

Jan. 14, 1958

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PAINT ROLLER CLEANER

2,819,483

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2 Sheets-Sheet 1

Fig. 1

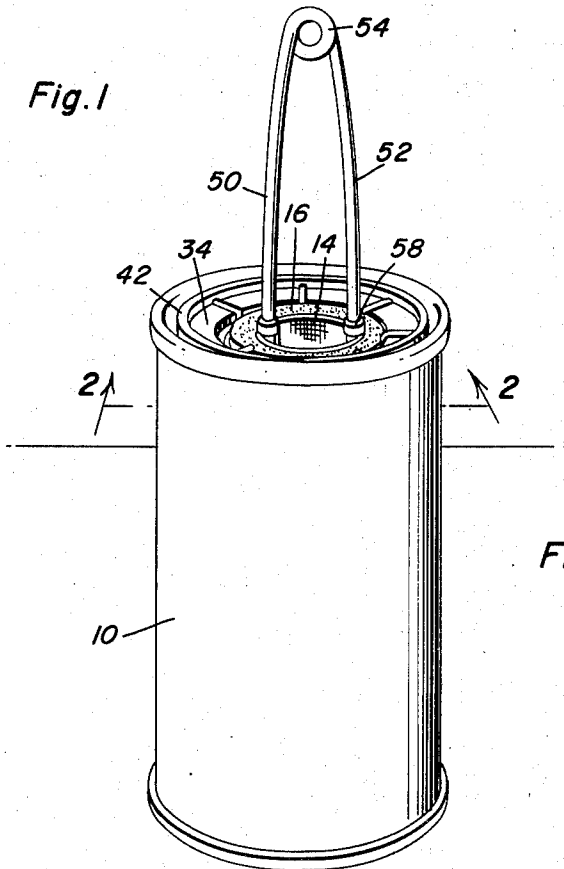


Fig. 8

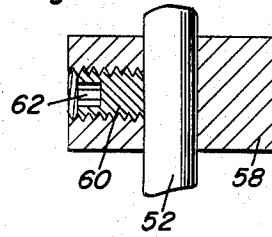


Fig. 7

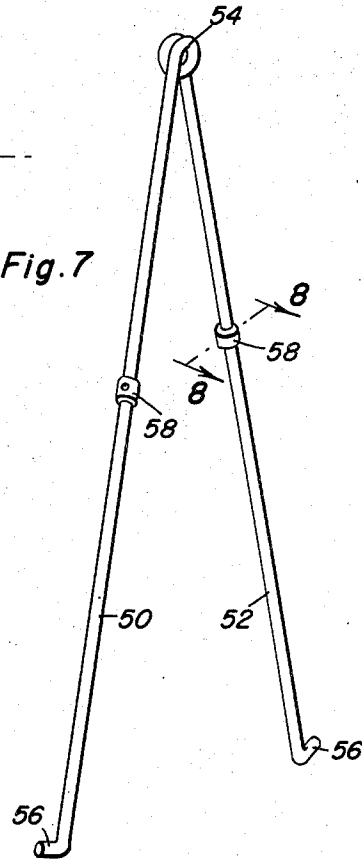
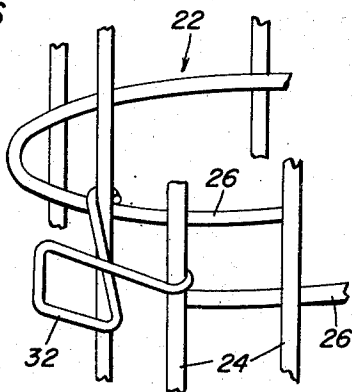


