

- [54] PAINT ROLLER CLEANING APPARATUS
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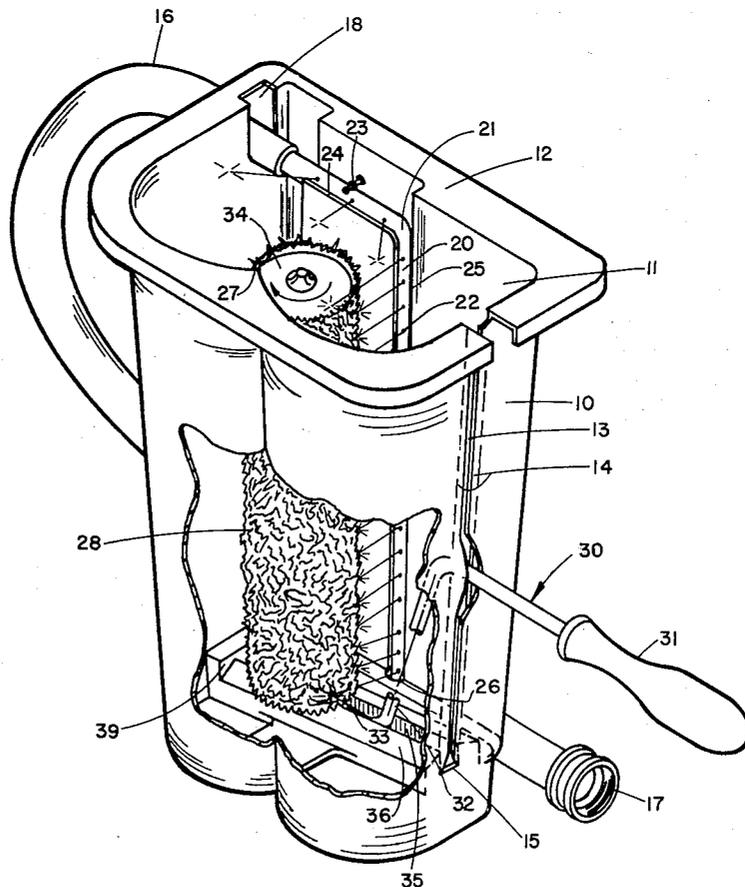
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[57] **ABSTRACT**

An apparatus for cleaning paint rollers while attached to the handles. A hollow casing has a slot to allow a paint roller to be inserted with the handle portion protruding through the slot and a plurality of fluid jets are aimed to direct a stream of water against the roller to clean the roller and to rotate the roller on its handle. The bottom portion of the container has a grooved track for holding the paint roller assembly in place while allowing it to be slid back and forth through the fluid jets causing rotation reversals for more thorough cleaning of the roller. The slot has flaps to prevent the escape of excess water and a lid is provided to prevent water from splattering while a drain and openings in the bottom and side allow the water and paint to escape from the apparatus.

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10 Claims, 8 Drawing Figures



