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M. P. VENGRIS

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ROLLER TYPE PAINT APPLICATOR

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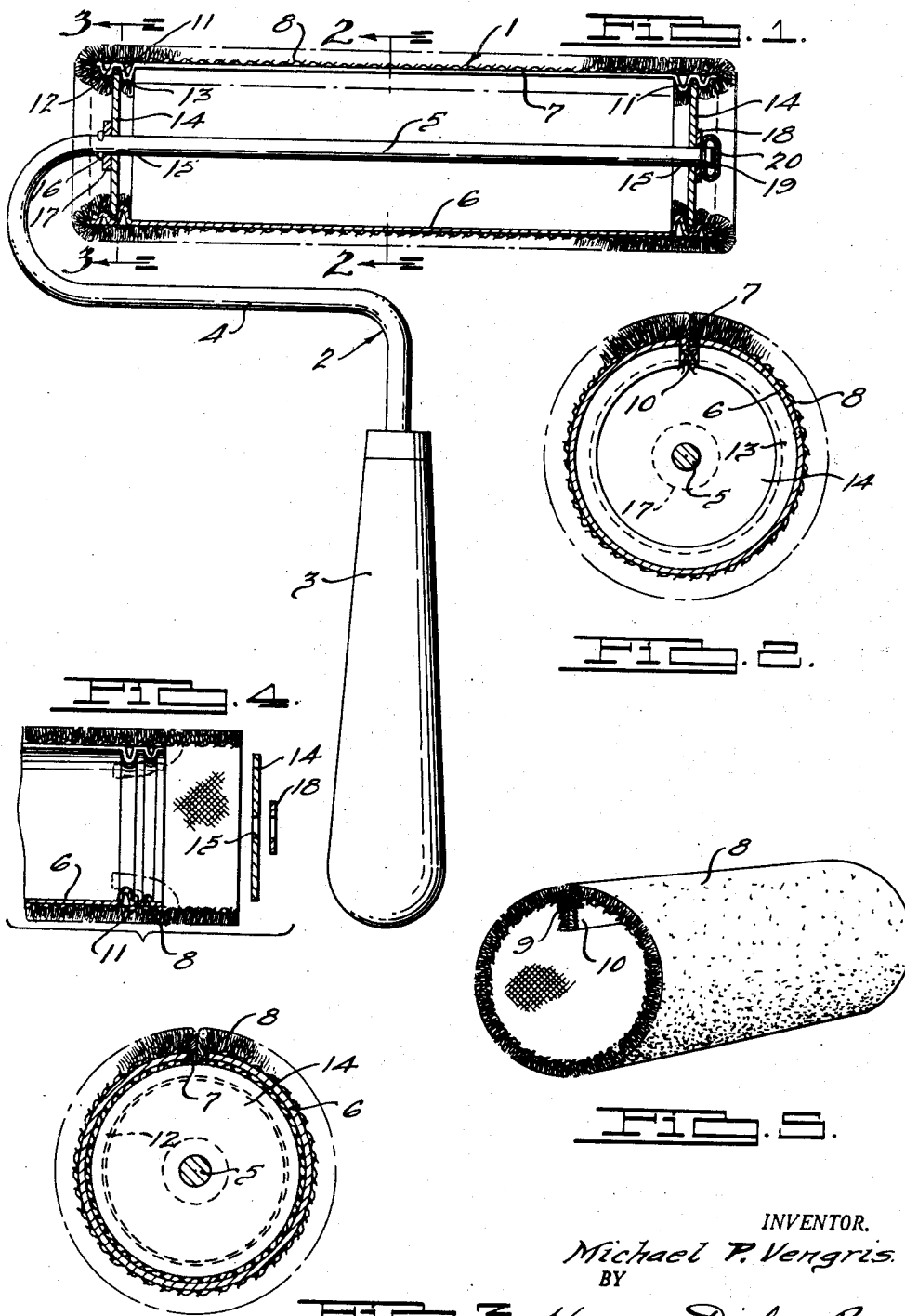


FIG. 3. *Harner, Dickey & Pierce*
ATTORNEYS.

