W. MATTHEWS.

FOUNTAIN BRUSH.

APPLICATION FILED JUNE 22, 1914.

1,138,772. Patented May 11, 1915.

Fig. 1.

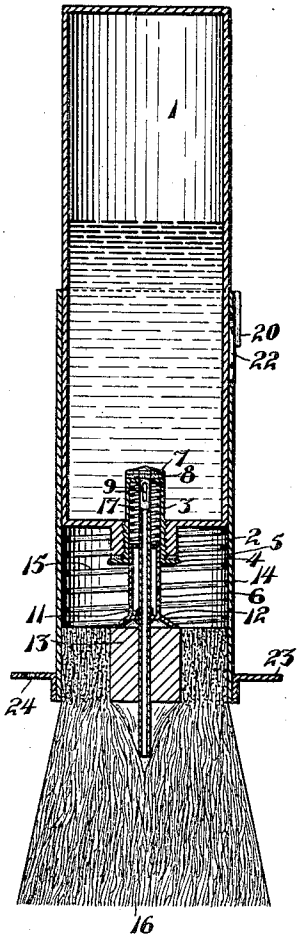


Fig. 2.

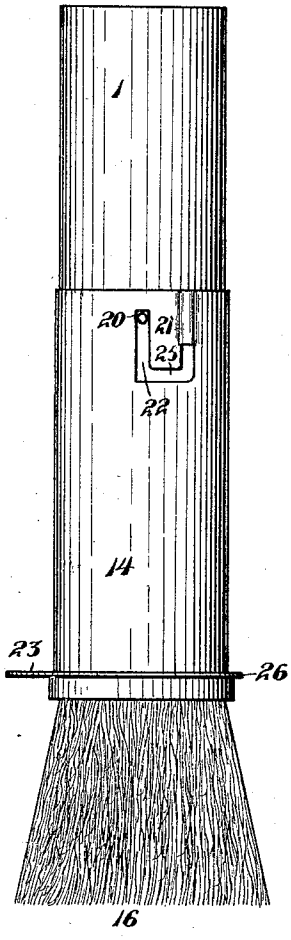
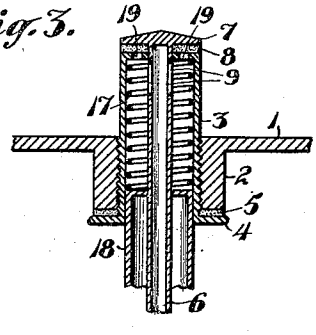


Fig. 3.



Witnesses:-

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UNITED STATES PATENT OFFICE.

WAYNE MATTHEWS, OF OAKLAND, CALIFORNIA.

FOUNTAIN-BRUSH.

1,138,772. Specification of Letters Patent. **Patented May 11, 1915.**

Application filed June 22, 1914. Serial No. 846,544.

To all whom it may concern:

Be it known that I, WAYNE MATTHEWS, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented new and useful Improvements in Fountain-Brushes, of which the following is a specification.

The present invention relates to improvements in fountain brushes, such as are used for stenciling letters or signs on boxes or the like, and the object of the invention is to provide a brush of this character which will be simple in construction, in which the liquid can be fed to the brush as desired and by a very simple operation, and which will not leak.

In the accompanying drawing, Figure 1 is a vertical section of the brush; Fig. 2 is a side view thereof; Fig. 3 is an enlarged sectional view, taken at right angles to Fig. 1, of a detail of the invention.

Referring to the drawing, 1 indicates a cylindrical reservoir for liquid, having a contracted neck 2. Screwed in said neck is a casing 3 of a spring chamber having a flange 4, between which and the neck is interposed a gasket 5 to prevent leakage. Extending centrally through said casing 3, which thus forms a guideway is a feed tube 6, the inner terminal portion of which passes through a central hole in the inner end of said chamber and has secured thereon a disk 7, carrying a gasket 8 adapted to make a tight joint against the bottom of said chamber. In the sides of said tube near the bottom of said chamber are formed elongated holes 9, so that, when said tube is pushed inwardly and the disk is spaced from the bottom of the chamber, and said holes are outside of said chamber, the liquid can pass into said feed tube from the reservoir through said holes. Said feed tube is secured by solder 11 to the inner surface of a concavo-convex disk 12, the circular edge of which abuts against a circular block 13 through a central hole in which the tube 6 extends. Secured tightly around said circular block and within an open end of a cylindrical tube 14 are the inner ends of bristles 16, the free ends of which spread out and form the brush. Said feed tube 6 extends through said block a sufficient distance to feed the liquid into said brush. The other open end of the tube 14 surrounds the cylindrical reservoir 1 and can slide thereon. When the tube 14 slides toward the reservoir the feed tube 6 is also moved inwardly, so that the holes 9 therein are on the outer side of the chamber 3, but this movement is resisted by a spring 17, coiled around the feed tube and compressed within the inner end of said spring chamber or guideway and the inner closed end of a tubular guide 18 surrounding the tube 6, the other end of which guide is secured to said disk 12. When the pressure employed to press the tube 6 inwardly into the reservoir 1 is removed, said spring again projects the guide, and therefore the tube, outwardly, and thus withdraws the holes 9 in said tube into the interior of the spring chamber, so that the liquid can no longer flow therethrough.

As liquid flows out, air flows in to supply its space through two small holes 19, (best shown in Fig. 3) in the inner end of the casing 3 of the spring chamber.

To assist the action of the spring 17, a stronger coiled spring 15 is interposed between the inner ends of the reservoir and bristles.

The reservoir 1 and the tube 14 are movably connected by means of a pin 20 on the outside of the reservoir which is received in a groove 21 pressed outwardly from the inner surface of the tube 14, said groove terminating in an angular slot 25 communicating with a straight slot 22 in the longitudinal direction of the brush in which the pin can reciprocate to permit the elongated holes 9 in the stem to pass into and outside of the spring chamber.

A flange 23 around the outer end of the tube serves to protect the hand from being smeared by the liquid. This flange has therethrough a hole 24 by which the brush can be hung up, and it has a flat portion 26 to prevent said brush from rolling when laid on a table.

I claim:—

1. The combination of a liquid receptacle, a brush, a tubular holder therefor surrounding the liquid receptacle, a tube having an open end opening into the brush, the tube having at its other end a hole adapted to communicate with the receptacle, a guide secured to the tube, a guideway within which said guide is guided and having an apertured inner end closely surrounding the tube, a spring pressing apart said brush and receptacle, and means for closing said aperture when said brush and receptacle are so pressed apart and for opening it when they

are pressed together against the action of said spring.

2. The combination of a liquid receptacle, a tube, a brush, a tubular holder therefor surrounding the liquid receptacle, an open end of the tube extending into the brush, the tube having at its other end an opening adapted to communicate with the receptacle, a spring compressed between the ends of the brush and receptacle, the receptacle having a projection and the brush holder having a longitudinally extending channel to receive said projection to limit the extent of separation of said brush and receptacle, and means for automatically closing said opening when said brush and receptacle are pressed apart by said spring and for opening it when they are pressed together against the action of said spring.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WAYNE MATTHEWS.

Witnesses:
F. M. WRIGHT,
D. B. RICHARDS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."