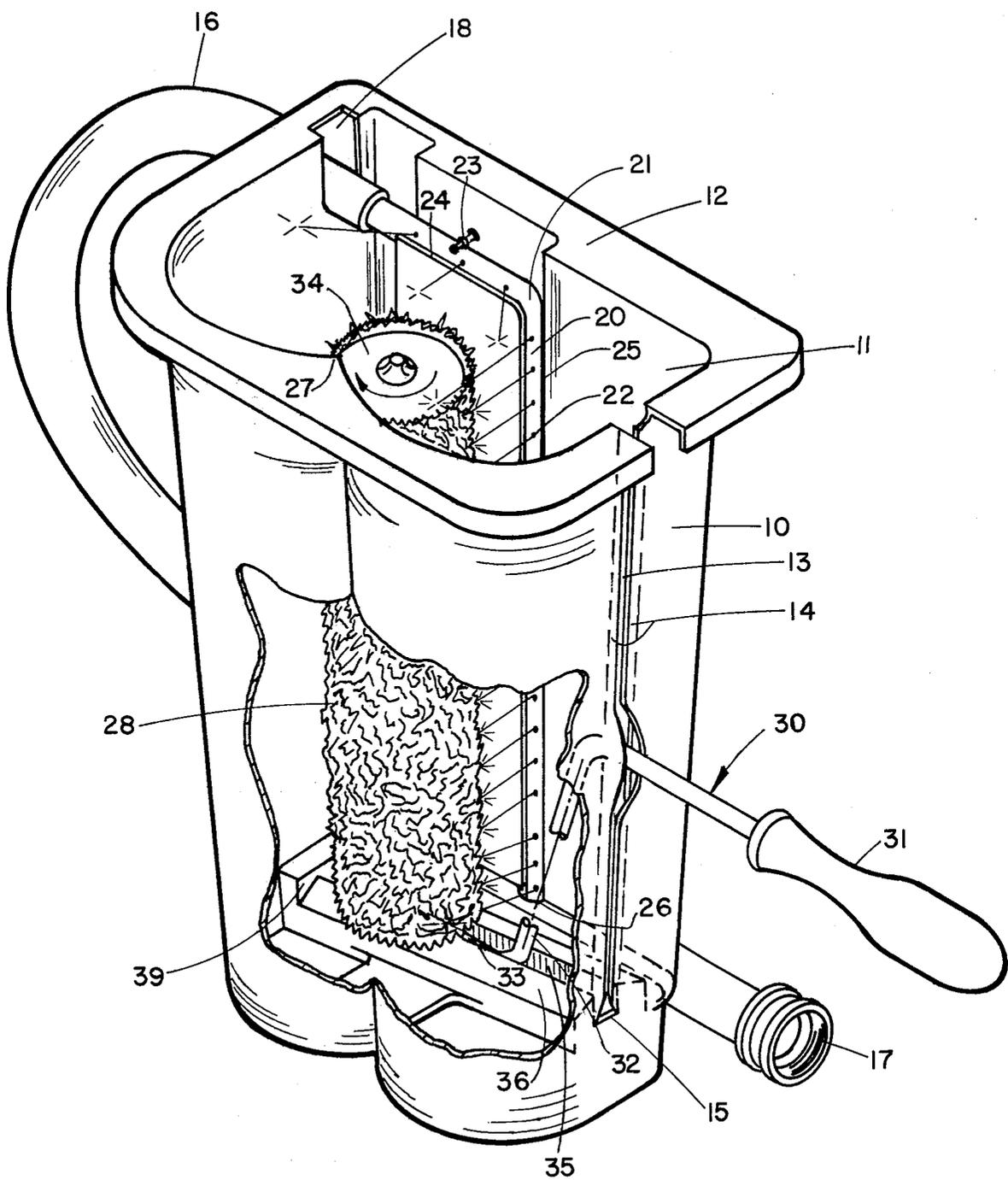
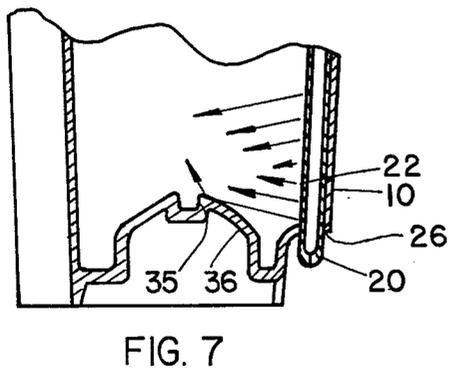
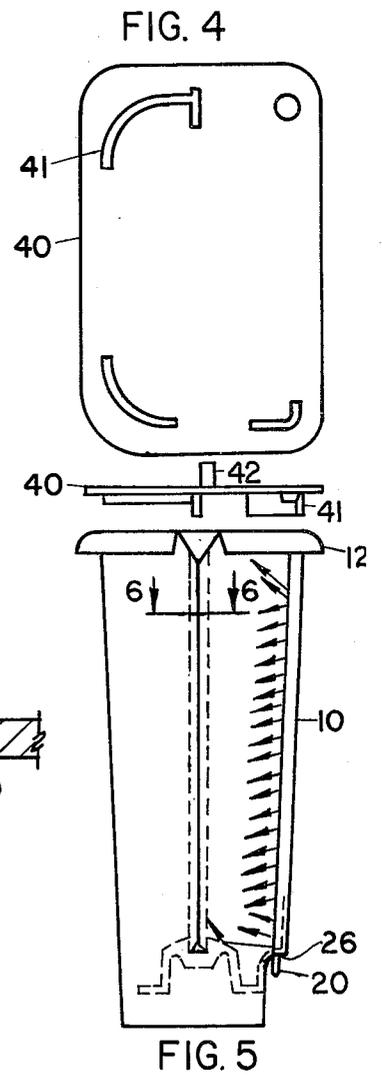
