Sept. 24, 1940. P. M. GOLDRICK ET AL 2,215,610

FOUNTAIN BRUSH

Filed April 22, 1939

FIG. 1

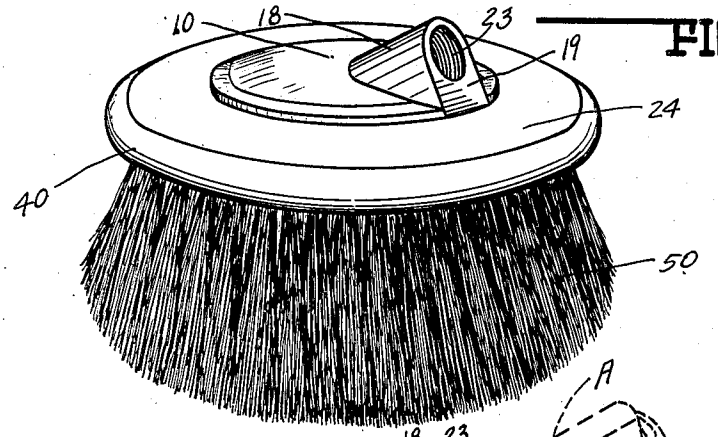


FIG. 2

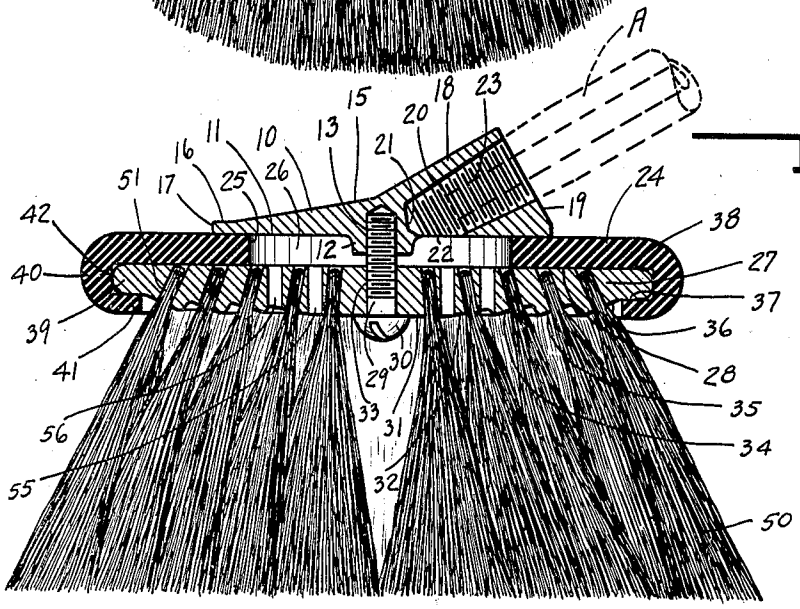


FIG. 4

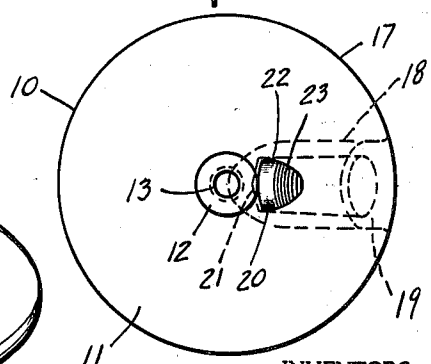
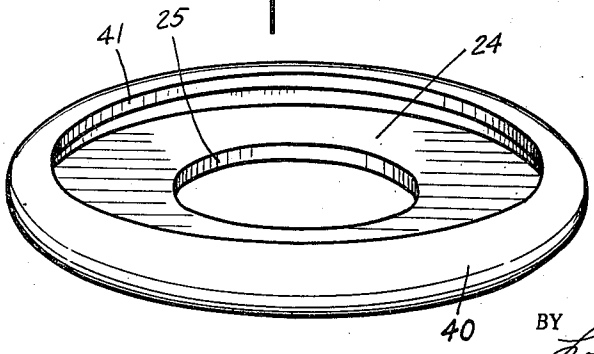


FIG. 3



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FOUNTAIN BRUSH

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Application April 22, 1939, Serial No. 269,500

1 Claim. (Cl. 15—128)

This invention relates to a simplified form of fountain brush.

