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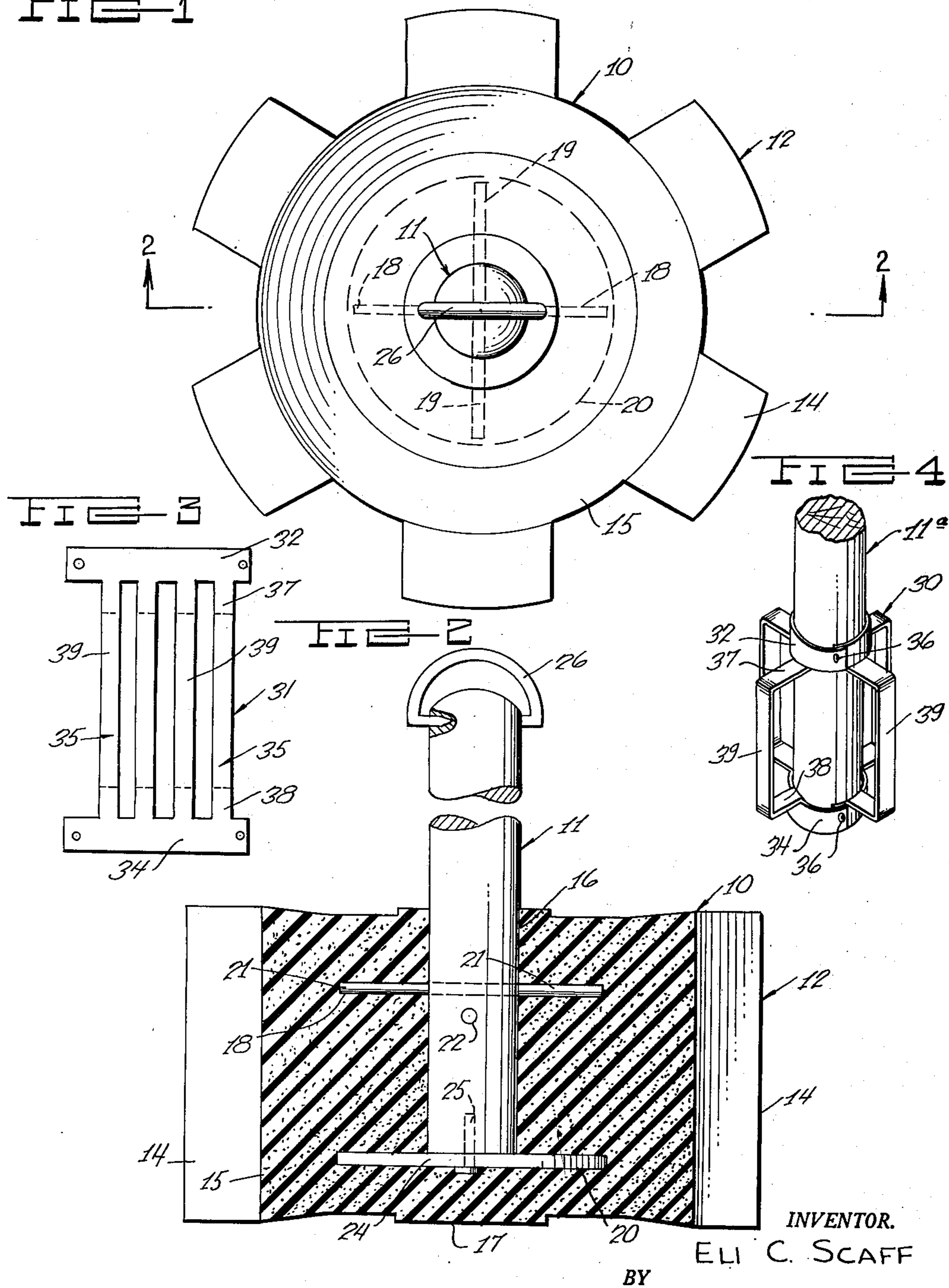
E. C. SCAFF

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TOILET BOWL BRUSH

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FIG-1



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2,628,381

TOILET BOWL BRUSH

Eli C. Scaff, La Junta, Colo.

