J. D. GARVEY.

BRUSH.

APPLICATION FILED FEB. 9, 1917.

1,240,558. Patented Sept. 18, 1917.

Fig. 5.

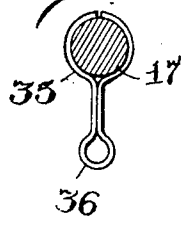
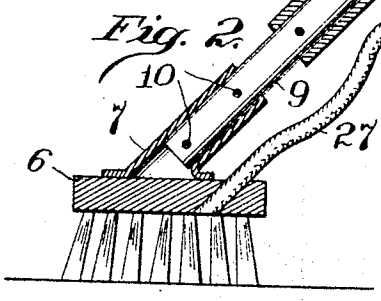


Fig. 1.

Fig. 2.



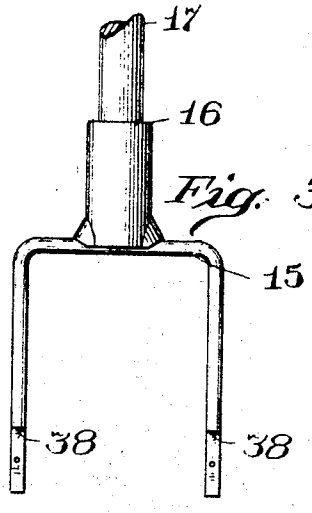
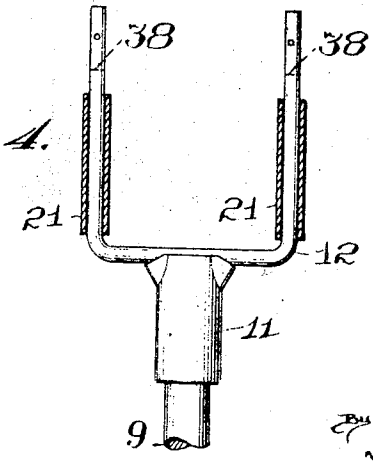


Fig. 3.

Fig. 4.



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BRUSH.

1,240,558. Specification of Letters Patent. **Patented Sept. 18, 1917.**

Application filed February 9, 1917. Serial No. 147,526.

To all whom it may concern:

Be it known that I, JAMES D. GARVEY, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Brushes, of which the following is a description, reference being had to the accompanying drawing, which forms a part of my specification.

My invention relates to improvements in brushes, more particularly to that form known as the fountain type of brushes, comprising a fluid-containing reservoir provided with a conduit leading to the brush-proper and means whereby the flow of fluid from the reservoir to the brush may be controlled and made intermittent.

The object of my invention is to provide a fountain brush of simple design and efficient operation; and wherein the respective parts may be readily separated for replacement and repair, as will be readily comprehended from the following description of the accompanying drawing, in which—

Figure 1 is a side view of a fountain brush embodying my invention; with an intermediate portion of the handle broken away.

Fig. 2 is an enlarged longitudinal sectional view of my invention, with the upper portion of the handle broken away.

Fig. 3 is a detail view, in elevation, of the upper encircling member or yoke for supporting the container.

Fig. 4 is a similar view of the lower encircling member or yoke, with the sleeves or ferrule members shown in longitudinal section.

Fig. 5 is a detail view of a pull-cord or chain supporting loop shown in plan and the handle in cross-section.

It will be apparent from the drawing and the description hereinafter contained that my invention may be applied to a number of different uses. I have chosen in this application to illustrate my invention as embodied in a scrubbing brush.

Referring to the drawing, the numeral 6 represents the brush proper, which may be of any suitable size and type, having attached to the upper surface thereof a socket or sleeve 7 formed and set at a suitable inclination to the brush-back. The sleeve may be secured to the brush-back in any suitable manner, as, for example, by screws, as shown at 8 in Fig. 1.