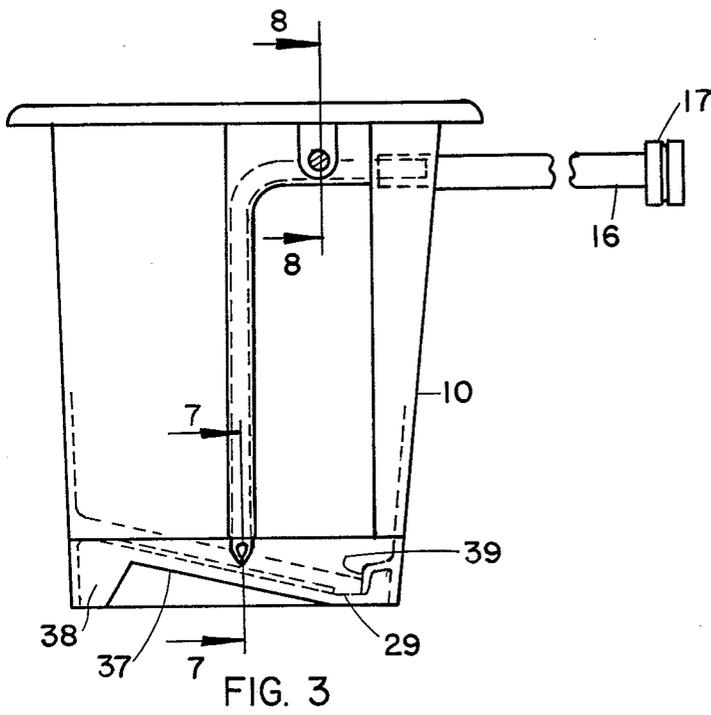
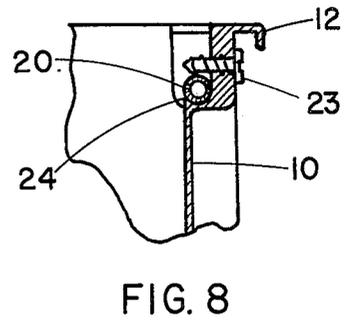
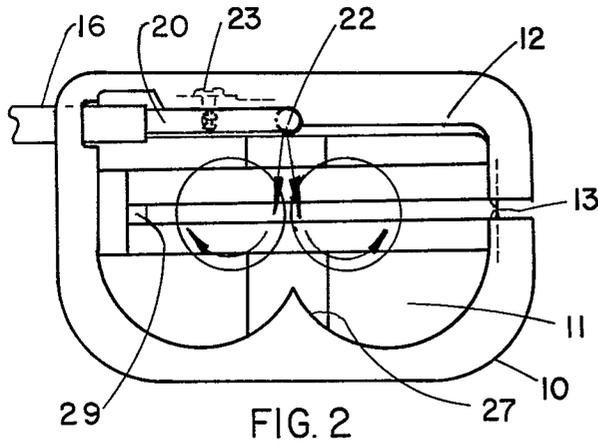


