

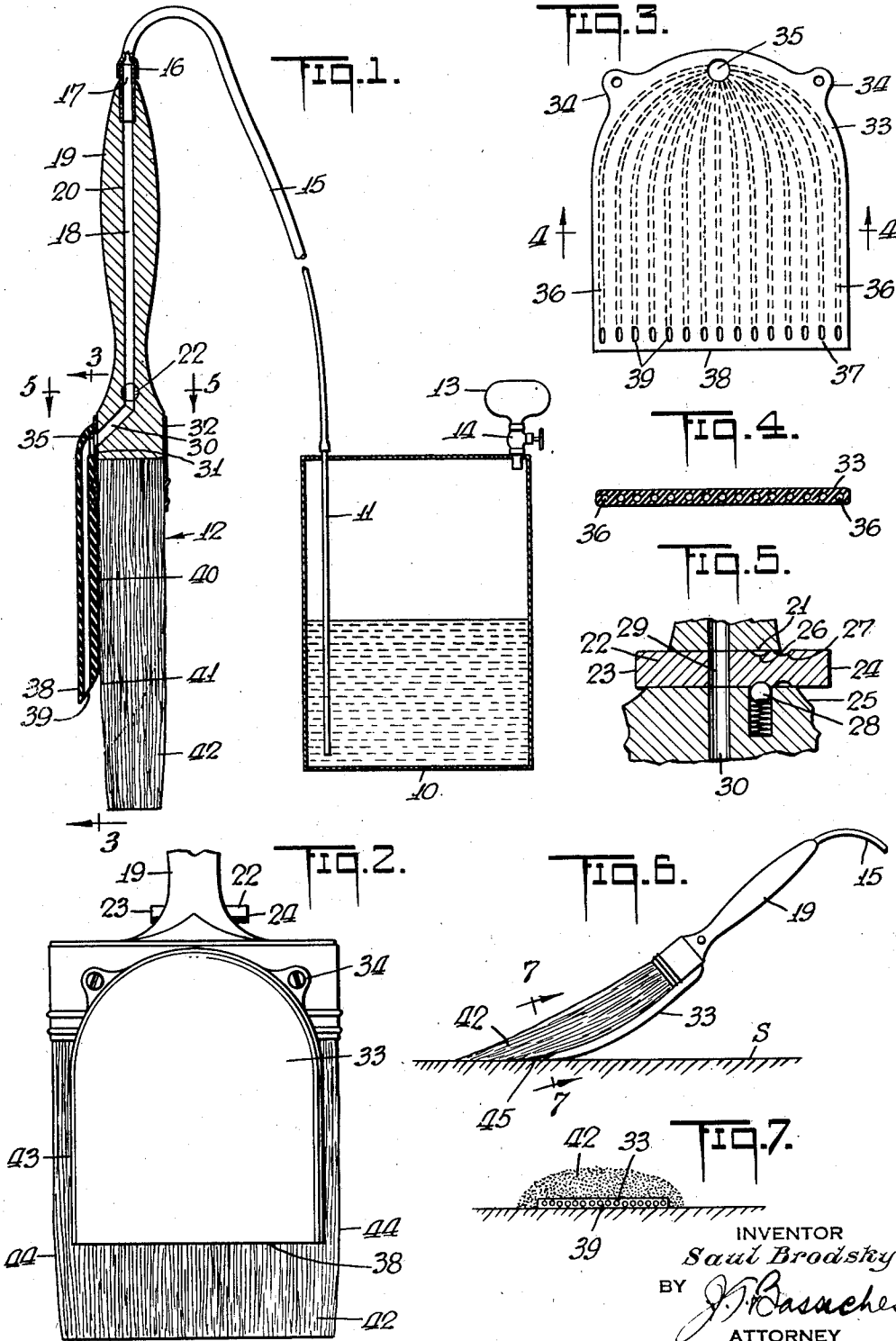
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FOUNTAIN BRUSH AND ATTACHMENT THEREFOR

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FOUNTAIN BRUSH AND ATTACHMENT THEREFOR

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This invention relates to paint brushes, and more particularly to a fountain-type feed of paint brush.

Known to me are the endeavors made to feed paint or like wall coating material to a bristle brush whereby the labor of dipping the brush into the paint can or reservoir is minimized. However, the process of painting is not merely that of distributing paint, and the efforts as heretofore made for automatically feeding liquid to a paint brush destroyed or inhibited one of the primary purposes of the bristle brush, to wit, the distribution of the paint on the wall or surface after its application to the wall or surface.

It is accordingly an object of my invention to provide a fountain type paint brush which permits application of the coating material from a remote reservoir and which permits distribution of the paint or coating material on the wall by the brush bristles, without impairing the efficiency of the brush, or requiring any new or different technique to be exhibited by the painter in working in the coating materials or paint on the surface.