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1 Claim. (Cl. 15—244)

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This invention relates to a brush, and more particularly to a toilet bowl brush for cleaning and scouring toilet bowls and the like.

It is an object of this invention to provide a toilet bowl brush of the kind to be more particularly described hereinafter, which is formed of sponge rubber or other resilient and flexible material which is effective for cleaning toilet bowls and the like, and which may be sterilized and cleaned in boiling water with no resultant damage.

Another object of this invention is to provide a brush of this kind which will readily reach into all parts of the toilet bowl, and is of such a soft texture that it will not scratch or otherwise mar the porcelain surface. The sponge-like formation of the brush will provide for substantially drying the brush by pressing, and the rubber formation will provide a brush having a longer life than the conventional bristle type of brush, and may be sold at a lower price than the brushes presently on the market for the same use.

Still another object of this invention is to provide a novel fastening means for securing a resilient sponge-like brush member on an end of a handle.

With the above and other objects in view, my invention consists in the arrangement, combination and details of construction disclosed in the drawings and specification, and then more particularly pointed out in the appended claim.

In the drawings:

Figure 1 is a top plan view of a toilet bowl brush constructed according to an embodiment of this invention;

Figure 2 is a transverse section, partly broken away, taken on the line 2—2 of Figure 1;

Figure 3 is a top plan view of a blank of a modified connecting member for securing the brush body to a handle;

Figure 4 is a perspective view, partly broken away, of the connecting member shown in Figure 3 connected to one end of a brush handle.

Referring to the drawings, the numeral 10 designates generally a toilet bowl brush constructed according to an embodiment of this invention for cleaning and scouring toilet bowls and the like. The brush 10 is formed with a handle 11 and a brush element or brush body 12 removably secured on one end of the handle 11. The brush body or brush element 12 is formed of an aerated rubber or sponge material preferably of the type known as the Dupont cellulose sponge material or the Goodyear Airfoam rubber. Preferably, the cellulose material will be used as such

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material provides for the boiling of the brush body in boiling hot water to sterilize the body after its use.

The brush body or brush elements 12 may be of any desired or suitable exterior configuration, and preferably of a substantially cylindrical body, as shown in the drawings, having outwardly-extending key members or lugs 14 extending outwardly from the periphery thereof. Preferably, the central cylindrical body 15 will have a plurality of circumferentially-spaced-apart lugs extending outwardly from the outer side thereof, as clearly shown in Figure 1 of the drawings, to provide for an abutment or bearing surface for scrubbing the articles on which the brush 10 is used.

The sponge-like body is formed with an outwardly-opening central bore or recess 16 which opens through the upper side thereof. The bore or recess 16 is terminated within the body 12 spaced upwardly from the extreme lower surface 17 thereof. The bore 16 will preferably be formed with an inside diameter substantially smaller than the outside diameter of the cylindrical rod or handle 11 for frictionally securing the handle therein. A plurality of horizontal inwardly-opening passages 18 are formed within the body 12 and communicate at their inner ends with the recess or bore 16, as clearly shown in Figure 2 of the drawings. Preferably, a pair of passages 18 will be disposed radially of the bore 16 and will be aligned transversely of the brush body 12, extending outwardly from the opposite side of the central bore 16. A second pair of passages 19 are formed in the body 12 in substantially the same manner as the outwardly-extending passages 18 and will be disposed at a different level or spaced downwardly therefrom and also communicate at their inner ends with the central bore 16.

At the lower end of the bore 16, there is formed an outwardly-extending cut-out portion 20 which extends outwardly and radially from the bore 16. The cut-out portion 20 intersects the extreme lower end of the bore 16 and extends outwardly therefrom substantially at right angles thereto. The cut-out portion 20 is substantially annular in configuration and is disposed in communication at its inner edge with the lower end of the recess or bore 16. The outwardly-extending passages 18 and 19 and the outwardly-extending cut-out portion 20 provide for the engagement of fastening elements to be carried by the handle 11 for removably securing the brush element 12 thereon.