FIG. 1



PAINT ROLLER CLEANING APPARATUS

BACKGROUND OF THE INVENTION

The present invention relates to an apparatus for cleaning paint rollers and especially for cleaning paint rollers which have been utilized with water base paints and with the paint roller still attached to its rolling mechanism and handle.

Paint rollers are commonly used to replace brushes in painting all types of surfaces and are generally made having a rolling mechanism with a handle which is adapted for a paint roller to be attached to by frictional engagement or other holding mechanism. The roller is then utilized with a paint tray for spreading paint on the roller where it is then rolled upon a surface to be painted. The roller can then be easily removed from the mechanism and thrown away, but with the wide acceptance of water base paints such as latex and acrylic paints, it has become common practice to clean the rollers which can be easily cleaned by the use of water rather than the more difficult task of cleaning an oil base paint utilizing organic solvents.

In the past a number of suggestions have been made for assisting in the cleaning of the roller. These include such things as a curved surface to squeeze paint off of the curved roller, and also include systems in which the roller is removed from the rolling mechanism and handle and attached to a separate holder for the roller which is then inserted in a casing of fluid and rotated by hand or with means such as an electric drill. The fluid can then be drained from the casing and the roller allowed to dry.

The present invention provides a paint roller cleaner in which the roller does not have to be removed from the rolling mechanism while cleaning the roller and does not require a power source other than the cleaning fluid to spin the roller both in cleaning and to continue the spin while drying. The present apparatus is also designed to provide a paint roller cleaner which is both simple and economical to manufacture and use by the consumer.

SUMMARY OF THE INVENTION

A paint roller cleaning apparatus is provided having a hollow casing which is open at both ends and has a lip around the top opening and is provided with a lid or covering for the top opening. One side of the casing has an elongated slot therein so that a paint roller can be placed in the casing with the handle protruding through the slot where it may be gripped by the user. A pipe having a plurality of orifices therein extends into the casing where the orifices direct a stream of fluid, such as water, against an inserted paint roller. The inserted pipe may have a hose connection extending from the casing for attaching to a fluid source. The casing may also be provided with a drain and may have a grooved track along the bottom which partially obstructs some of its opening. The groove is for accepting a portion of the handle of the rolling mechanism for holding the roller in place and allowing it to be moved back and forth within the streams of fluid jets. The roller is maintained in a spin by the jets hitting one side thereof and when the water is turned off or the roller pushed out of its path, the roller will continue spinning to allow it to partially dry. The casing provides means for directing the jets of water passing the roller.

BRIEF DESCRIPTION OF THE DRAWINGS

Other objects, features and advantages of this invention will be apparent from a study of the written description and the drawings in which:

FIG. 1 is a perspective view with a portion broken away showing the preferred embodiment of the paint roller cleaner in accordance with the present invention;

FIG. 2 is a top plan view of the apparatus in accordance with FIG. 1;

FIG. 3 is a side plan view of the embodiment of FIGS. 1 and 2;

FIG. 4 is a plan view of the cover;

FIG. 5 is an end plan view showing the cover partially removed;

FIG. 6 is a sectional view taken along line 6—6 of FIG. 5;

FIG. 7 is a cutaway sectional view taken along line 7—7 of FIG. 3; and

FIG. 8 is a sectional view taken along line 8—8 of FIG. 3.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to FIG. 1, a paint roller cleaner in accordance with my invention is illustrated having a casing 10 having an opening 11 in the top with a lip 12 around the opening 11, and a slot 13 extending down one side of the casing 10. Slot 13 has a pair of flaps 14 protruding over a portion thereof and the bottom of the slot 13 extending into a triangular opening 15. A hose 16 extends from the casing 10 and has a coupling or connector 17 for attachment to a water source such as a water hose or spigot. The hose extends through an opening 18 into the casing 10 where it is attached to a pipe 20. Pipe 20 is curved at 21 and extends the length of the casing 10 and has a plurality of jets or openings 22 therein so that water entering the hose 16 is directed into the pipe 20 and out the jets 22 into the casing 10. Pipe 20 is held in place by a threaded screw 23 or a plastic pin passing through the casing 10 to engage the pipe 20 and holding it against a ledge 24. Pipe 20 also fits within a groove 25 and extends into a hole 26 so that it may be held in place facing the proper direction by simply inserting it into the proper position within the casing 10 and applying the screw 23 to lock it in place.