Fig. 6



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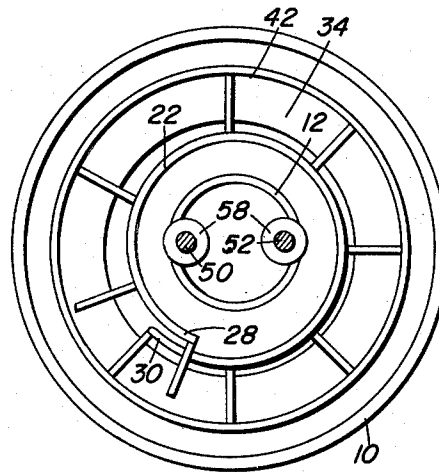
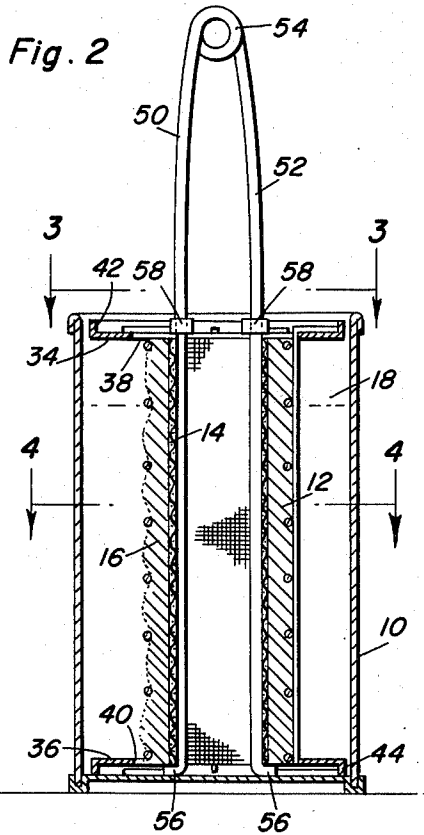
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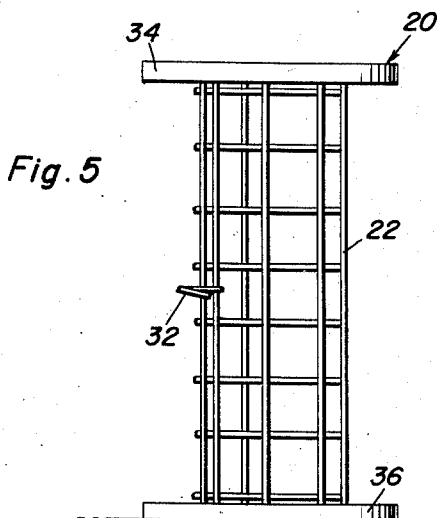
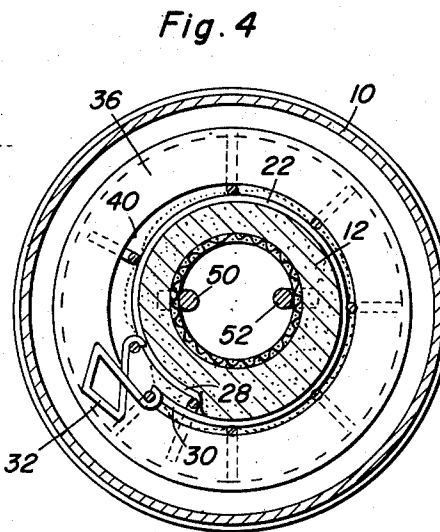
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**Fig. 3**



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## PAINT ROLLER CLEANER

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7 Claims. (Cl. 15—121.2)

This invention comprises novel and useful improvements in a paint roller cleaner, and more specifically relates to an apparatus to facilitate and render more efficient the cleansing of paint from the surfaces of paint rollers and the reconditioning of the rollers for further use.

The principal object of this invention is to provide an apparatus for removing paint from paint rollers after their use in painting, in a greatly improved and simplified manner.

A further object of the invention is to provide a paint roller cleaning apparatus in conformity with the preceding object which will enable the cleansing action of the roller to be effected by a reciprocatory and/or a rolling action of the roller upon a grill-like surface for scraping the paint encrustations from the material of the roller, while the latter is immersed in a liquid solvent solution.

Yet another object of the invention is to provide an apparatus whereby reverse ends of the paint roller may be scrubbed and cleansed in succession by reversing the roller for reciprocation in the cleaning element, thereby enabling the cleaning apparatus to be reduced in its vertical height.

A still further object of the invention is to provide a paint roller cleaner in conformity with the preceding objects wherein the cleaning and scrubbing element of the apparatus may be easily adjusted in order to adapt its circumference and diameter to receive different sizes of paint rollers therein.

Yet another important object of the invention is to provide an apparatus as set forth in the foregoing objects wherein there is provided an improved resilient holder for receiving a paint roller during the cleansing operation of the same, and wherein the holder will not interfere with the scrubbing operation of the paint roller in the cleaner.

