

W. L. CLARK.
 FOUNTAIN BRUSH AND RESERVOIR THEREFOR.
 APPLICATION FILED JAN. 28, 1907

953,374.

Patented Mar. 29, 1910.

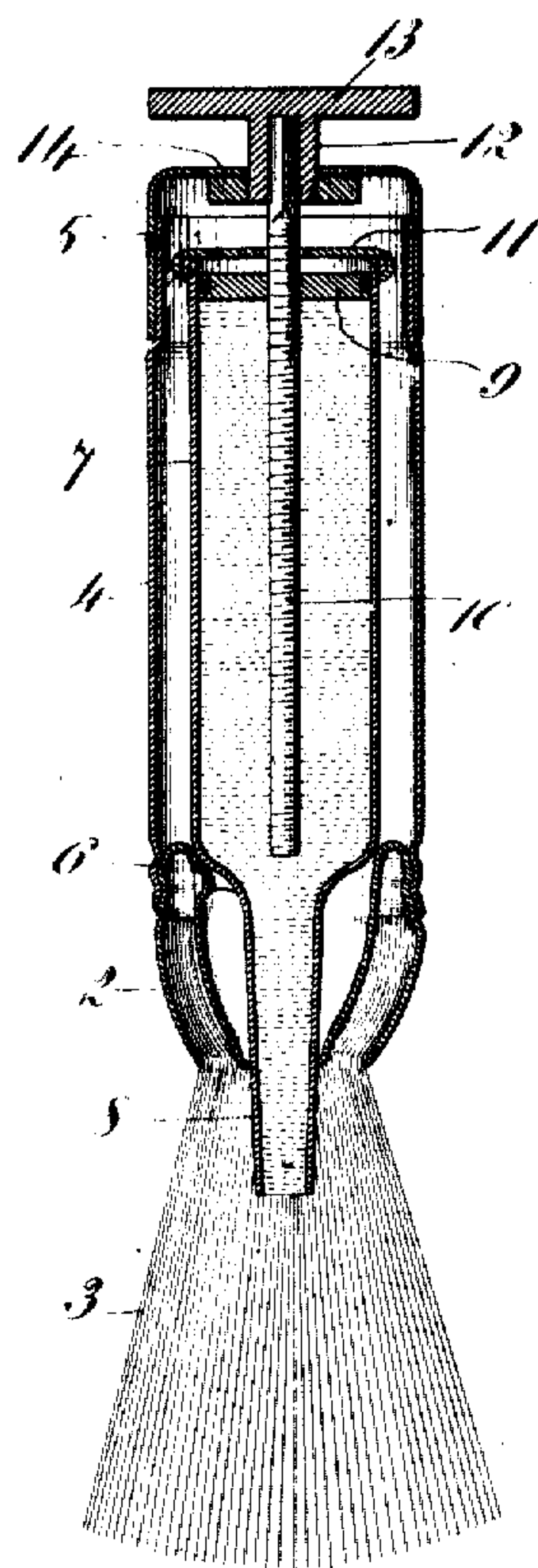


Fig. 1.