The socket or sleeve 7 is adapted to receive a short shaft or rod 9, preferably of wood; the shaft or handle-portion being secured in the sleeve by any suitable means, as, for example, the rivets 10. The opposite end of the rod 9 is intended to enter the socket-portion 11 of a bifurcated member or yoke 12, cast integral therewith or otherwise secured thereto and constituting the lower part of a rectangular frame. The bifurcated member or yoke 12 is adapted to straddle or fit about the lower end of a fluid-container or receptacle 13, with the legs of the yoke or bifurcated member being adapted to extend lengthwise of and along the sides of the receptacle; while the intermediate or transversely disposed portions of the yoke fit into a suitable groove 14 formed in and extending transversely of the bottom or lower end of the receptacle 13, as more clearly disclosed in Fig. 2, thereby preventing the receptacle from slipping out of place. The ends of the yoke 12 are formed with a kerf or rabbet so as to coact with the rabbeted ends of a similar yoke 15 which is adapted to straddle the upper end of the receptacle 13 and is disposed in a direction opposite to that of yoke 12. The yoke 15, like yoke 12, may be formed integral with or otherwise secured to a socket portion or thimble 16 adapted to receive the handle 17. The upper end of the receptacle 13 is also preferably formed with a groove 18 disposed transversely of the container or receptacle and adapted to receive the intermediate portion of yoke 15, thereby preventing the upper end of the receptacle from slipping out of the composite yoke or frame when both yoke or frame members 12 and 15 have been properly secured together at the sides of the receptacle. The rabbeted ends of both the frame members 12 and 15 are provided with registering perforations so that when the ends of the two yokes of the frame overlap one another, as shown in dotted lines in Figs. 1 and 2, both yokes may be secured together by means of suitable pins, as, for example, cotter pins, indicated at 19 in Fig. 1.

In order to reinforce the connection between the two frame members or yokes, I prefer to provide the tubular members or sleeves 21, 21, which are adapted to slide on and incase the opposing legs of the frame-members or yokes when the latter have been brought into proper relation or alinement with each other. The sleeves are each provided with an opening extending trans-

versely therethrough adapted to receive the cotter pins 19 when the openings in the sleeves have been brought into register with the openings in the lapping ends of the yokes, see Fig. 1. With the sleeves 21, 21 maintained in the position shown in Fig. 1, it is evident that the yokes will be held against any independent or lateral movement and a firm coupling provided whereby the container or receptacle 13 will be held in proper position within the frame which extends lengthwise of the receptacle and preferably in contact therewith.

As disclosed in the drawing, with the grooves 14 and 18, in the bottom and top ends, respectively, of the receptacle, arranged adjacent opposite sides of the receptacle, the latter will be held in a slanting or angular manner so that the fluid within the container or receptacle will flow toward the lowermost corner or end of the container. The upper side of the container, adjacent the top end thereof, is provided with an opening 22 formed to receive a suitable screw-cap 23, whereby a fluid-tight closure may be provided. With the opening 22 located as shown and described, the device may be easily placed beneath a water-tap or faucet for the purpose of filling the container.

The under surface of the container, adjacent the lower end thereof, is provided with an outlet 24 leading to a suitable valve-casing or housing 25 shown provided with a suitable flange whereby the valve-casing may be soldered or otherwise properly secured to the receptacle or container 13. The valve-casing or housing is preferably shown in the nature of a cylinder open at its lower end to receive the valve-seat forming member 26, which is shown threaded into the lower end of the cylinder or housing 25. The member 26 is provided with a suitable passage extending therethrough, and the outer end thereof is formed so as to receive a suitable conduit or flexible tube 27, the opposite end whereof is preferably inserted in an opening or perforation formed in the brush-back, as clearly shown in Fig. 2, so that fluid passing from the valve-housing into the tube 27 will be discharged onto the bristles of the brush.

The valve-housing 25 is provided with a plug-valve 28 preferably tapered as shown so as to conform with the tapered valve-seat of member 26, and thereby close off the passage through member 26. The valve 28 is preferably located beneath the plane of the outlet opening 24 so that the plug-valve may be moved to its seat in the direction of flow of the fluid through the valve-housing; in other words, so that the pressure of the fluid within container 13 will assist in the proper seating of the valve. The valve 28 is provided with a rod 29 extending through a suitable opening in the closed end of the valve-housing; and the portion of the rod, intermediate of the valve 28 and the closed end of the housing, is provided with a suitable spring 30 which normally tends to force and maintain the valve on its seat.

