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PAINT ROLLER WITH GUIDE PLATE

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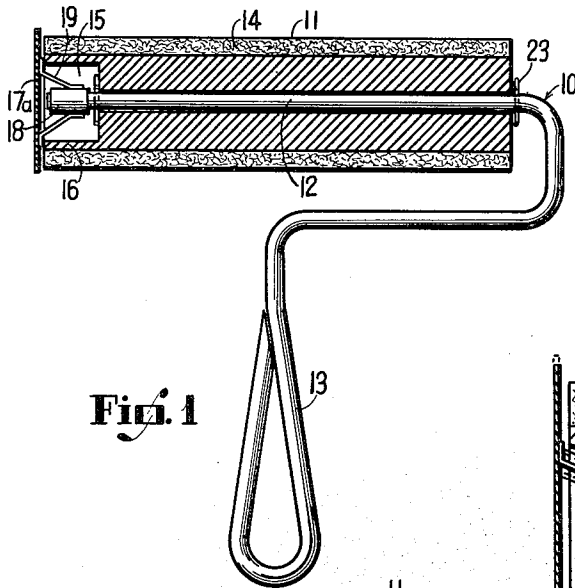


Fig. 1

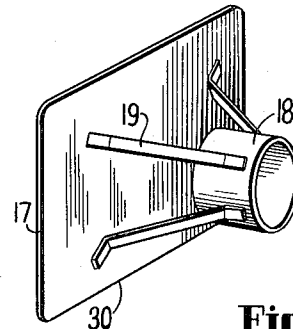


Fig. 2

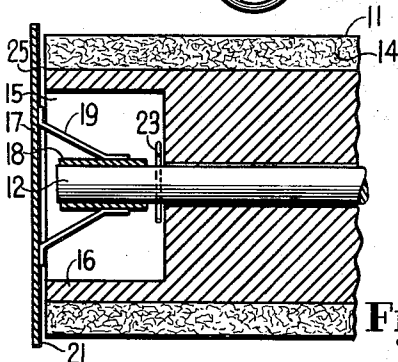


Fig. 3

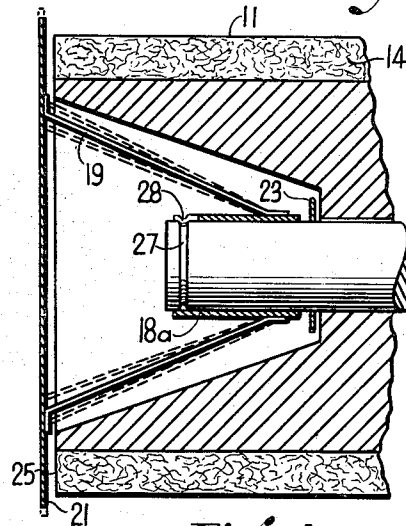


Fig. 4

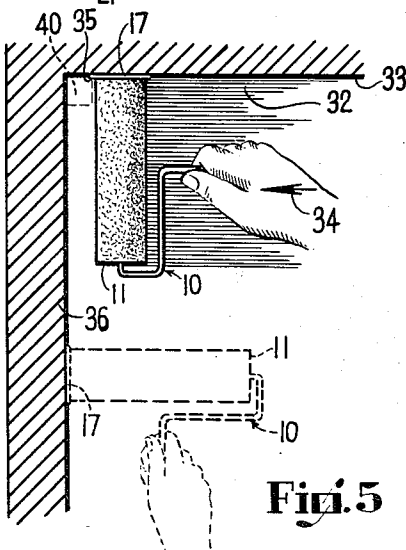


Fig. 5

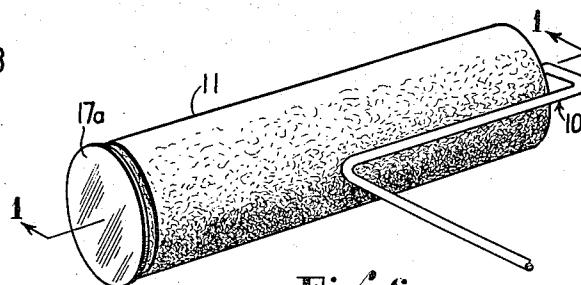


Fig. 6

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PAINT ROLLER WITH GUIDE PLATE

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4 Claims. (Cl. 15—248)

This invention relates to an applicator for paints and the like.

An object of this invention is to provide an applicator particularly adapted for painting the portions of wall surfaces which lie adjacent to abutting walls.