The chief object of this invention is to provide a brush wherein the metallic parts are of relatively small area, if exposed, and such metallic parts which are not of such restricted area, are substantially encompassed and covered so that the possibility of marring of an object in the use of the brush is reduced to a minimum.

Another object of the invention is to construct a brush wherein the various tufts of bristles are progressively offset substantially as hereinafter set forth, and for the purpose set forth.

A further object of the invention is to produce a brush of fountain character which has all the advantages of previous brushes and substantially none of the disadvantages thereof and which is constructed of substantially a minimum number of parts.

The chief feature of the invention consists in providing a brush wherein the respective parts are so arranged and constructed that each of the foregoing objects is accomplished.

Another chief feature of the invention consists in the particular form of the combination gasket and protector element.

Other objects and features of the invention will be set forth more fully hereinafter.

The full nature of the invention will be understood from the accompanying drawing and the following description and claim:

In the drawing, Fig. 1 is a perspective view of one embodiment of the invention, the handle and fluid supply member being omitted.

Fig. 2 is a central sectional view of the brush shown in Fig. 1, the handle and fluid supply member being shown dotted.

Fig. 3 is a perspective view of the combination gasket and protector member.

Fig. 4 is a bottom plan view of the head member looking toward the gasket contacting face thereof.

In the drawing 10 indicates a head member which has a flat face 11 from which extends a boss 12 apertured and threaded as at 13. The upper and outer face of said member is slightly pitched in a flattened conical form, as indicated at 15, and is defined by a flange portion 16. The conical form may, if desired, extend to the peripheral edge 17.

Extending upwardly therefrom is a boss somewhat triangular in shape, in two transverse planes, as indicated at 18 in Fig. 2 and at 19 in Fig. 1. This boss structure has a tapered bore 20 therein terminating at 21 and short of the bore 13. This tapered bore 20 intersects the face 11 and forms the opening or discharge outlet 22 shown more clearly in Fig. 4. This tapered boss is suitably threaded as at 23. A handle member, such as a pipe A shown dotted in Fig. 2, can be screwed into the tapered threaded hole 20—23 and constitutes the handle for the brush structure and to supply fluid, such as water, to the brush structure.

A gasket 24 is of suitable resilient material such as rubber of the desired hardness, and the same includes a central aperture 25. Herein, preferably, the thickness of said gasket is greater than the length of the boss 12. The area of the opening 25 or central aperture is somewhat less than the area of the head member defined by the side wall 17 thereof. Herein the brush is shown as of circular outline. It may be, however, of elliptical, square, rectangular or other outline, as desired. In the present instance, the aperture 25 is also of circular outline and forms a chamber 26 which communicates with the discharge outlet 22 of the bore 20.

A back member is indicated generally by the numeral 27. It has a flat upper face 28 which engages the opposite face of the gasket 24. Herein it is shown of greater area than the head member and the part of the back member which projects beyond the head member is suitably covered or protected by the head exposed portion of the gasket member 24.

A bolt 29 has its head portion 30 bearing upon the lower face 31 of the back member and is threadedly engaged in the threaded bore 13 to clampingly connect the head, gasket and back members together in fluid tight relation. Herein the lower face 31 of the back member 27 is shown relieved annularly as at 32 and in spaced relation to the central opening 33 through the back member and which receives the bolt 29. Concentric therewith is another annular groove 34 and concentric therewith is a third annular groove 35. The portion 32 constitutes a step arrangement and the same also applies to the adjacent portions 34, 35 and 36. The portion 36 terminates in a face 37 parallel to the upper face 38 of the back portion. Face 31 is also parallel thereto but offset with reference to the face 37.