It should be noted that the casing 10 has a dual curved surface 27 directly opposite the jets 22 extending the length of the casing 10 which will divert the water from the jets around these angled surfaces and direct them back into the casing at a desired angle. A paint roller 28 is shown attached to its rolling handle 30 having a handle grip 31 with the roller handle having a curved portion 32 and 33 connected to the roller holder 34 to which the removable roller 28 is assembled. The bottom portion of the handle 33 can be seen inserted into a grooved track 35 fixedly attached to the bottom of the casing 10 and in line with the slot 13. The grooved track 35 has angled surfaces 36 and extends to a drain opening 29 (FIG. 2) to allow drainage from the surfaces as well as from the track 35. It should be noted that the track 35 is at an angle to cause the roller 28 to rise and fall, as it moves back and forth, a distance greater than the spacing between the jets 22 to assure that the jet streams hit all portions of roller 28 including top and bottom ends thereof. Groove 35 and slot 13 allow the paint roller handle 30 to be guided within the

casing 10 with the roller 28 extended parallel to the pipe or channel 20 and jets 22 while the roller is held by the handle grip 31 by the user of the mechanism. The user can then slide the roller in its parallel position along the grooved track 35, changing the position of the roller relative to the jets 22. This allows the water from the jets 22 to hit the roller 28 at different spots on the roller and to put it in a position as illustrated where the jets hit tangent to the roller in such manner as to spin the roller. The fluid pressure forces the roller 28 to spin rapidly in either direction depending on its position with respect to the water from jets 22. Once the roller is thoroughly cleaned, the operator can slide the handle 30 along the track 35 to move the roller out of contact with the water from jets 22 while the roller is still spinning to partially dry the roller. The bottom of the casing 10 is open except for the track 35 which is held at each end and except for the straps holding the track 35 in place from the sides. Thus, as can be seen, the roller mechanism 30 can be quickly inserted into the casing 10 as illustrated, inserted in place and the water through the hose 16 directed through jets 22 to clean the roller and partially dry it.

Turning now to FIGS. 2 and 3, the mechanism is further illustrated with FIG. 2 having a pair of circles to show two positions of the paint roller. The casing 10 has a lip 12 and an opening 11 with the curved surfaces 27 on one side and pipe 20 on the opposite side connected to the hose 16, where the arrows are used to illustrate the direction of the fluid from jets 22 and with the threaded screw 23 holding the pipe 20 in place. These views also illustrate the slot 13 as well as a connector 17 attached to the hose 16 and the angling of the grooved track 35 as well as the bottom edge 37 forming a leg 38 into the casing 10. A stop 39 is illustrated in FIG. 3 and stops the sliding of the roller handle in one direction.

FIGS. 4 and 5 illustrate the use of a transparent top or lid 40 which can cover the opening 11 of the casing 10 to prevent splatter from the casing. The lid has protruding surfaces 41 to allow it to fit tightly and be held in place in the opening 11 with a portion of the lid surface resting on the lip 12. Protruding members 41 are shaped to fit the particular shape of the opening 11. FIG. 5 also illustrates one end of the casing 10 with the lip 12 and top 40 having the protruding members 41 just separated from the lip 12 and illustrates the handle 42 on the opposite side the top 40. The extension of pipe 20 through the opening 26 in the casing 10 to hold the pipe 20 in place at one end is more clearly viewed in this figure. Arrows indicate the flow direction of the jets of fluid from pipe 20. Those having a slight downward angle are to assure the spray cleaning of the upper end of any paint roller holder 34 regardless of its length or end configuration and to eliminate a need for any compensating adjustments. The three uppermost and three lowermost jets of fluid from pipe 20 have an upward angle to spray clean the underside of the lid 40 and the lower end of the paint roller holder 34 respectively.

FIG. 7 is a sectional view of the casing 10 having the pipe 20 extending through the opening 26 and more clearly illustrating the shape of the grooved track 35. The grooved track 35 has angled surfaces 36 directing the jets of water to spray under a portion of the roller as illustrated by the arrows extending from the jet openings 22.

