

May 2, 1933.

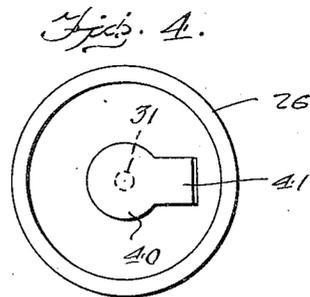
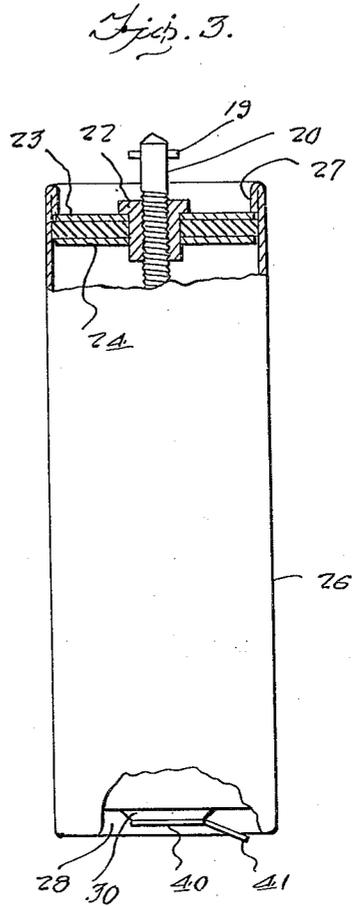
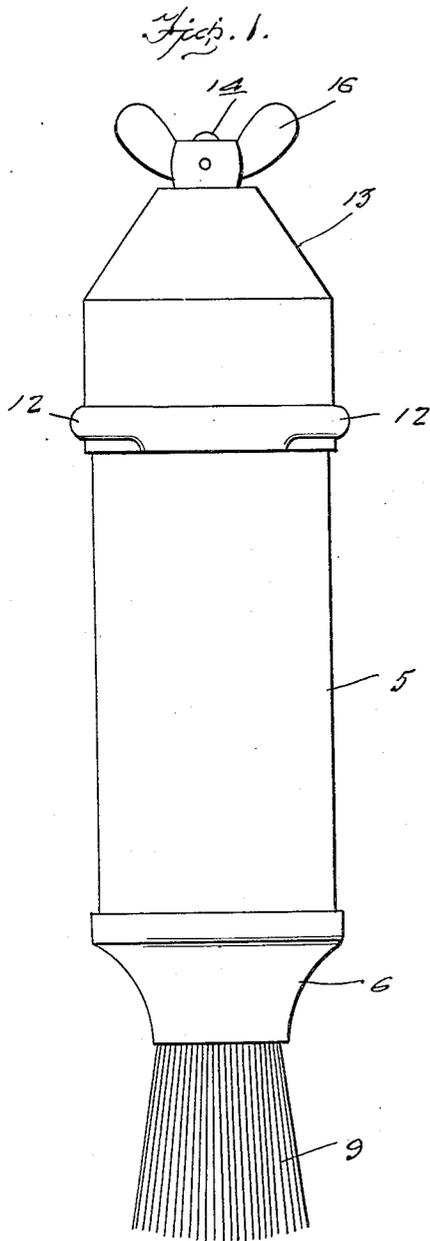
H. T. WECK

1,907,376

FOUNTAIN BRUSH

Filed Sept. 1, 1931

2 Sheets-Sheet 1



Inventor

*H. T. Weck*

By *Clarence A. O'Brien*  
Attorney

May 2, 1933.