I have found that an external application of the paint to the paint brush bristles in a manner not to interfere with the effectiveness of the bristles and to take advantage of the cupping or enveloping action of the bristles on the surface about the liquid distributor, makes the expedient of a fountain type of paint brush commercially practicable. I have further found that by the employment of a manifold which is flexible and externally located, little or no change in design of the bristle construction need be made, and this construction may be availed of efficiently, to carry out the steps of applying the paint or coating material to the wall surface, and thereafter "working in" or distributing the coating material into the wall surface without impairing the efficiency, design or manner of manipulation of this contrivance.

Still more particularly it is an object of my invention to combine with a brush having a fountain feed, a manifold for applying the surface coating material or paint to the outer face bristles and combine with the bristles as they are warped or flexed in normal position on the surface, means for efficiently distributing the paint without streaking or running of the paint or coating material.

Still more particularly, it is contemplated by my invention to provide in combination with a paint brush, a manifold for applying paint or the

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like to the brush, which may be coordinated with the wear and life of the bristles themselves so that the effectiveness of the manifold, as to length and position, may be constant in relation to the bristles.

Other objects of my invention reside in the provision of a fountain type brush which is efficient in operation, and economical in production and maintenance.

To attain these objects and such further objects as may appear herein or be hereafter pointed out, I make reference to the accompanying drawing forming a part hereof in which:

Figure 1 is a longitudinal sectional view of the combined fountain brush and dispensing container, the brush being magnified for clarity;

Figure 2 is a fragmentary side elevation of the brush assembly;

Figure 3 is a section taken on the line 3—3 of Figure 1;

Figure 4 is a section taken on the line 4—4 of Figure 3;

Figure 5 is a fragmentary section taken on the line 5—5 of Figure 1;

Figure 6 is a view showing the brush in use on a wall surface;

Figure 7 is a section taken on the line 7—7 of Figure 6.

Making reference to the drawing, it is contemplated by me to feed paint from a storage receptacle 10, through a tube 11, to a brush 12. A pressure head for feeding the paint or like liquid material upwardly through the tube 11 may be effected by a cartridge 13 of compressed gas, such as carbon dioxide which, by the valve 14, maintains a pressure head for the paint, in order to feed it upwardly through the tube 11. The pressure head of compressed gas may be furnished by other means, such as compressed air, furnished by a pump, air compressor or the like.

The tube discharges into an extended length of flexible tubing 15, whose terminal end 16 is connected with the nozzle 17 of the duct 18 in the handle 19 of the brush 12. The duct 18 may be fitted, nested or recessed within a boring or edge slot of the handle 19. In the illustration shown, the duct 18 is a boring 20, intersecting a transverse boring 21, within which there is slidably mounted the valving element 22, whose opposite ends 23—24 protrude adjacent the shoulder 25 of the brush handle. Annular slots 26 and 27 cooperate with a detent 28 to tension the valving element 22 in one of two positions. A valve port 29 serves to bring the duct 18 in communication with the channel 30, terminating in the side 31

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through the ferrule 32 of the brush. The channel 30 is capped by the manifold 33, which has a pair of lateral ears 34, 34 adjacent the upper edge, held by fastening elements or screws to the side 31 of the brush. The manifold aperture 35 connects with a series of ducts 36, which lead from the common opening 35 to the mitre edge 37 adjacent the straight edge 38, thereby forming a plurality of apertures 39 adjacent the mitre edge 37. The manifold 33 is arranged to have its face 40 hug the face 41 of the bristles 42 in the normal position of the brush.

The width of the manifold is chosen so that its side edges 43 are spaced inwardly from the side edges 44 of the bristle assembly of the brush.

I have found that the material for the manifold which serves my purposes is a neoprene or like oil insoluble synthetic flexible rubber body. This material is selected so that it is sufficiently limp or flexible to conform to the curvature of the bristles in the usual operation of bending, warping or flexing of the brush in applying and distributing paint.

The mitre edge 37 and the straight edge 38 cooperate with the bristles so that as the brush is flexed against the surface S, a pocket 45 is formed and is closed on one side by the surface of the wall S and on its opposite edges by the bristles which have been spread in flexing the brush against the wall surface. Thus the liquid coating is fed in a space between the wall surface and the brush and not through the brush.

In the position as shown in Figure 6, the painter flicks the valve member 22 by pressing the edge 23 to bring the port 29 in alignment with the duct 18. Paint under pressure oozes into the pocket 45 previously described, and the painter thereupon applies the paint to the wall surface, manipulating the brush in the usual manner. After a quantity of the paint has been applied, he can work properly under normal painting operations. The painter then flicks the end 24 of the valve to close the duct 18, as the detent 28 enters the groove 27. When this operation has been accomplished, the painter then distributes the paint with the bristles in the usual way, working in the paint by up and down strokes, effected by both sides of the brush.

The flexibility of the manifold 33 is such as to conform to bristle bending in the distribution of the paint and as the painter works in the paint with the bristles, the characteristic brushing movement is carried out effectively, with no interference by reason of the brush having the limp manifold mounted thereon. Attachment to suspend the manifold to the handle part, at the upper edge by means of the ears 34 is all that is required.

As use may cause the bristles 42 to become worn out, the painter may merely coordinate the length of the manifold with the length of the bristles, by cutting a small section of the manifold along the edge 37. A scissor, knife or similar instrument is all that is required to trim the manifold to the proper size with relation to the length of the bristles of the brush.