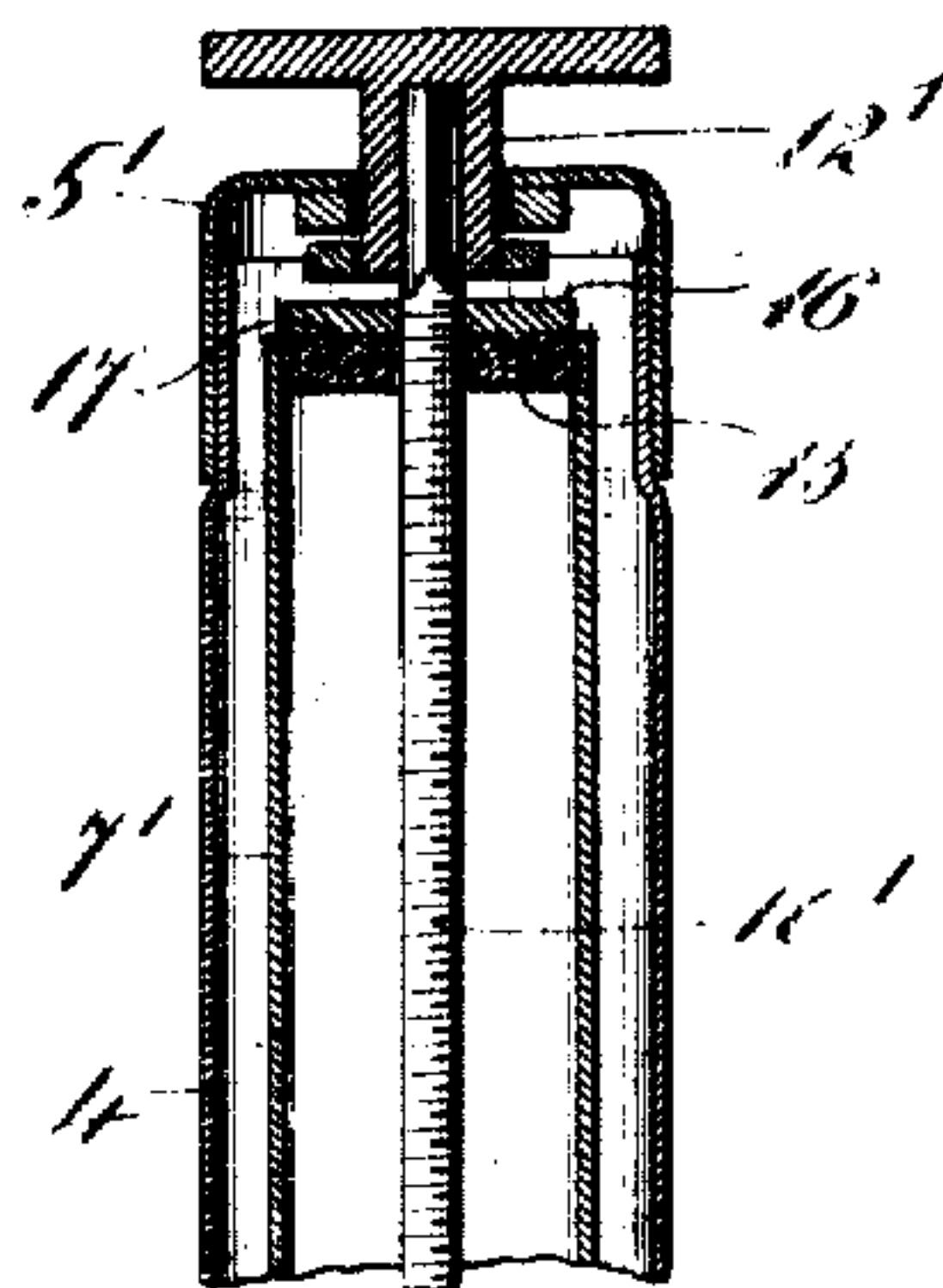


Fig. 2.