The outer end of rod 29 is preferably shown in the nature of a loop or ring adapted to receive the end of a suitable pull-cord or chain 31 which passes through a guide 32 secured to the upper end of the container or receptacle 13. The guide 32 may be provided with a suitable roller 33 for the chain 31 so as to permit proper movement of the chain by the manipulator of the brush. The guide 32, with its roller 33, is so arranged as to enable a direct upward pull to be exerted on rod 29 of the valve 28, when it is desired to move the latter from its seat to permit fluid to flow from container 13 through tube 27 and onto the bristles of the brush 6.

The chain is preferably made of a length so as to extend in proximity to the upper end of the handle 17; the upper end of the chain being provided with a suitable grasp or handle 34 of such size as to prevent its passage through the loop of uppermost guide 35 which encircles the handle 17. The guides 35 are arranged at suitable intervals on the handle and have the pull cord or chain pass therethrough; the various guides being similar and preferably in the nature of the looped metallic member shown more clearly in Fig. 5; the members being provided with sufficient resiliency to permit them to be sprung onto and firmly engage or clamp the handle 17. The guide 35, at the upper end of the handle, as shown in Fig. 5, is bent back upon itself so as to provide the loop-portion 36 for the passage of the chain 31 as well as the shank or pin of grasp 34; while the ends of member 35 are bent so as to spring about the handle 17; the latter being preferably provided with grooves at suitable intervals apart to receive the desired number of guides 35, as clearly indicated in Fig. 1; the grooves preventing the guides shifting lengthwise of the handle.

The upper end of the valve-housing 25 may be provided with suitable washers, as indicated at 37, adapted to surround the rod 29 and provide a fluid-tight closure. The outer end of valve-seat member 26 is preferably tapered or made conical, as shown in Fig. 2, so as to prevent the flexible tube 27 from slipping off the end of member 26; thereby obviating the necessity for providing any other means for fastening the flexible conduit onto the end of the valve-seat member.

With the foregoing description, the operation of my device will be readily understood. The container or receptacle 13 may be filled, through the opening 22 after screw-

cap 23 has been removed, with water or any desired fluid adapted for use in scrubbing. The operator places the brush upon the floor or other surface to be cleaned in the usual manner, and by pulling on handle or grasp 34, and, therefore, on the pull-cord or chain 31, the valve 28 will be withdrawn from its seat and the fluid in the container permitted to flow by gravity through the discharge-opening 24 of the container, through valve-housing 25 past the valve and out through valve-seat member 26 into the flexible tube or hose 27 connected therewith, from whence the fluid will be discharged onto the bristles and be distributed onto the surfaces to be cleaned through proper forward and backward movement of the brush.

When sufficient fluid has been used for immediate purposes, the operator releases grasp 34 of pull-chain 31, thereby allowing spring 30 to force the valve onto its seat so that further flow of the fluid through conduit 27 will be discontinued until the operator again applies an upward pull on chain 31. As is clearly evident from the construction shown and described, the flow of fluid from container 13 may be controlled by the operator, so that the flow will either be continuous in a small or a large quantity, or intermittent as desired. The container 13 may be of any desired capacity; and, in the event that it is desired to remove the container for the purpose of replacement or repair, this may be readily accomplished by simply removing the cotter pins 19 so as to allow the sleeves 21, 21 to be slipped past the overlapping or rabbeted portions of the two yokes 12 and 15. With the ends of the yokes extending along opposite sides of the container, sidewise movement of the container will be prevented; while the location of the transversely disposed portions of the yokes in the grooves at the upper and lower ends of the receptacle will prevent any vertical displacement or movement of the receptacle relative to the handle of the brush; at the same time the construction of the handle, or rather the frame portion thereof, will prevent any strains being placed on the container because of the rabbeted formation of the yoke-ends shown in Figs. 3 and 4, whereby movement of the main portion of the handle relative to the lower portion will be made impossible due to the shoulders shown at 38, formed on the opposing ends of the two frame members.