And a final important object of the invention to be specifically enumerated herein resides in the provision of a paint roller cleaner as specified in the preceding objects wherein the cleaning element of the apparatus shall more effectively prevent the splashing of the cleaning solvent from the container and the return of the solvent into the container.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view showing a preferred embodiment of the apparatus and illustrating the positioning of a paint roller to be cleaned in the apparatus for the scrubbing and cleaning operation, the resilient holder being shown applied to the paint roller for manipulating the same;

Figure 2 is a vertical transverse sectional view taken substantially upon the plane indicated by the section line 2—2 of Figure 1;

Figures 3 and 4 are horizontal sectional views taken

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substantially upon the planes indicated by the section lines 3—3 and 4—4 of Figure 2, and upon a somewhat enlarged scale;

Figure 5 is an elevational view of the cylindrical cleaning element forming an essential element of this apparatus;

Figure 6 is a fragmentary perspective view upon an enlarged scale of a portion of the cleaning element of Figure 5 and showing in particular the adjustable fastening means for varying the diameter of the cylindrical cleaning element;

Figure 7 is a perspective view of the resilient holder employed for manipulating the paint roller to be cleaned; and

Figure 8 is a detail taken upon an enlarged scale substantially upon the plane indicated by the section line 8—8 of Figure 7.

The principle of operation upon which the present invention is based is that a paint roller be immersed in a cleaning solvent and be scrubbed or moved against a roughened surface in order to work or flex the material of the roller and remove paint or paint encrustations therefrom. In carrying out this principle, there is provided a container 10 of any desired type, but preferably of sufficient size to receive at least the major portion of the length of a paint roller therein. As shown in the drawings, a container is provided of sufficient size to receive the entire paint roller 12 therein. The conventional paint roller for which the present cleaning device is particularly adapted consists of a cylindrical wire screen 14 or the like upon which is disposed a layer of fabric or other paint receiving material 16. After use in applying paint to a surface, it is desirable to clean the paint roller in order to remove any paint encrustations therefrom and to leave the paint applying surface 16 soft and pliable.

In the apparatus in accordance with this invention, it is intended that the container 10 shall be filled with a liquid solvent to a level which is preferably at least one-half to three-fourths of the height of the container, as shown by the solvent level line 18.

The paint roller cleaning element of this invention is shown more particularly in Figure 5, being indicated generally by the numeral 20. The cleaner consists of a cylindrical member or sleeve 22 of a grill-like material or of a coarse wire mesh, the same comprising, as shown in Figure 6, a plurality of straight longitudinal wires or rods 24 to which are connected a plurality of curved lateral wires or rods 26. This piece of grill-like material has its ends disposed in overlapping engagement, the two ends being indicated at 28 and 30 in Figure 3. By means of this overlapping engagement, there is thus provided a sleeve of a skeletal form, and in which the amount of overlap of the ends may be controlled and adjusted by the resilient fastening clip 32. By varying the amount of overlap of the sheet of material forming the sleeve 22, the diameter of the same may be varied for a purpose to be subsequently apparent.

The upper and lower ends of the sleeve 22 are secured to circular end plates 34 and 36, these plates being provided with apertures 38 and 40 therethrough which are substantially equal in diameter to that of the sleeve 22. Upstanding peripheral rims 42 and 44 are provided upon the plates upon the opposite sides of the plates from the sleeve 22.

While the actual height of the sleeve is not critical, it is essential that the sleeve shall be of a length not less than one-half that of the paint roller in order that when the latter is slidably disposed within the sleeve, with the sleeve being positioned in the container as shown in Figure 2, the major portion of the length of the paint roller will be immersed in the liquid and in contact with the rough surface of the skeletal sleeve.

The upstanding rim at the top plate is preferably dis-

posed adjacent the upper rim of the container 10, as shown in Figure 2, in order that any solvent lifted upwardly upon the plate by the upward sliding movement of the paint roller 12 in the sleeve will be prevented from being spilled over the rim of the container 10, being trapped by the rim 42 and returned through the opening 38 or 40 into the container.

It will be apparent that either end of the cleaning element may be disposed as the upper plate. It will be observed that the mounting of the plates 34 and 36 upon the sleeve 22 serves to impart rigidity and strength to the grid-like structure of the sleeve.