It will be understood that the matter of dipping the bristles into a paint-can involves a time factor which is material. The painter on his scaffold or ladder must replenish the supply of paint from time to time, and therefore keep within close range of it.

Fountain type brushes known to me have not heretofore been successful because of a misapplication of the feed of the paint and a destruc-

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tion of the effectiveness of the bristles to perform their intended purpose.

By my invention, the established technique of the painter is maintained for the important painting factors of first applying the paint and then distributing it and working the paint in on the wall, free from brush marks or streaks.

It will be understood that while I have described and shown in my invention a manifold as applied only to one side of the brush and that this is desirable to a certain extent in that spattering, as the brush is flicked, is minimized, it will be understood that I may apply manifolds to both exposed faces of the brush, without departing from the spirit of my invention, it being understood that the painter may then require dual valve control to time the opening and closing of the valve with the particular manifold which is effective.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent, is:

1. In a paint brush or the like having a fountain feed and channel, the combination therewith comprising a flexible wall conforming manifold having a distributing edge transversely of the brush and means for attachment to an outer face of the brush head, a passage in said manifold for receiving paint from the fountain channel, and ducts between the said edge and brush connected with said passage terminating adjacent said distributing edge and confined between the said edge and said brush in flexing the brush in painting.

2. In a paint brush or the like having a fountain feed and channel, the combination therewith comprising a flat, wall conforming flexible manifold having a distributing edge transversely of the brush and means for attachment to an outer face of the brush head, a passage in said manifold for receiving paint from the fountain channel, and ducts between the said edge and brush connected with said passage terminating adjacent a distributing edge, said edge having a face directed at an angle to conform the same to the bowing curve of the brush bristles as the bristles are contacted against the surface to be painted.

3. In a paint brush having a bristle part and a handle part with a fountain feed, the combination therewith of a flat, wall conforming flexible manifold having a distributing edge transversely of the brush and a portion connected with said feed and held to the exterior face of the brush head in a position to be flexed by the brushing operation of the brush, feed ducts through said manifold having discharge points adjacent the exterior face of the bristle part of the brush to have the discharge ends between the manifold and brush, with said bristle part of said brush extending beyond the distributing edge of the manifold whereby the manifold flexes in applying the paint to a surface, with the sides of the bristles of the brush enveloping the discharge apertures of said manifold.

4. In a paint brush or the like having a handle part and a bristle part, with a fountain feed line, the combination therewith of a flexible manifold connected to said feed line having a wall conforming edge and attached to the handle part of said brush on the exterior face thereof, said manifold being in close proximity to the brush exterior and flexing with the brush bristles during operation and having the discharge end between the manifold and brush part during flexing over said manifold.

5. In a paint brush or the like having a handle

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part and a bristle part, with a fountain feed line, the combination therewith of a flexible manifold connected to said feed line and attached to the handle part of said brush on the exterior face thereof, said manifold encasing a plurality of distributing ducts terminating in a rectilinear edge adjacent the bristles to have outlets between the brush part and manifold, the manifold being capable of being readily trimmed along said edge so that its length may be kept in conformity with the length of the bristles of the brush.

6. In a paint brush or the like having a handle portion and a bristle portion and a conduit to serve as a fountain feed for the brush from a remote source of supply, a flexible manifold having a wall conforming edge affixed to the outside face of the handle part including one portion connected with the conduit and the other lying adjacent the bristle portion and having discharge apertures between the manifold and bristle portion, said manifold being of a flexibility to conform to the bending of the bristles in use, and to direct the discharge apertures to a position where the fluid flows from said manifold between the bristles and the surface to which the paint is applied with the bristle portion extending beyond the distributing edge of the manifold.

7. In a paint brush or the like having a handle portion and a bristle portion and a conduit to serve as a fountain feed for the brush from a remote source of supply, a flexible manifold having a wall conforming edge affixed to the outside face of the handle part, including one portion connected with the conduit and the other lying adjacent the bristle portion and having discharge apertures between the manifold and bristle portion, said manifold being of a flexibility to conform to the bending of the bristles in use, and to direct the discharge apertures to a position where the fluid flows from said manifold between the outer bristles and the surface to which the paint is applied, said manifold apertures lying between the outer edges of said bristle part to have the

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apertures enveloped by the bristles in applying the liquid to the surface to be coated.

8. In a paint brush or the like having a handle portion and a bristle portion and a conduit on the handle part to serve as a fountain feed for the brush from a remote source of supply, a flexible manifold having a wall conforming edge affixed to the outside face of the handle part, including one portion connected with the conduit and the other lying adjacent the bristle portion and having discharge apertures between the manifold and bristle portion, said manifold being of a flexibility to conform to the bending of the bristles in use, and to direct the discharge apertures to a position where the fluid flows from said manifold between the outer bristles and the surface to which the paint is applied, said manifold having a plurality of channels, which terminate in a transverse edge lying adjacent the bristles, said edge lying at an angle forming a mitre edge substantially to conform to the bowing of bristles of the brush when flexed against the surface to be coated.

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