Another object of this invention is to provide an applicator for painting a surface with such applicator being provided with a guide for contacting an abutting surface to facilitate forming a straight edge for the paint coat, with the straight edge being substantially at the junction of the surfaces.

Still another object of the present invention is to provide an applicator particularly adapted for painting a surface near a second abutting surface, with the applicator being provided with a guard plate to confine the paint to the surface being painted.

Further objects and advantages of the present invention will be apparent from the following description, reference being had to the accompanying drawings wherein preferred forms of embodiments of the invention are clearly shown.

In the drawings:

Fig. 1 is a longitudinal section through the roller of the present invention, taken substantially on the line 1—1 of Fig. 6;

Fig. 2 is a perspective view of a modified guide plate of the present invention;

Fig. 3 is a fragmentary sectional view of a guide plate of the present invention showing one mounting means therefor;

Fig. 4 is a fragmentary sectional view showing a guide plate of the present invention showing a second mounting means therefor, with the section being taken substantially along the line 1—1 of Fig. 6;

Fig. 5 is a plan view of a surface being painted and showing the operation of an applicator constructed in accordance with the present invention; and

Fig. 6 is a perspective view of an applicator for paint which embodies the present invention.

Referring to the drawing and more particularly to Fig. 1, a roller type paint applicator is indicated generally at 10. Such applicator is provided with a roller 11 which is rotatably carried by a shaft 12. A handle 13 is preferably formed by bending an extension of the shaft 12 to form an integral handle substantially as shown in Fig. 1. The circumferential portion 14 of the roller 11 may be formed of any material suitable for absorbing and applying paint in the conventional manner.

A recess 15 is provided in the end of the roller 11 so that an end 16 on the shaft 12 is freely disposed within the recess. Such shaft end 16 can thereby be utilized in attaching a guide plate 17 or 17-a to the applicator. To provide such mounting, a collar or sleeve 18 or 18-a is removably carried on the shaft end, and a plurality of elements 19 are fastened between the inner face of the plate 17 and the outer surface of the collar 18. The elements 19 are preferably made of resilient material so that the

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plate 17 or 17-a is yieldingly mounted relative to the roller 11.

It is preferable to make the diameter of the circular guide plate 17-a or the height of the rectangular guide plate 17 slightly greater than the diameter of the roller as is exemplified at 21 in Figs. 3 and 4. Hence when the roller is pressed against the surface being painted, the plate 17 or 17-a will be constantly pressed against such surface by the resilient connection between the shaft 12 and the plate 17 or 17-a, with such resilient connection being provided by the elements 19 or by other similar means.

In Fig. 2 the guide plate 17 is shown connected to the collar 18 in a preferred manner wherein the elements 19 provide the resilient connection between the plate and the collar. It should be noted that the resilient connection can be achieved in various other ways without departing from the spirit of the present invention.

As seen in Figures 1 and 3 collar 18 is removably carried on the end of shaft 12 so that the plate 17 can readily be removed from the applicator while paint is being applied to the roller. Hence the collar 18 can engage the shaft end with a snug sliding fit in the manner shown in Fig. 3.

In such embodiment a stop ring 23 may be provided on the shaft to limit the inward movement of the collar relative to the shaft. It should be noted, however, that it is not necessary to limit the inward movement of the collar with the slip ring since the guide will function satisfactorily when the abutting end 25 of the roller is in engagement with the inner surface of the guide plate 17.

Another arrangement for securing the collar to the shaft is shown in Fig. 4. Here a circumferential groove 27 is shown formed in the end of the shaft, and a cooperating protrusion 28 is provided on the inner surface of a collar 18-a. This collar type can be used with either a rectangular plate 17 or a circular plate 17-a to provide an arrangement whereby the plate can be readily snapped on and off of the applicator, and when such plate is in its mounted position, both inward and outward movement of the collar 18-a will be prevented or limited to a specific amount of travel. At the same time the plate will be prevented from falling from the applicator when the end of the applicator which carries the plate is tilted downwardly. At the same time, the plate is rotatably mounted relative to the shaft 12. Such is advantageous when a straight edged plate 17, such as the one of Fig. 2, is employed. When such plate is used it is necessary that the shaft be rotatable relative to the plate so that the handle of the applicator can be freely manipulated.

In Fig. 6 an applicator is shown having a guide plate 17-a constructed in accordance with the present invention with such plate being circular in shape. Such circular plate serves as a satisfactory guide for contacting a surface abutting the surface being painted. Since the circular plate 17-a contacts the surface being painted only at a single point of tangency, such plate is of limited utility in preventing paint from seeping under the plate. When, however, a plate is selected which has a surface contacting edge 30 of substantial length, as is the case of rectangular plate 17 of Fig. 2, then the plate will possess utility both as a guide and as a seal.