In order to facilitate the placing of the paint roller in the cleaning element and manipulating the roller in the cleaning element for cleansing paint from the same, there is provided a resilient holder for the paint roller. This holder, as shown in Figure 7, may conveniently comprise a single rod-like member having a pair of arms 50 and 52 which are integrally connected at their upper end, as by a coiled portion 54 which serves to resiliently urge the arms apart. At their lower ends, the arms are provided with a pair of outwardly extending fingers 56 which, as shown in Figure 2, are adapted to be disposed below the lower end of the paint roller, after the arms are passed through the paint roller, for gripping the lower end of the roller and assisting in retaining the latter upon the arms. A pair of shoulders 58 are slidably disposed in an adjustable manner upon each of the arms and cooperate with the fingers 56 for positioning the paint roller therebetween. These shoulders preferably consist, as shown in Figure 8, of a collar which is slidably received upon the arms and which is secured in adjusted position thereon as by a setscrew 60 threaded through the collar and engaging the arm, this screw being provided with a recessed tool engaged head 62.

By this construction, the shoulders may be adjusted towards or from the fingers whereby to adapt the fastener to receive different lengths of paint rollers.

It should be particularly noted that the shoulders and the fingers protrude laterally from the arms a relatively short distance so that when the arms are squeezed together, the device may be readily passed through the hollow center of a paint roller; and when engaged upon the roller, will not interfere with the passage of the roller into or out of the cleaning member 22.

In operation, with a paint roller disposed upon the arms, the roller is pushed into the interior of the hollow sleeve cleaning member 22 and then may be vertically reciprocated and/or rotated and twisted, whereby to cause the material 16 of the roller to be rubbed or scuffed against the rough surfaces of the grill formed by the members 24 and 26. It will be seen from Figure 2 that preferably a snug fit is established between the material 16 and the sleeve 22 whereby the material 16 is caused to flex or be kneaded during the vertical and/or rotational movement of the roller in the cleaning element. After the lower end of the roller has been effectively cleansed in the solvent by the above mentioned action, the roller may be withdrawn, the resilient fastener removed and then positioned in the other end of the roller, and the roller then reinserted in the cleaning element but in a reverse position to thoroughly cleanse the other end of the same.

After cleaning one end of the roller, and removing the fastener from the roller, the hollow sleeve cleaning member embracing the roller can be upended in the container and then by reinserting the fastener, the cleaning action can take place on the opposite end of the roller.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art. It is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and

equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A cleaning apparatus for paint rollers comprising a container for receiving a cleaning solvent, a cylindrical roller cleaner comprising a grid rolled into a sleeve with its edges overlapping and having its longitudinal axis disposed vertically in said container and adapted to scrape the exterior of a paint roller when the latter is reciprocated therein, a resilient holder having arms for radial resilient engagement with the interior surface of a paint roller, said arms having fingers and shoulders projecting laterally therefrom sufficiently for engaging the opposite ends of a paint roller to retain the latter upon the arms but insufficient to project beyond the exterior surface of said roller, said fingers and shoulders being adapted to pass through the interior of a paint roller when said arms are squeezed together.

2. The combination of claim 1 including means for adjustably securing the overlapping edges whereby to vary the diameter of the sleeve.

3. The combination of claim 1 including means for adjustably securing the overlapping edges whereby to vary the diameter of the sleeve, said sleeve having circular plates secured to and extending radially from the sleeve, at least one of said plates having an opening substantially equal to the diameter of the sleeve to enable passage of a paint roller into said sleeve through said opening.

4. The combination of claim 1 including means for adjustably securing the overlapping edges whereby to vary the diameter of the sleeve, said sleeve having circular plates secured to and extending radially from the sleeve, at least one of said plates having an opening substantially equal to the diameter of the sleeve to enable passage of a paint roller into said sleeve through said opening, at least one of said plates having a peripheral flange upon that side of the plate which is remote from the sleeve.

5. A cleaning apparatus for paint rollers comprising a container for receiving a cleaning solvent, a cylindrical roller cleaner having its longitudinal axis disposed vertically in said container and adapted to embrace and scrape the exterior of a paint roller when the latter is reciprocated therein, said cleaner comprising a grid disposed into a cylindrical sleeve with its vertical edges overlapping circumferentially, means for adjustably securing the overlapping edges whereby to vary the diameter of the sleeve for adapting it to slidably receive different sizes of paint rollers.

6. The combination of claim 5 wherein said sleeve has circular plates secured to and extending radially therefrom at its top and bottom edges, at least one of said plates having an opening substantially equal to the diameter of the sleeve whereby to enable passage of a paint roller through said opening.

7. The combination of claim 5 wherein said sleeve has circular plates secured to and extending radially therefrom at its top and bottom edges, at least one of said plates having an opening substantially equal to the diameter of the sleeve whereby to enable passage of a paint roller through said opening, at least one of said plates having a peripheral flange upon that side of the plate which is reverse from the sleeve.

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