H. T. WECK

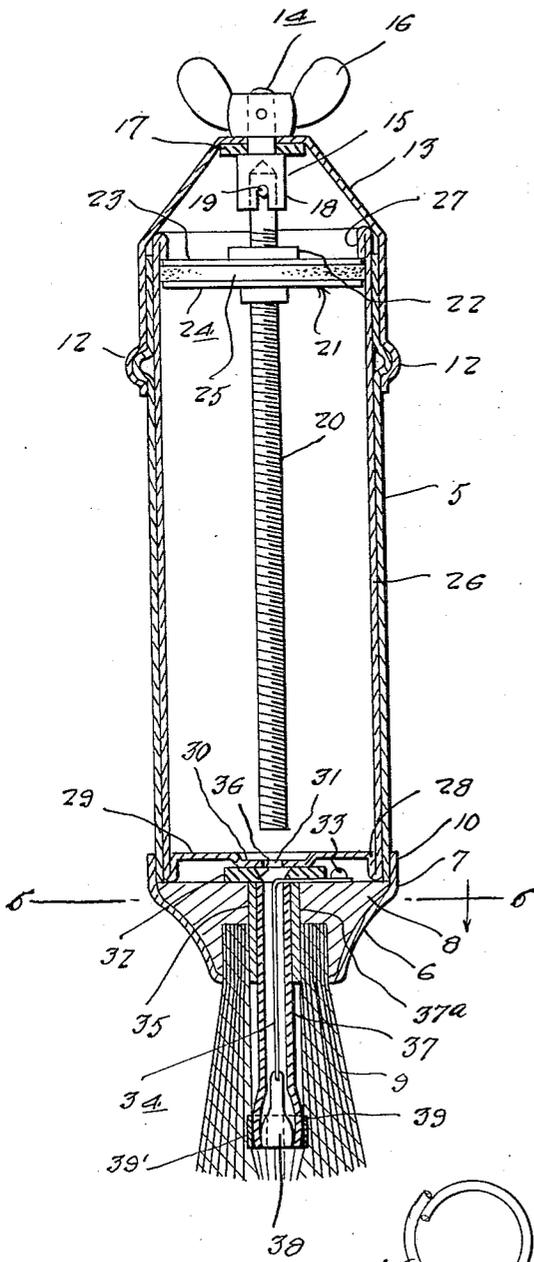
1,907,376

FOUNTAIN BRUSH

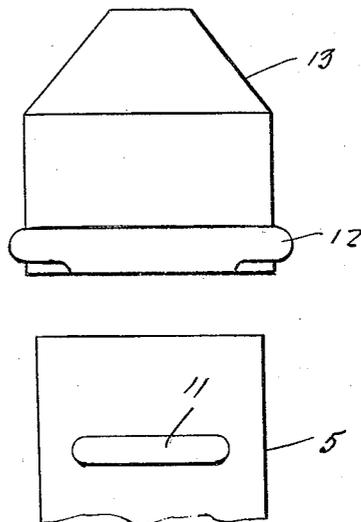
Filed Sept. 1, 1931

2 Sheets-Sheet 2

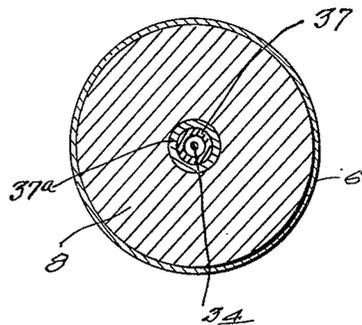
*Fig. 2.*



*Fig. 5.*

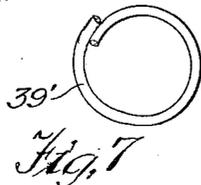


*Fig. 6.*



Inventor

H. T. Weck



By *Clarence A. O'Brien*  
Attorney

# UNITED STATES PATENT OFFICE

HENRY T. WECK, OF ELGIN, ILLINOIS

FOUNTAIN BRUSH

Application filed September 1, 1931. Serial No. 560,598.

This invention relates generally to fountain brushes and particularly to a new and novel form of fountain brush of the magazine type utilizing refill cartridges, the construction and method of use of which will be understood from the following.

It is an object of this invention to provide a fountain brush structure of the type described wherein pressure is generated by a manually operated screw operated piston whereby to force from the refill cartridge the polishing paste or fluid or the like therein, so as to dispense the same to a polish applying brush attached to the brush structure, the said functions being accomplished by novel structure of a more simple and effective character than heretofore devised which permits ready and easy disassembling for cleaning purposes and repair.

This and other objects of the invention, its nature, and its composition and arrangement and combination of parts will be readily understood by any one acquainted with the art to which this invention relates upon consulting the following descriptions of the drawings, in which:

Figure 1 is a general side elevational view of the complete device of my invention.