A flange 39 with rounded or relieved corners peripherally defines the brush back and the same is of reduced thickness relative to the thickness of the major portion of the brush back.

The gasket 24 includes a flange enveloping flange portion 40 and the same terminates at its free end in an inwardly directed flange 41. The

side wall 40 together with the protecting portion of the gasket 24 and the flange or rim 41 which is inwardly directed and substantially parallel to the portion 24 forms an inwardly directed reentrant groove 42 that seats the flange portion 39 of the brush back and protects the side and bottom edge of the brush back flange 39 so that furniture and the like will not be marred in the use of the brush. The specific cup like form of the combination gasket and protector is shown clearly in Fig. 3 but is shown in inverted relation for clearness in said figure.

A plurality of tufts of bristles indicated by the numeral 50 are suitably secured in recesses 51 in the brush back. Any desired or conventional method of anchorage may be employed. Preferably, the tufts are secured by what is known in the industry as the buttonholing thereof associated with wire anchorage means, not shown herein for clearness. Also, these tufts are arranged in annular series concentric with each other and in suitable spaced relation.

By way of example and explanation, only, the axes of the openings 51 that open upon the face 36 is approximately 25° from the vertical or central axis of the brush. The openings or recesses 51 that open upon the face 35 are at 20°. The similar openings that open upon the face 34 are at 15°. The openings 51 that open upon the face 32 are at 10°. The openings 51 that open upon the face 31 are at 5°. Any other desired inclination may be employed. The progressive inclination permits the brush bristles to flare outwardly and project beyond the outline of the combination gasket and protector, see Fig. 2.

Between the innermost annular series of bristles and the series next adjacent thereto, are the apertures 55 and these are circularly arranged and in spaced relation. A second annular series of apertures 56 is positioned between the second and third inner annular series of bristle tufts. The apertures 55 and 56 communicate with the chamber 26 and thus liquid supplied by the pipe A to the bore 20 engages the end wall 21 of the bore and discharges downwardly and to the right—see Fig. 2—and then divides and flows in opposite directions about the chamber 26 and from thence passes through the apertures 55 and 56 and flows down between the bristle tufts.

The annular flat faces of the head member and back member may be provided with annular ridges directed towards each other and of the same diameter or slightly different diameters for seating in the gasket or the gasket may be provided with oppositely directed annular ridges of the same diameter or slightly different diameters on opposite faces between that annular area defined by the side wall 25 of the gasket and the side wall 17 of the head structure, these being conventional methods of insuring positive fluid sealing, if, as and when desired, and since these are obvious expedients well known in the art of multiple part fountain structures, the same are omitted herein for clearness.

While the invention has been illustrated and described in great detail in the drawing and foregoing description, the same is to be considered as illustrative and not restrictive in character.

The several modifications described herein as well as others which will readily suggest themselves to persons skilled in this art, all are considered to be within the broad scope of the invention, reference being had to the appended claim.

The invention claimed is:

A brush including a back member of relatively great area compared to its thickness, the thickness being substantially uniform, the back member including on one face a plurality of reentrant annular grooves, one within the other, each groove having an angular outline in radial section, each successive outer groove having a greater depth than the adjacent inner groove, the angle outline side remote from the center of the brush and of each outer groove being of lesser inclination to the face, and the other angle outline side of the groove being of greater inclination to that face, and a plurality of bristle tufts projecting from the several grooves to form a substantially complete bristle brushing face of greater area than member area face, the lengths of the outermost tufts being greater than the innermost, all terminating in a plane substantially parallel to said member face, each tuft having a central axis substantially perpendicular to the second mentioned angle side of the groove and angular to a common plane defining said face.

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