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A pair of outwardly-extending pins 21 are fixed on the lower end of the handle 11 and extend outwardly therefrom substantially radially for engagement within the passages 18 of the brush element 12. When the pins 21 are cylindrical in configuration, the pins will have an outside diameter slightly greater than the inside diameter of the corresponding cylindrical passages 18 to provide for the frictional engagement of the pins 21 within the passages 18. A similar set of radially-extending pins 22 are fixed on the lower end of the handle 11 and extend radially outwardly therefrom at a lower level than the pins 21 and are adapted to be frictionally engaged within the passages 19.

A flat, circular plate 24 is fixedly secured to the extreme lower end of the handle 11 and is suitably fixed thereon by a bolt, rivet, screw or other suitable fastening member 25 which is engaged through the plate 24 and into the lower end of the handle 11 along the length thereof. The plate 24 is formed for engagement in the cut-out portion 20 below the passages 18 and 19 to provide for the fixed engagement of the lower end of the handle 11 in the brush element 12. The plate 24 will normally have a thickness slightly greater than the opening of the cut-out portion 20, so that the plate 24 will be frictionally engaged therein.

A bail 26 may be pivotally engaged on the extreme upper end of the handle 11 for suitably securing the handle in any selected position, as on a fastening hook or the like.

In the use and operation of the brush 10, with the handle 11 and brush element separated, the resilient aerated sponge-like body 12 may be initially extended for increasing the inside diameter of the central bore 16 and the inside diameter of the passages 18 and 19. With the sponge-like body 12 in its extended position, the handle 11 with the pins 18 and 19 and the plate 24 secured thereon is then engaged in the bore 16 and the body 12 may be suitably distorted for engaging the plate 24 in the cut-out portion 20 and the pins 18 and 19 in their respective recesses or passages. Such arrangement completes the assembly of the brush and the brush may then be used for cleaning toilet bowls and the like for which it is particularly designed.

By forming the brush of this resilient, sponge-like material, a suitable cleaning operation may readily be accomplished and the cleaning operations may include the use of scouring powders or other abrasive material, and this abrasive material will in no manner affect the deterioration of the sponge-like body 12, but will provide for the suitable cleaning of the toilet bowls or the like. The formation and configuration of the brush body 12 will provide for the suitable cleaning of the brush body by engaging the sponge body in hot boiling water, and then pressing the body for removing the water therefrom. In this manner the body 12 may be suitably dried to provide for the further use of the body.

In Figures 3 and 4 of the drawings there is shown a modified form of connecting member 30 for securing the brush body or element, not shown in the drawing, to the brush handle 11a. The connecting member 30 is preferably formed from a blank 31 of flat sheet metal material to be bent

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or formed to the desired shape or configuration to be more particularly described hereinafter.

The blank 31 is initially formed by stamping or cutting a flat sheet of metal in a manner to provide a pair of spaced-apart transverse bars 32 and 34 connected together by a plurality of spaced-apart connecting bars 35. The transverse bars 32 and 34 are adapted to circumvent one end of a brush handle 11a to be secured thereon by nails or other suitable fastening elements. When the bars 32 and 34 are secured on the handle 11a, they are moved closer together than when they were on the blank 31 so that the connecting bars 35 will be crimped to U-shape, each connecting bar 35 then including a pair of outwardly-extending arms 37 and 38 connected at one end to a handle strap formed by the transverse bars 32 and 34, respectively, and connected together, at their outer ends, by an outwardly-spaced bight 39.

When the fastening member 30 is engaged on one end of the handle 11a, the brush-engaging members connecting bars 35 will be circumferentially spaced apart about the handle 11a as the transverse bars 32 and 34 will encircle one end of the handle.

The brush which will engage the connector 30 will be of sponge rubber or other suitable resilient and flexible material, formed suitably to be engaged within the body thereof by the outwardly-offset members 39.

I do not mean to confine myself to the exact details of construction herein disclosed, but claim all variations falling within the purview of the appended claim.

I claim:

Means for attaching a rubber brush to a handle comprising a pair of flat bar elements formed into ring shape and circumposed on the handle at longitudinally spaced points and affixed thereto, circumferentially spaced flat U-shaped bars having straight arms, said arms being disposed in parallelism at right angles to the ring-shaped bar elements and formed integrally therewith, the bight portions of said bars being straight and parallel to the handle and spaced outwardly therefrom by the arms, said U-shaped bars being adapted to be embedded within the brush.

ELI C. SCAFF.

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