Figure 2 is a vertical transverse sectional view through Figure 1.

Figure 3 is an elevational view of the interior cylinder of the device of my invention partly broken away to disclose the relationship of the piston thereto.

Figure 4 is a bottom view of Figure 3.

Figure 5 is an elevational view of the removable cap of the device and the upper end of the exterior cylinder.

Figure 6 is a horizontal sectional view taken approximately on the line 6—6 of Figure 2 looking downwardly in the direction of the arrows.

Figure 7 is an end view of a split spring ring on the dispensing means.

Referring in detail to the drawings, the numeral 5 designates generally the exterior cylinder of the device upon the lower end of which is mounted the brush head generally designated 6 which consists of a cup 7 enclosing the solid body 8 of generally frusto-

conical form, in which the brush 9 of generally circular cross section is secured. A vertical flange portion 10 of the cup rises above the upper surface of the body 8 so as to permit the lower end of the exterior cylinder 5 to be telescoped into the cup 7 so that the lower edge of the cylinder 5 abuts the upper surface of the body 8. The upper end of the exterior cylinder 5 is open, and below the upper end thereof there is formed a pair of diametrically opposite beads 11 adapted to be engaged by radially outwardly formed recesses 12 in the cap generally designated 13, whereby to assemble the cap on the upper end of the cylinder 5. Portions of greater diameter between the recesses 12 permit placing the cap on the cylinder over the beads 11 and rotating the cap so as to engage the beads 11 in the recesses 12 for locking the cap on the cylinder. The upper portion of the cap 13 is frusto-conical and the top wall thereof is apertured centrally, to receive therethrough the shaft 14 of a key generally designated 15. Externally of the top wall of the cap there is provided a wing nut 16, keyed to the shaft 14. A washer 17 on the shaft 14 engages the lower surface of the top wall, and the upper surface of the slotted socket 18. The slot in the socket 18 is arranged to receive the upper end of the screw 20 and engage a pin 19 near the upper end of the screw 20 which has a left-handed thread whereby to rotate the screw 20 to move the piston 21 carried thereby downwardly so as to compress the paste or fluid in the cartridge in which it operates. The piston 21 is carried on the bushing 22 on which it is forced or pressed and retained frictionally against a shoulder or flange on the upper end of the bushing.

The piston consists of the disks 23 and 24 and the packing 25 therebetween which coact to make the piston fit snugly in its cylinder 26. As appears in Figure 2, the upper edge of the cartridge 26 is intumed as at 27 to provide an abutment to limit upward movement of the piston 20. The lower edge of the cylinder 26 is intumed as at 28, and reaching radially inwardly from the upper edge of the portion indicated as at 28 in a

horizontal plane is the bottom 29 provided centrally with a depression 30 having an aperture 31 for permitting discharge of the paste or fluid from the cylinder 26.

5 The depressed portion 30 is arranged to engage the resilient washer 32 disposed upon the block 8, as the cartridge 26 is forced downwardly in the cylinder 5 so as to make the engagement of the portion 30 with the washer 32 fluid tight. The action of the flared walls of the cap 13 on the upper edge of the cartridge as the cap is forced into position upon the cylinder 5 brings this about. The key 15 controls the movement of the screw 20 in an obvious manner.

On the upper surface of the block 8 is secured by a screw 33 the foot portion of an L-shaped spring wire 34 which extends inwardly from the point of its attachment to the block. The standard portion of the wire 34 depends through and in spaced relation to the walls of a flexible tube 37 which is tightly surrounded by a metal tube 37a. A bore 35 in the block 8 with which a conical aperture or beveled aperture 36 in the washer 32 communicates, has disposed therein the metal tube 37a also which acts to position the brush 9, which is ring-like in horizontal cross section. The flexible tube 37 depends centrally through the brush 9 to a point near the lower end thereof. The spring wire 34 has on its lower end a plug 38 which assumes, preferably, the form of a bowling pin. The plug 38 is adapted to act to close a bulbous expanded portion 39 on the lower end of the tube 37. A split spring ring 39' surrounds the lower end of the bulbous portion 39 and yieldingly limits the expanding movement of the portion 39 by which discharge of fluid is conditioned. The ring also prevents permanent stretching of the material of the tube 37.

