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R. M. CONKLIN
PAINT APPLICATOR
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2,891,301

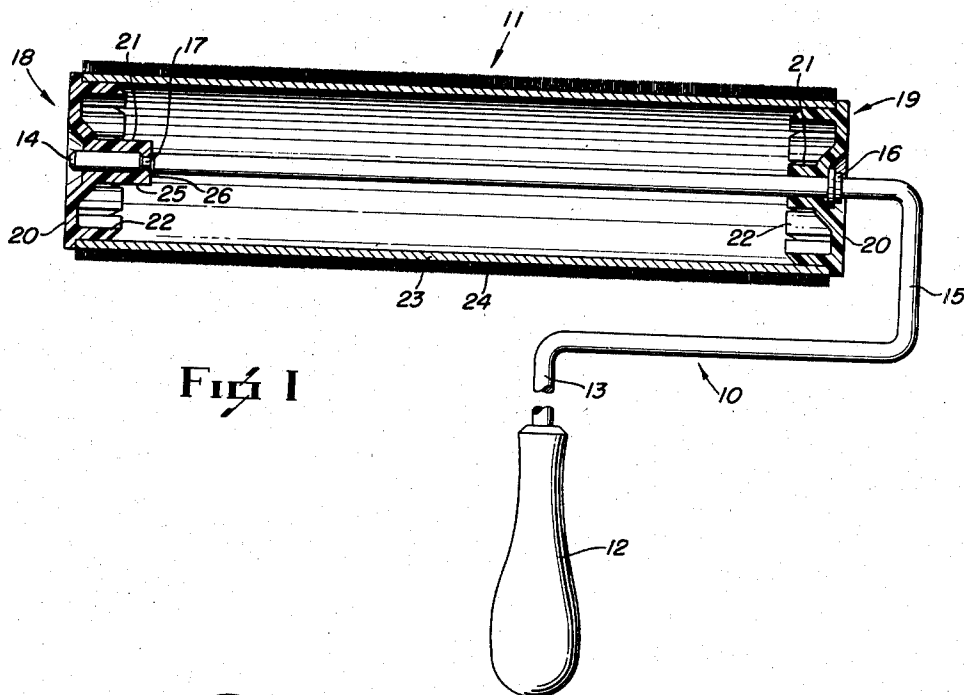


Fig. 1

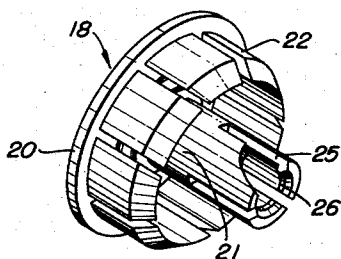


Fig. 3

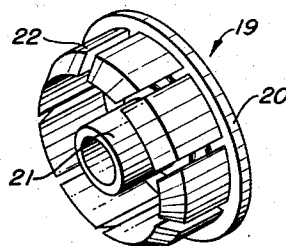


Fig. 4

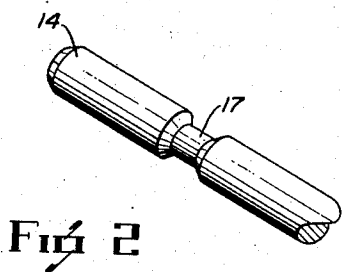


Fig. 2

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PAINT APPLICATOR

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1 Claim. (Cl. 29—116)

This invention relates to paint applicators of the roller type. More particularly, it relates to new and improved means for mounting a roller on a support, by which means a roller can be quickly and easily assembled and disassembled.

Paint rollers, as such, are not new. However, the rollers presently in use are so constructed as to make them difficult to assemble for painting and to disassemble for cleaning and replacement. For example, conventional-type roller assemblies are provided with end supports which are slidably mounted on a central shaft or axle. Some form of collar, stop, or similar fastening means must be provided at each end of the shaft to hold the roller in position. Frequently, the fastening means is not removable, with resulting difficulty in cleaning the roller. Also, if the covering material cannot be cleaned, the entire assembly must be discarded. Other applicators are provided with a large-headed screw or some other type of removable fastening at one end of the shaft. This fastening becomes covered with paint in use, and, as a result, it is difficult to disassemble the roller. It has also been found that the screw fastening may loosen in use, resulting in accidental disassembly of the applicator.

It has now been found that, by use of applicant's improved assembly, such prior-art problems are avoided.

Accordingly, one of the objects of this invention is to provide a paint applicator which can be quickly and easily assembled and disassembled.

Another object is to provide a paint-roller assembly which can be easily disassembled for cleaning.

A further object is to provide means whereby the paint-applying portion of a paint roller may be replaced without the necessity of discarding the complete applicator.