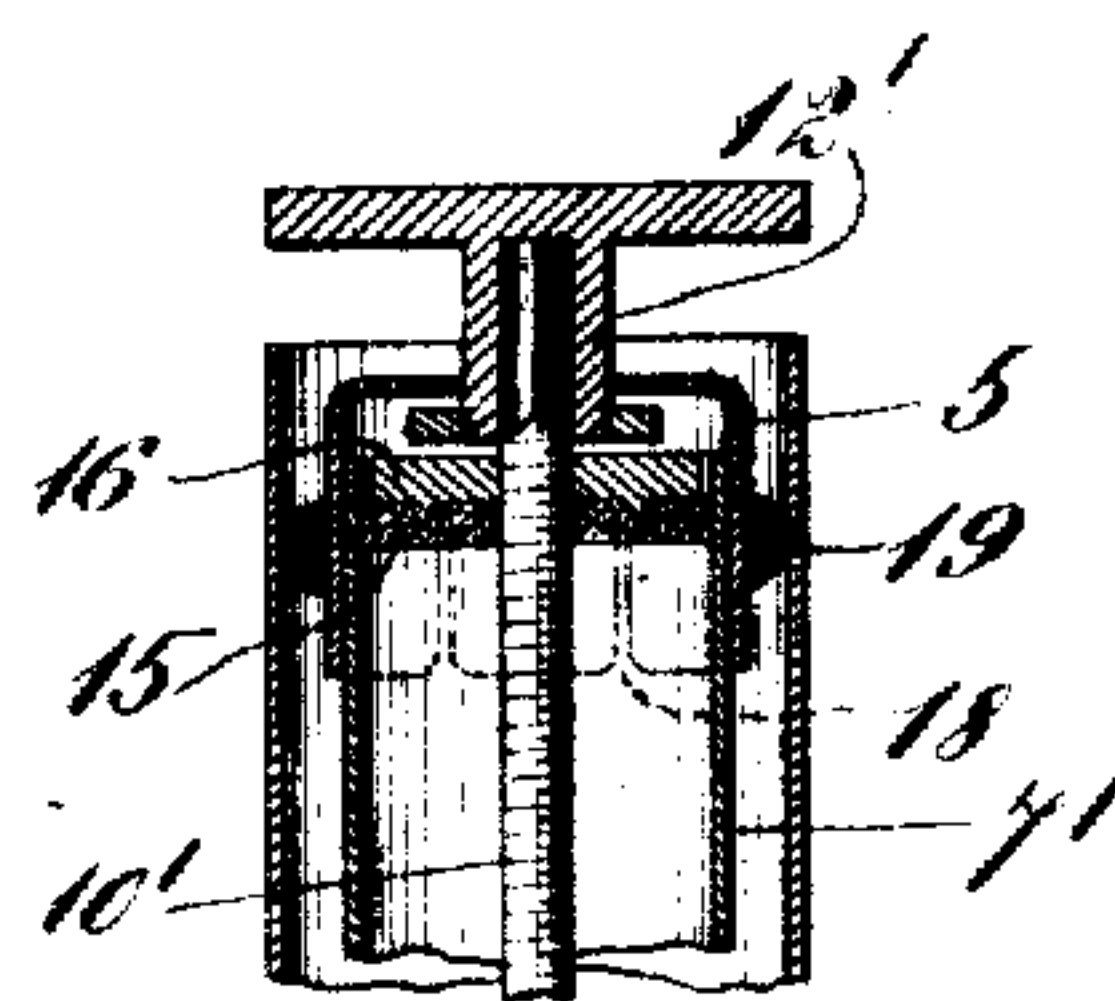


Fig. 3.

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UNITED STATES PATENT OFFICE.

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FOUNTAIN-BRUSH AND RESERVOIR THEREFOR.

953,374.

Specification of Letters Patent.

Patented Mar. 29, 1910.

Application filed January 26, 1907. Serial No. 354,184.

To all whom it may concern:

Be it known that I, WALTER L. CLARK, a citizen of the United States, and resident of New York, in the county of New York and State of New York, have invented new and useful Improvements in Fountain-Brushes and Reservoirs Therefor, of which the following is a specification.

This invention relates to fountain brushes and to reservoirs therefor, or adapted for use in connection therewith, and particularly to constructions of that type in which a piston is employed for expelling the contents of the reservoir, a main object of my invention being to improve upon the means heretofore employed for operating the pistons in such reservoirs in respect to certain particulars which will hereinafter appear.

My invention also includes certain features which contribute to the production of detachable reservoirs of the type referred to at a minimum of expense, by making it possible to omit certain of the parts with which it has heretofore been necessary to provide such reservoirs in order to adapt them for use in connection with fountain brushes.