UNITED STATES PATENT OFFICE

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ROLLER TYPE PAINT APPLICATOR

Michael Peter Vengris, Dearborn, Mich., assignor
to The Drum Corporation, Detroit, Mich., a
corporation of Michigan

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4 Claims. (Cl. 29—116)

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The present invention relates to improvements in paint rollers, or liquid contact applicators.

Hand tools have been employed which comprise contact rollers having pile fabric surfaces with the rollers rotatably mounted on handles. The pile fabric covers are usually removable so that they may be cleaned, but in prior constructions the covers and their mountings have been such that proper cleaning is not attained and the covers have a comparatively short life. According to the present invention, the covers are mounted on the rollers in an improved manner so that they may be easily applied or removed and easily cleaned.

One of the primary objects of the present invention is to provide an improved way of applying and attaching the cover to a roller so that it may be easily applied and removed and the cover may be easily and thoroughly cleaned.

A further object of the invention is to provide an improved hand tool of the type mentioned which is economical to manufacture.

Other objects of the invention will become apparent from the following specification, the drawing relating thereto and from the claims hereinafter set forth.

In the drawing, in which like numerals are used to designate like parts in the several views throughout:

Figure 1 is a cross-sectional view of a paint contact roller, showing the handle upon which the roller is mounted in elevation;

Figure 2 is an enlarged, cross-sectional view taken substantially along the line 2—2 of Figure 1;

Figure 3 is an enlarged, cross-sectional view taken substantially along the line 3—3 of Figure 1;

Figure 4 is a partial end view of the roller and illustrates the manner of applying the cover to the mounting member; and

Figure 5 is a perspective view of a pile fabric cover employed with the present invention.

Referring to the drawing, a paint contact roller is generally indicated at 1 and is rotatably mounted upon a handle, generally indicated at 2.

The handle 2 comprises a hand grip 3 having a rod or tube 4 projecting from one end thereof which is reversely bent to provide a mounting shaft 5. The hand grip 3 is substantially normal to the axis of the mounting portion 5.

The contact roller 1 comprises an elongated tubular member 6, which is preferably formed of metal and which has a longitudinally extending slot 7 completely therethrough. The mounting

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tube 6 is thus resilient and may be compressed slightly when the cover 8 is applied thereto.

The cover 8 is a pile fabric, such as mohair, and is formed of a rectangular sheet of such material. The adjacent edges of the sheet are brought together and stitched, inwardly of the edges, as indicated at 9. The cover is then turned inside out, so that the stitched edges form a radially inwardly directed flange 10, as indicated in Figure 5, with the fibers of the cover directed outwardly. It is thus in tubular form and the dimensions are such that when it is applied to the mounting member 6 the member 6 is slightly sprung inwardly, so that after the cover is mounted on the member 6 it is firmly held thereon. The cover 8 is longer than the mounting member for a purpose which will be described hereinafter.

The cover 8 is mounted on the tubular member 6 so that the inwardly directed flange 10 of the cover is received within the slot 7. The ends of the cover 8 project beyond the ends of the mounting tube 6, as indicated in Figure 4.

In order to secure the cover 8 to the tube 6 and to mount the roller 1 on the shaft 5, an internal annular groove is formed adjacent each end of the member 6. Such groove is indicated at 11 and is formed between a pair of internally directed annular flanges 12 and 13, adjacent each end of the tube 6. Such flanges may be rolled in the tube 6 and the inner annular flange 13 has greater depth, or projects radially inwardly a greater distance, than the outer flange 12.

The cover 8 is secured to the member 6 and the assembly is mounted on the shaft 5 by means of metal disks or washers 14. The disks 14 have an external diameter slightly larger than the internal diameter of the flanges 12 but substantially larger than the internal diameter of the flanges 13. The disks 14 also have central openings 15 therethrough, through which the shaft 5 projects for rotatably mounting the roller assembly 1.

In applying the cover 8 to the mounting member 6, it is telescoped over the member 6 with the flange 10 received within slot 7 and with both ends of the cover 8 projecting beyond the ends of the tube 6, as described above. The overhanging ends of the cover 8 are then turned inwardly, as indicated by the broken lines in Figure 4, so that such inturned ends overlie their adjacent grooves 11. The disks 14 are then forced into their adjacent ends so that they snap over flanges 12 and clamp the intucked ends of the cover 8 into grooves 11. The inner annular

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flanges 13 serve as stops to limit the inward movement of the disks 14.