To describe the operation of the present invention, reference is made to Fig. 5 where the applicator 10 is shown in operative relationship with a surface 32 to which paint is being applied. As is seen, paint is being applied to the surface in the area adjacent to the abutting wall 33. A guide plate 17 or 17-a is in contact with the abutting wall 33 so that the roller 11 will apply paint substantially up to the junction of the two surfaces. When the applicator is provided with a rectangular guide plate 17, such as the one shown in Fig. 2, the forwardly protruding portion 35, Fig. 5, serves as a bumper which stops the ap-

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plicator short of the wall 36 towards which the applicator is being moved. In this manner the abutting wall being approached is protected from the paint covered roller.

Paint is applied adjacent to the abutting wall 36 in a similar manner. With the present invention it is possible to paint an entire surface with the exception of a small portion 40 of the surface area which lies in the corner as seen in Fig. 5. Such corner portion 40 cannot be painted with a roller type applicator due to the natural configuration of the roller. It is, however, a simple operation to paint the corner area 40 with a brush to complete the painting of the surface.

While the forms of embodiments of the present invention as herein disclosed constitute preferred forms, it is to be understood that other forms might be adopted, all coming within the scope of the claims which follow:

I claim:

1. An applicator for paint and the like comprising a roller, a shaft rotatably supporting the roller and having a handle, a sleeve rotatably carried on said shaft, a guide plate contiguous to an end of the roller, said plate forming a wall-contacting edge portion normally extended beyond the peripheral surface of said roller when said plate is in normal disposition, and resilient mounting means connecting the plate with said sleeve, said resilient mounting means being adapted to permit yielding of said plate from said normal disposition upon contact of a surface to be painted by said roller and to constantly urge said edge portion against said surface to form a positive spring-pressed seal against the flow of paint from said roller beyond said plate.
2. An applicator for paint and the like comprising a roller having a recess in one end thereof, a shaft rotatably supporting the roller and having a handle, with the shaft extending through the roller and having an end disposed in the recess, a guide plate contiguous to the recessed end of the roller, said plate forming a straight edge portion for contacting a wall along a length of said plate, said edge portion of the plate being normally extended beyond the peripheral surface of said roller when said plate is in normal disposition, and resilient mounting means including a sleeve rotatably connecting the plate with the shaft, said resilient mounting means including a resilient member connecting said plate to said sleeve to permit yielding of said plate from said normal disposition upon contact of a surface to be painted by said roller and to constantly urge said edge portion against said surface to form a positive spring-pressed seal against the flow of paint from said roller beyond said plate.

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3. An applicator for paint and the like comprising a roller having a recess in one end thereof, a shaft rotatably supporting the roller and having a handle, with the shaft extending through the roller and having an end disposed in the recess, and a guide plate contiguous to the recessed end of the roller, said plate including a straight-edged portion for contacting a wall along a length of said plate, said edge portion of the plate being normally extended beyond the peripheral surface of said roller when said plate is in normal disposition, said plate also including an end portion extending beyond the peripheral surface of the roll a greater distance than said edge portion to form a stop to prevent engagement of said roll with an adjacent wall, and resilient mounting means rotatably connecting the plate with the shaft, said resilient mounting means being adapted to permit yielding of said plate from said normal disposition upon contact of a surface to be painted by said roller and to constantly urge said edge portion against said surface to form a positive spring-pressed seal against the flow of paint from said roller beyond said plate.

4. An applicator for paint and the like comprising a roller having a recess in one end thereof, a shaft element rotatably supporting the roller and having a handle, with the shaft element extending through the roller and having an end disposed in the recess, a guide plate contiguous to the recessed end of the roller, said plate forming a wall-contacting edge portion normally extended beyond the peripheral surface of said roller when said plate is in normal disposition, a mounting element rotatably and removably carried on the end of the shaft element, with one of said elements having a circumferentially extending groove, and with the other of said elements having a protrusion adapted to snap into the groove upon engagement of one of said elements with the other of said elements, and resilient means connecting the plate with the mounting element, said resilient means being adapted to permit yielding of said plate from said normal disposition upon contact of a surface to be painted by said roller and to constantly urge said edge portion against said surface to form a positive spring-pressed seal against the flow of paint from said roller beyond said plate.

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