FIG. 6 is a sectional view showing a portion of the container 10 having the opening 13 with the flaps 14 which may be formed in the molding process and gives additional protection from splattering water egressing from the casing.

FIG. 8 is a sectional view showing how the screw 23 is threaded through the casing 10 below the lip 12 and locks pipe 20 in place against ledge 24. Thus it should be clear that the lid 40 and casing 10 can be molded in one operation and the pipe 20 quickly inserted and locked in place with one screw 23 to complete the assembly of the apparatus.

It should be noted that my invention is adapted to clean any size and type standard paint roller without any changes or adjustments to the apparatus. Further, the invention is self-cleaning and requires no power except that derived from the fluid pressure which may be operated on standard household water pressure. The spinning of the roller by the water jets assists in loosening particles from the roller during cleaning, while the entire roller surface is being sprayed and also assist in drying the roller when removed from the jets by turning off the jets or sliding out of the way with roller still spinning.

This invention, however, is not to be construed as limited to the particular forms disclosed herein since these are to be regarded as illustrative rather than restrictive.

I claim:

1. A paint roller cleaner comprising in combination:
 - a. a hollow casing open at both ends and adapted to receive a paint roller;
 - b. an elongated channel located in said casing and having a plurality of openings therein facing the interior of said casing for spraying the length of a paint roller in said hollow casing;
 - c. fluid channel connection means located exterior said hollow casing and connected to said elongated (pipe) channel for attaching a fluid source;
 - d. said casing having an elongated slot therein extending from said opening along one side thereof for receiving a paint roller handle;
 - e. a bottom portion of said casing having an elongated grooved track for receiving a portion of a paint roller handle to hold and guide said paint roller during cleaning thereof whereby sliding said handle in said groove provides additional coverage of fluid sprayed on said roller from said fluid channel;
 - f. drain means for allowing the escape of fluid from said (casing) groove whereby a paint roller handle guides the roller while it is being cleaned in said hollow casing without removal from the handle.
2. The apparatus in accordance with claim 1 in which said casing has a lip around the opening thereof and a lid for placement on said lip to cover the opening in said casing following insertion of a paint roller in said casing.
3. The apparatus in accordance with claim 2 in which said lid is transparent and has a protruding section adapted to fit in said casing opening against the edge of said lip for holding said lid onto said casing.
4. The apparatus according to claim 1 in which said casing elongated slot is at least partially covered by flexible flaps which allow the insertion of a paint roller handle but partially seal said slot for the egress of fluid

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and which scrapes the excess paint from the paint roller handle as it is being moved in and out.

5. The apparatus in accordance with claim 4 in which said bottom elongated grooved track of said casing is angled toward the (a) drain through said casing (bottom portion) to allow the egress of fluid from said track and to allow the movement of said roller relative to said spray openings in said channel to cover the area of said roller between said sprayed fluid by sliding said paint roller in said angled groove.

6. The apparatus in accordance with claim 5 in which said bottom track (bottom on the portion of said casing) has angled sides to enhance drying the apparatus after use by providing natural drain-off slopes and to direct fluid from said elongated channel onto one end portion of a paint roller being cleaned.

7. The apparatus in accordance with claim 1 in which said casing interior has elongated side portions, one said side portion facing said elongated channel having a pair of curved surfaces coming together at an apex to

direct jets of fluid from said orifices in said channel along said curved paths and thereby wash down the curved surfaces as well as reduce fluid splattering.

8. The apparatus in accordance with claim 1 in which the interior of said casing has a ledge running parallel to said top opening therein to the edge of an elongated vertically extending groove and said groove extends to an opening in the bottom of said casing and said channel sets on said ledge in said groove and extends through the opening in the bottom portion of said casing.

9. The apparatus in accordance with claim 8 in which said channel is held in place by a fastener on top of said ledge binding said channel against said ledge.

10. The apparatus in accordance with claim 1 in which said channel has a plurality of openings directed at different angles whereby streams of fluid can be deflected to clear portions of said paint roller not in a direct line with said channel opening.

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