Other objects and advantageous features of this invention will be apparent from the following detailed description when taken in conjunction with the accompanying drawings, in which:

Figure 1 represents a cross section of an assembled paint applicator embodying applicant's invention,

Figure 2 represents a portion of a supporting shaft for a roller,

Figure 3 represents an end member for mounting a roller on a support, and

Figure 4 represents another type of end member.

In general, this invention comprises a grooved support, a roller, and end members which support the roller and at least one of which has a hub with projecting fingers extending into the grooves of said support.

Referring to Figure 1, one embodiment of this invention comprises a support 10 having a roller assembly 11 mounted thereon. The support may be of any suitable construction and may comprise a handle 12, mounted on a shank 13. Roller support shaft 14 is substantially normal to shank 13 and is connected to it by bracket 15. A collar 16 is fastened to one end of support shaft 14 adjacent the bracket to act as a thrust stop for the roller assembly. The open end of support shaft 14 is provided

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with an annular groove 17. Roller assembly 11 is mounted on support shaft 14 by means of end members 18 and 19.

Figures 3 and 4 show end members 18 and 19 in greater detail. These end members serve as rotatable supports for the roller assembly and also position it on the support shaft. The end members are preferably made of nylon, although other suitable materials will suggest themselves to those skilled in the art.

End member 18 is formed by a circular flange 20, extending radially from a hub 21, which is shaped to fit and rotate about support shaft 14. Normal to the flange 20 and evenly spaced from the hub 21 are a plurality of lugs 22 projecting from the flange 20 on the side opposite the face side. The lugs 22 are evenly spaced about the hub 21, providing a circular form over which the end of roller assembly 11 is pressed. The roller assembly 11 may comprise a cylindrical tube 23 over which a pile-type of cloth sleeve 24 is stretched.

End member 18 is further provided with a plurality of fingers 25 projecting from hub 21 normal to flange 20 on the side opposite the face side. Each finger 25 has a detent member 26 extending into the bore of hub 21 so as to engage the annular groove 17 of support shaft 14 when the end member is fitted onto the support shaft. End member 19 is similar to end member 18, except that hub 21 is not provided with fingers and detent members. Annular groove 17 is so spaced that the engagement of detent members 26 with the groove will maintain end member 19 positioned against collar 16.

To assemble the paint applicator, end members 18 and 19 are pressed into the opposing ends of roller assembly 11. This unit is then slid onto the support shaft until end member 19 contacts collar 16. At the same time, the detent members 26 of end member 18 engage annular groove 17. The roller assembly is then fixed against lateral movement on the support shaft, but can revolve freely about it.

To disassemble the applicator, pressure is applied against the face of end member 19, disengaging the detent members of end member 18 from groove 17, enabling the entire roller assembly to be slid off the support shaft 14. The end members can then be removed from the roller, and the roller cleaned or replaced by a new roller.

While there has been illustrated and described the present embodiment in more or less detail, it will be understood that the invention is not limited thereto, and includes all changes and modifications coming within the scope of the claim.

What is claimed is:

A paint roller structure, comprising a supporting shaft provided with an abutment and with a transverse groove in longitudinally spaced relation thereto, a pair of end discs each having a laterally extending hub section apertured to enable the disc to be slid along and to be rotatably mounted on said shaft, each of said end discs also having a laterally extending rim section, and a generally annular section extending radially between said hub section and said rim section, a hollow cylindrical member having its end portions non-rotatably seated on the rim sections of said end discs, the generally annular sections of said discs extending radially outwardly beyond said rim sections to provide end stops for said hollow cylindrical member, and a paint-applying cover secured to said hollow cylindrical member, the hub section of one of said end discs having bearing engagement against said shaft abutment to thereby prevent sliding movement of said end disc along the shaft in a direction away from the shaft groove, the hub section of the other end disc comprising a series of circumferentially spaced laterally extending yieldable fingers, the free ends of at least two of which are provided with radially extending projections

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having retaining snap-action engagement in the groove of said shaft, to thereby normally prevent sliding movement of such disc in either direction along said shaft.

References Cited in the file of this patent

UNITED STATES PATENTS

627,108	Fishel	June 20, 1899	
632,774	Bateman	Sept. 12, 1899	
759,408	Tonini	May 10, 1904	10

5

885,036
1,238,880
1,482,660
1,500,199
1,904,122
2,545,700

498,680

4

Gibson	Apr. 21, 1908
Buck	Sept. 4, 1917
Overmyer	Feb. 5, 1924
Overmyer	July 8, 1924
Chapman	Apr. 18, 1933
MacKey	Mar. 20, 1951

FOREIGN PATENTS

Belgium	Feb. 1, 1951
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