As shown in the drawing, the socket-members 11 and 16 may be formed to receive suitable pins or rivets for securing the ends of the rod 9 and handle 17, respectively, in place.

What I claim as my invention and desire to secure by Letters Patent is:—

1. A fountain brush, comprising a brush proper, a liquid container having a valved outlet, means for conveying the liquid from the valved outlet to the bristles of the brush, a handle comprising a pair of bifurcated portions adapted to straddle opposite ends of the container so as to have the bifurcations presented in opposite directions, means whereby the oppositely presented bifurcations are secured together, and means extending lengthwise of the handle whereby said valved connection may be controlled.

2. A fountain brush, comprising a brush proper provided with an aperture in the back thereof, a sectional handle, one portion whereof is obliquely secured to the brush-back, the opposing ends of the handle-sections being bifurcated so as to provide a receptacle-receiving opening therebetween, a receptacle provided with socketed ends to receive the bifurcated portions of the handle-sections and thereby prevent displacement of the receptacle, means whereby the bifurcations of the handle-sections are secured together so that pressure on the upper handle-section will be exerted on the lower handle-section without transmitting said pressure to the receptacle, said receptacle being provided with a valved outlet, a conduit connected with said valved outlet and with the brush-back for conveying fluid from the receptacle to the brush proper, and means disposed lengthwise of the handle for controlling said valved outlet.

3. A fountain brush, comprising a brush, a sectional handle, a liquid container removably mounted between the sections of said handle, a split-frame whereby the sections of the handle are secured together, said frame being adapted to extend about the sides of the container and maintain the latter in place, a valved connection intermediate of the container and the brush and located exteriorly of the container, means, extending lengthwise of the handle, whereby the valved connection may be controlled from the upper end of the handle, and means whereby the split-frame is maintained in "set-up" condition and the handle-sections secured together.

4. A fountain brush, comprising a brush provided with an aperture in the back thereof, a sectional handle obliquely secured to the brush, the sections being provided with opposing bifurcated ends adapted to be secured together so as to provide a receptacle-receiving frame, a liquid container mounted in said frame-portion of the sectional handle and provided with an exterior valve-housing on one side thereof having communication with the container and the aperture in the brush-back, a spring-controlled valve in said housing, and means extending lengthwise of the handle whereby the valve may be controlled from the upper end of the handle.

5. A fountain brush, comprising a brush provided with an aperture in the back there-

of, a sectional handle, one section being obliquely secured to the brush-back, a pair of forked members whereby the sections of the handle are secured together and a container-receiving frame provided, a liquid container removably mounted in said frame and having a valve-housing on the side thereof having communication with the container and the aperture in the brush-back, said housing having a valve-seat intermediate of the points of communication with the container and the brush, and a spring-controlled valve mounted in said housing, and means yieldingly mounted on and extending lengthwise of the handle and connected with the valve whereby the latter may be controlled from the upper end of the handle.

6. In a fountain brush, the combination of a brush proper provided with an opening in the back thereof, a sectional handle, one section whereof is secured to the brush-back, a two-part member formed to constitute a frame, one part whereof is secured to each handle-section, means whereby both parts of the frame-member may be locked in alined relation and the handle-sections secured together, a handle, a container mounted in said frame-member, a tube extending from the container into the opening in the brush-back, and means whereby the flow from the container may be controlled.

7. A fountain brush, comprising a brush, the back whereof is provided with an opening therethrough, a sleeve obliquely secured to said brush, a bifurcated frame-member connected with said sleeve, a handle, the lower end whereof is provided with a bifurcated frame-member, the two frame-members being correlated and constituting a container-receiving frame, a liquid container removably mounted in said frame and provided with an outlet adjacent the lowermost portion thereof, a valve-casing connected to said outlet and located outside of said container, a spring-controlled valve arranged in said casing so as to normally close off the outlet in said container, means extending lengthwise of the handle whereby said valve may be moved so as to open said outlet, and a conduit extending from said casing to the opening in the brush-back whereby the contents of said container will be discharged onto the bristles of the brush when said valve is operated.

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