The assembly may then be applied to the shaft 5 so that such shaft is received through openings 15 in the disks 14. In order to properly position the roller assembly 1 on the shafts 5, axial movement in one direction is limited by tabs or projections 16 which may be struck in the shaft 5 adjacent the bent end, and a washer 17 is received over the shaft 5 adjacent the projection 16 against which the adjacent disk 14 abuts. The shaft 5 projects slightly beyond the opposite disk 14 and a washer 18 may be disposed over the shaft 5 on the outside of the adjacent disk. The end of shaft 5 is formed with a groove 19 and a snap button 20 is snapped over the end of the shaft 5 within groove 19 so that the contact roller assembly 1 is rotatably held on the shaft against axial displacement.

To remove the roller, it is merely necessary to take off the snap button 20 and the washer 18, and the assembly may be pulled off shaft 5. It is then only necessary to insert a tool, such as a screwdriver, in the opening 15 of each disk and snap it out of groove 11. The ends of the cover 8 may then be pulled out and the cover removed from the mounting tube 6. It may then be thoroughly cleaned and re-applied for the next use.

Formal changes may be made in the specific embodiment of the invention described without departing from the spirit and substance of the invention, the scope of which is commensurate with the appended claims.

What is claimed is:

1. In a liquid applicator tool, a cylindrical member, means forming an internal annular seat in each end of said member, said last named means comprising a pair of longitudinally spaced, inwardly directed flanges adjacent each end of said member, the inner flange of each pair extending farther inwardly than the outer flange, a cover embracing said member, the opposite ends of said cover being turned in around the ends of said member to overlie said seats, a disk disposed within each end of said member holding the inturned end of the cover within its seat, and means forming aligned central openings in said disks.

2. In a liquid applicator tool, a cylindrical member, means forming an internal annular groove in each end of said member, said last named means comprising a pair of longitudinally spaced, inwardly directed, annular flanges adjacent each end of said member, the inner flange of each pair extending farther inwardly than the outer flange, a cover embracing said member, the opposite ends of said cover being turned in around the ends of said member to overlie said grooves, a disk dis-

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posed within each end of said member holding the inturned end of the cover within its groove, the construction and arrangement of said flanges and the disks with respect to each other being such that the disk may be snapped over the outer flange and the inner flange serves as an abutment, and means forming aligned central openings in said disks.

3. In a liquid applicator tool, a cylindrical member having a longitudinal extending slot therethrough, means forming an internal annular groove in each end of said member, said last named means comprising a pair of longitudinally spaced, inwardly directed, annular flanges adjacent each end of said member, the inner flange of each pair extending farther inwardly than the outer flange, a cover embracing said member, the opposite ends of said cover being turned in around the ends of said member to overlie said grooves, a disk disposed within each end of said member holding the inturned end of the cover within its groove, the construction and arrangement of said flanges and the disks with respect to each other being such that the disk may be snapped over the outer flange and the inner flange serves as an abutment, and means forming aligned central openings in said disks.

4. In a liquid applicator tool, a cylindrical member having a longitudinally extending slot therethrough, means forming an internal annular groove in each end of said member, a pile fabric cover embracing said member, said cover having the adjacent edges inturned and the inturned edges received within said slot, the opposite ends of said cover being turned in around the ends of said member to overlie said grooves, a metal disk disposed within each end of said member holding the inturned end of the cover within its groove, and means forming aligned central openings in said disks.

MICHAEL PETER VENGRIS.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
472,237	Crooker	Apr. 5, 1892
689,590	Johnson et al.	Dec. 24, 1901
940,985	Moore	Nov. 23, 1909
1,287,121	Skau	Dec. 10, 1918
2,437,050	Schulz	Mar. 2, 1948
2,520,363	Thomas et al.	Aug. 29, 1950

FOREIGN PATENTS

Number	Country	Date
19,094	Great Britain	Aug. 29, 1896
185,968	Switzerland	Nov. 16, 1936