As the screw 20 is rotated to move the piston 21 downwardly against the paste or fluid in the cartridge 26 through the aperture 31 in the bottom thereof, and through the beveled aperture 36 in the washer and through the tube 37, the paste or fluid coming through the tube 37 under pressure will operate against the plug 38 and expand the bulbous portion 39 of the tube 37. Upon applying the brush to the work, and flexing the brush 9 and tube 37 thereagainst, the paste or fluid will pass the plug 38, flow upon the brush 9 and be applied to the work. When the brush is not being used the plug 38 being larger in diameter than the normal interior diameter of the bulbous portion 39, will maintain the tube 37 closed in an airtight manner, and preserve the paste or fluid against coming into contact with the air or otherwise deteriorating and gumming any of the parts of the device of the invention. It is believed to be obvious that the tube 37 flexes relative to the plug 38 when the brush is ap-

plied to the work, and that this action aids in dispensing the polishing paste or fluid to the brush 9 at the desired rate, and when not so applied the expenditure of polishing paste or fluid is suspended.

It is one object of the invention to arrange that the interior cylinder or container 26 be in the nature of a replaceable magazine or refill cartridge to be furnished for use with the exterior cylinder 5 and the brush head 6. Consequently, means must be furnished for closing the aperture 31 in the bottom of the cartridge 26 until such time as it is desired to avail of the contents thereof. A suggested closure in the case at hand is a lightly soldered plate 40 covering the opening 31 and provided with a lip 41 enabling the easy removal of the plate 40 for opening the aperture 31. It is obvious the cartridges 26 can thus be stored safely without deterioration of the polishing paste or fluid for indefinite periods, yet be instantly available for insertion into the cylinder 5.

It is believed that the above is sufficient description to enable anyone acquainted with the art to which this invention relates to understand, make and use the device of the invention, and further description will, therefore, not be given.

It is to be definitely understood that I do not desire to limit the application of this invention to the particular modification set out herein to illustrate the principles thereof, and any change or changes may be made in material, and in structure and arrangement of parts, consistent with the spirit of the invention and the scope of the subjoined claims.

What is claimed is:

1. A fountain brush of the type described comprising an exterior tubular casing, a shell on the lower end of the casing, a brush and automatic paste or fluid dispensing means carried by the shell for feeding paste or fluid to the brush, a removable conical, hollow closure cap on the upper end of the casing including a manually rotatable element, a replaceable paste or fluid container for insertion in said casing, said container comprising a closed bottomed cylinder, a threaded piston rod and a piston threaded on the rod in the cylinder, said cylinder having a discharge orifice in its bottom communicating with the said paste or fluid dispensing means, said rotatable element having means enabling it to be detachably connected to the upper end of the piston rod for rotating it to move said piston downwardly to force the paste or fluid in the container through said orifice, said closure cap and container having means enabling the cap to be operated so as to force the bottom of the container into forcible engagement with said shell.

2. A fountain brush comprising a tubular casing, a shell secured to the lower end of

the casing, an automatic dispensing means and a brush carried by the shell, a frustro-conical hollow closure for the upper end of the casing, a manually rotatable element carried by the closure; a replaceable fluid container having a piston and a piston operating screw therein, an apertured bottom on said container, a resilient seat in said shell with which the aperture in said bottom is adapted to seat and register, said hollow closure having means enabling it to engage the upper end of the container and forcibly seat said apertured bottom on the resilient seat, said rotatable element being connected for operating the screw for ejecting the contents of the container through the apertured bottom thereof.

3. Automatic dispensing means for a container comprising a rigid tube communicating with a hole in the container, a flexible tube in the interior of the rigid tube and depending therebelow, an elastic bulb formation on the lower end of the flexible tube, and a resiliently suspended valve member carried in the bulb formation, whereby the lower end of the bulb formation is normally closed.

In testimony whereof I affix my signature.

HENRY T. WECK.

30

35

40

45

50

55

60

65