly.

4. Cleaner apparatus for a paint applicator of the type having an applicator roller, a handle, and a rod member disposed therebetween, said apparatus comprising means forming a fluid passage which bounds a space, said fluid passage being provided with a plurality of circumferentially spaced orifices tangentially directed toward said space; means for connecting said first-mentioned means to a source of fluid under pressure; and an open-ended, axially extending shield disposed about and secured to said first-mentioned means, said shield including an axially extending slot at one end for slidably receiving the rod

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member whereby the applicator roller may be manually axially moved in said space between said orifices.

5. Cleaner apparatus for a paint applicator of the type having an applicator roller, a handle, and a rod member disposed therebetween, said apparatus comprising an open-ended cylindrical shield; an annular tube disposed within and secured to said shield and bounding a space, said tube being provided with a plurality of circumferentially spaced orifices tangentially directed toward said space; and means for connecting said tube to a source of fluid under pressure; said shield including an axially extending slot at one end for slidably receiving the rod member whereby the applicator roller may be manually axially moved in said space between said orifices.

6. Cleaner apparatus according to claim 5 and characterized in that said orifices are formed by tubes in fluid communication with said annular tubes, and in that said tubes are each directed both tangentially and downwardly.

7. Cleaner apparatus for a paint applicator of the type having an applicator roller, said apparatus comprising: means forming an annular fluid passage which bounds a space within which the applicator roller is receivable, said means including a plurality of circumferentially spaced orifices tangentially directed toward said space; means for connecting said first-mentioned means to a source of fluid under pressure; and an axially extending shield carried by said first-mentioned means and surrounding said space, said shield being open at one end and including an axially extending slot affording relative axial movement of the roller of the paint applicator within said space.

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