The various features of my invention as preferably constructed when applied to or adapted for use in connection with a fountain shaving brush are illustrated in the accompanying drawings, in which—

Figure 1 is a central longitudinal section through one form of brush, complete; Fig. 2 is a similar section through the outer end of the handle portion of another form of brush; and Fig. 3 is a similar section showing another construction.

The shaving brush illustrated in Fig. 1 of the drawings comprises a body portion 2 carrying a mass of bristles 3, and provided with a hollow handle 4 having a removable portion such as a cap 5 telescopically fitted to the outer end of said handle, although the entire handle may be detachably connected to the body of the brush as at 6.

7 represents a detachable soap receptacle adapted to be inserted into and withdrawn from the hollow handle and provided with an elongated neck or outlet nozzle 8 arranged to project through a central opening in the body portion 2 and into the interior of the mass of bristles 3. This receptacle 7 is provided with a piston 9 originally located at the rear or outer end of said receptacle, behind the material contained therein, and for forcing said piston

forward there is provided a screw-threaded rod 10 passing through said piston and through a cap 11 closing the outer end of the receptacle, and extending longitudinally within the latter in threaded engagement with the piston.

The parts above described are similar in construction and arrangement to the corresponding parts shown and described in a prior application for U. S. Letters Patent filed by me on the 13th day of November, 1906, Serial No. 343,273, in which certain features of the aforesaid construction are claimed. In said prior application, however, the threaded rod is shown as having a bearing on the interior of the cap which closes the outer end of the receptacle, so that if said rod be rotated in the proper direction the piston will be forced forward by reason of its screw-threaded engagement therewith, while in the present case the rod 10 has no bearing on the cap piece 11 but passes freely through the same, its outer end being provided or engaged with a suitable operating head. As shown in Fig. 1 a thumb piece 12 is provided, which is mounted to rotate in the cap 5 and has a socket adapted to receive and fit the squared outer end of the rod 10, from which it can thus be readily detached whenever it is desired to disconnect the cap 5 from the handle 4 and the receptacle. The thumb piece 12, in addition to being rotatably mounted in the cap 5, is also capable of a reciprocating movement with respect to the same in the direction in which the threaded rod 10 extends, said movement being preferably limited by suitable stops.

In the construction illustrated the head 13 of the thumb piece itself serves as the stop for limiting the inward or forward movement of said thumb piece, while the stop for limiting the movement of the same in the opposite direction is afforded by a disk or flange 14 carried by the inner end of said thumb piece, in position to abut against the adjacent face of the cap 5. As thus constructed, by turning the thumb piece 12 in the proper direction the rod 10 may be rotated and caused to travel outward or backward through the piston, without moving the latter, until the flange 14 abuts against the cap 5, whereupon by pressing said thumb piece inward without rotating it the piston will be forced forward by its engagement with said rod 10 through a distance corresponding to the movement of said thumb

piece, which distance cannot exceed the length of the reduced portion of the thumb piece between its head 13 and flange 14. My construction thus provides for determining
 5 with accuracy the distance through which the piston is to be forced forward in any given instance, and therefore the quantity of soap or other material which will be expelled from the receptacle by such movement,—a result which is particularly advantageous in cases where the amount of material so expelled cannot be directly observed, as is the case in fountain brushes of the type illustrated. My arrangement may
 10 obviously be used to expel with equal accuracy any less amount of material than that resulting from a maximum movement of the thumb piece, provided the latter be not withdrawn by rotation to its outermost position, and it may also be noted that the piston may be operated, if desired, by merely rotating the thumb piece 12, if said thumb piece be held against longitudinal movement.
 15 Those features of my invention which relate more particularly to the simplification of the receptacle or reservoir itself are illustrated in Fig. 2, in which is shown a receptacle 7' having no permanent cap for closing its outer end but adapted to have its piston-operating means inserted when the receptacle and the brush proper are assembled for use. The piston is represented in this figure as composed of two parts, namely,
 20 a disk 15 of cork or the like, which makes a close sliding fit with the interior of the receptacle, and a metallic disk 16 of slightly less diameter than the disk 15 and adapted to serve as a reinforcing and strengthening backing for the later, as well as for forcing it forward. The two disks 15 and 16 are preferably separable, in which case the operating rod 10' has a screw-threaded engagement with the disk 16 and passes freely
 25 through a central perforation in the disk 15, the former disk being provided with projections or teeth 17 adapted to be forced into the cork disk 15 and prevent relative rotation of the two disks. This arrangement permits the receptacle 7', when first filled with its intended contents, to be closed by inserting the cork disk 15 into its outer end and covering said disk with a sheet of tin foil or similar material in such manner as
 30 to prevent any of the contents of the receptacle from passing out through the central perforation in the disk, thus providing a package which may be put up and sold irrespective of the threaded rod 10' and the disk 16. In this case said parts 10' and 16 will be sold in connection with the brush proper and combined successively with a number of filled receptacles, the combination being effected by inserting one of the receptacles into the hollow handle of the brush,

forcing the threaded rod 10' through the central perforation in the cork disk, and causing the rigid disk 16 to seat against the rear or outer face of said cork disk, and inasmuch as the rod 10' and disk 16 are detachable from the receptacle and its cork disk, said rod may or may not be detachable from the means for operating it, which means are represented in Fig. 2 as consisting of a rotatable and longitudinally-movable thumb piece 12' mounted to operate in the detachable cap 5' which normally closes the outer end of the brush handle, substantially as shown in Fig. 1. My invention thus makes it possible to provide each brush proper with piston-operating means capable of serving as such in connection with any number of receptacles adapted for use with the brush, and to make and sell such receptacles without any piston-operating means, thereby reducing the cost of the receptacles and contributing to the possibility of providing filled receptacles at such a low price that the use of the brush will be reasonably economical for the average user.

It will be evident that the means for operating the piston of a receptacle such as is shown in Fig. 2 may be detachably connected to the receptacle itself, if desired, and such an arrangement is illustrated in Fig. 3, in which the receptacle 7' has the cap 5'' slipped directly upon its outer end, in frictional engagement therewith, said cap being preferably provided with longitudinal slits 18 to enable it to expand slightly when forced upon the receptacle and thus increase its grip upon the same. The threaded rod 10', the disk 16 carried thereby, and the operating thumb piece 12' are constructed and combined in the same manner as is illustrated in Fig. 2, the thumb piece being mounted in the cap 5'' and the disk 16 being arranged to engage and operate the cork disk 15 by which the receptacle is closed when first filled. I thus provide a reservoir or receptacle which may be sold without any piston-operating means, as above described, but which when combined with a cap 5'' and connected parts will form a complete and operative package from which the contents may be expelled at will, and which may be used either in connection with a fountain brush or independently thereof. If used with such a brush it may be detachably connected thereto in any suitable manner, as, for example, by surrounding the cap 5'' with a ring 19 of soft rubber or similar material adapted to enter the hollow handle portion 4' of the brush and fit the same with sufficient closeness to hold the receptacle in place, in which case the head of the thumb piece 12' will serve as a sort of cover for the open end of the brush handle.

I claim as my invention:

1. In a fountain brush, the combination 130

with a body portion and bristles of a hollow handle portion, a receptacle removably contained therein and provided at its inner end with an outlet, a piston arranged to slide longitudinally in said receptacle, and a screw-threaded rod passing through and having threaded engagement with said piston and also passing through the outer end of the receptacle, said rod being provided at its outer end with operating means and being movable longitudinally with respect to the receptacle, without rotation, when the combined parts are in assembled relation.

2. In a fountain brush, the combination with the body portion and bristles of a hollow handle portion, a receptacle removably contained therein and provided at its inner end with an outlet, a piston adapted to slide longitudinally in said receptacle, a threaded rod passing through and engaging said piston and also passing through the outer end of the receptacle, said rod being movable in an endwise direction, without rotation, when the combined parts are in assembled position, and means for limiting the endwise or non-rotative movement of said rod.

3. In a fountain brush, the combination with the body portion and bristles of a hollow handle comprising a removable portion, a receptacle removably contained within said hollow handle and provided at its inner end with an outlet, a piston adapted to slide longitudinally in said receptacle, a threaded rod passing through and engaging said piston and also passing freely through the outer end of the receptacle, and an operating head mounted to rotate and to reciprocate without rotation in the removable handle portion and operatively engaging said rod.

4. In a fountain brush, the combination with the body portion and bristles of a hollow handle comprising a removable portion, a receptacle removably contained within said hollow handle and provided at its inner end with an outlet, a piston adapted to slide longitudinally in said receptacle, a threaded rod passing through and engaging said piston and also passing freely through the outer end of the receptacle, an operating head mounted to rotate and to reciprocate without rotation in the removable handle portion and operatively engaging said rod, and means for limiting the reciprocating movement of said operating head.

5. In a fountain brush, the combination with the body portion and bristles of a hollow handle carried by said body portion and comprising a cap piece detachably applied to its outer end, a receptacle removably contained within said hollow handle and having an outlet at its inner end, a piston adapted to slide longitudinally in said receptacle, and a threaded rod passing through and engaging said piston, said rod being movable in an endwise direction through the outer

end of the receptacle, without rotation, and being provided at its outer end with operating means passing through the cap piece and operable from the exterior thereof.

6. In a fountain brush, the combination with the body portions and bristles of a hollow handle portion and a receptacle removably contained therein, said receptacle being provided with an outlet at its inner end and with a piston adapted to slide longitudinally within the receptacle, a threaded rod passing through and engaging said piston and also passing through the outer end of the receptacle, said rod being movable in an endwise direction, without rotation, when the combined parts are in assembled position, and being provided at its outer end with an operating head or thumb piece, and means for limiting the endwise or non-rotative movement of said rod.

7. In a fountain brush, the combination with the body portion and bristles of a hollow handle portion and a receptacle removably contained therein and provided at its inner end with an outlet, a piston adapted to slide longitudinally in said receptacle, a threaded rod passing through and engaging said piston, said rod being movable in an endwise direction without rotation, a thumb piece for operating said rod, and a cap piece located at the outer end of the hollow handle portion and having said thumb piece passing through it.

8. In a fountain brush, the combination with the body portion and bristles of a hollow handle portion and a receptacle removably contained therein and having an outlet at its inner end, a piston adapted to slide longitudinally in said receptacle and comprising two separable portions, and a rod passing through said piston in threaded engagement therewith, said rod being movable through the outer end of the receptacle in an endwise direction, without rotation, when the combined parts are in assembled position, and being provided on the exterior of the latter with operating means.

9. In a fountain brush, the combination with the body portion and bristles of a hollow handle portion and a receptacle removably contained therein and having an outlet at its inner end, a piston adapted to slide longitudinally in said receptacle and comprising two separable portions, a rod passing through said piston in threaded engagement therewith, said rod being movable through the outer end of the receptacle in an endwise direction, without rotation, when the combined parts are in assembled position, and being provided on the exterior of the latter with operating means, and means for limiting the endwise movement of said rod.

10. As an article of manufacture, a brush comprising a body portion and bristles and

a hollow handle carried by the body portion,
in combination with a cap piece detachably
secured to the outer end of the handle, a
thumb piece mounted to rotate in said cap
5 piece and also to have a limited endwise
movement therein without rotation, and pis-
ton operating means carried by said thumb
piece.

In testimony whereof, I have hereunto
subscribed my name this twenty-third day 10
of January, 1907.

WALTER L. CLARK.

Witnesses:

E. D. CHADWICK,
JOSEPH T. BRENNAN.