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PATENTED DEC. 31, 1907.

E. A. & C. A. GARVEY.
FOUNTAIN MARKING AND STENCIL BRUSH.

APPLICATION FILED JUNE 29, 1907.

FIG. I.

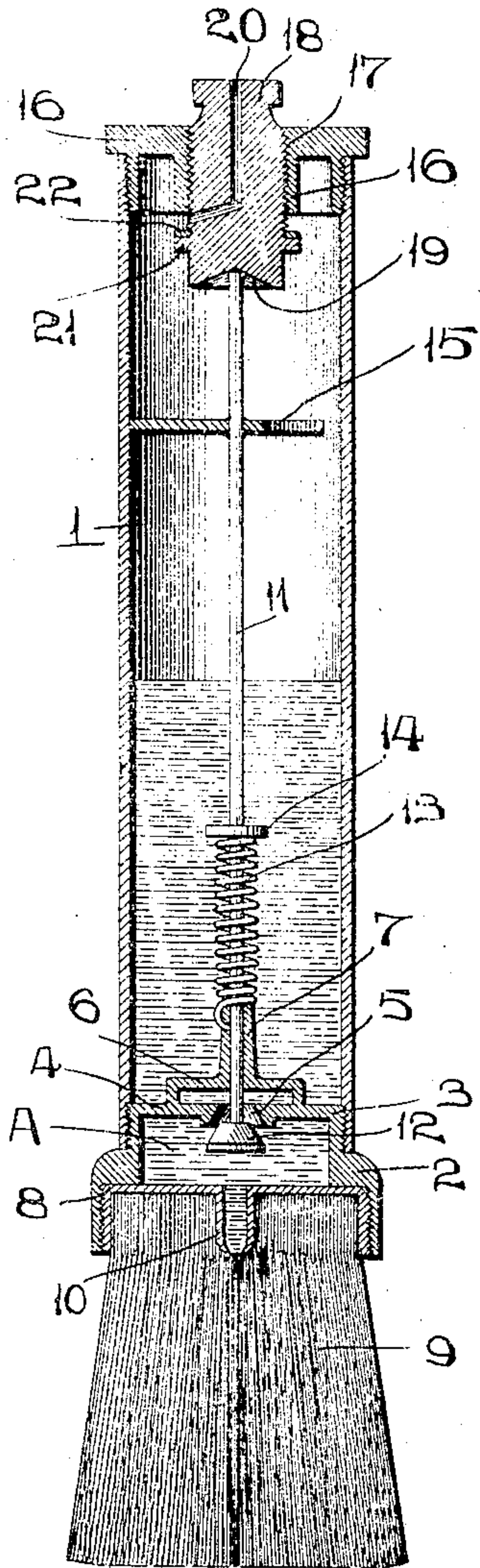


FIG. II.

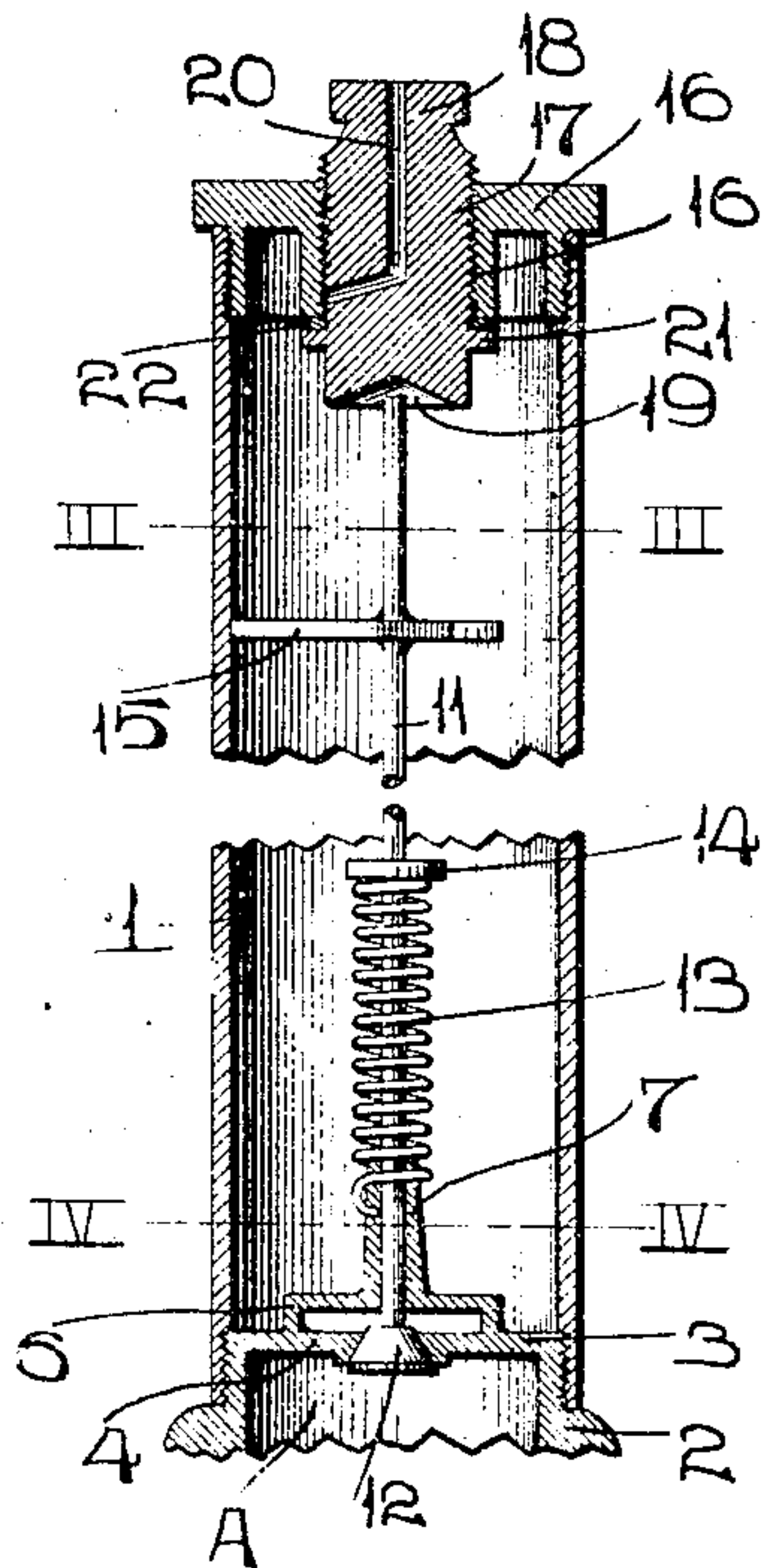


FIG. III.

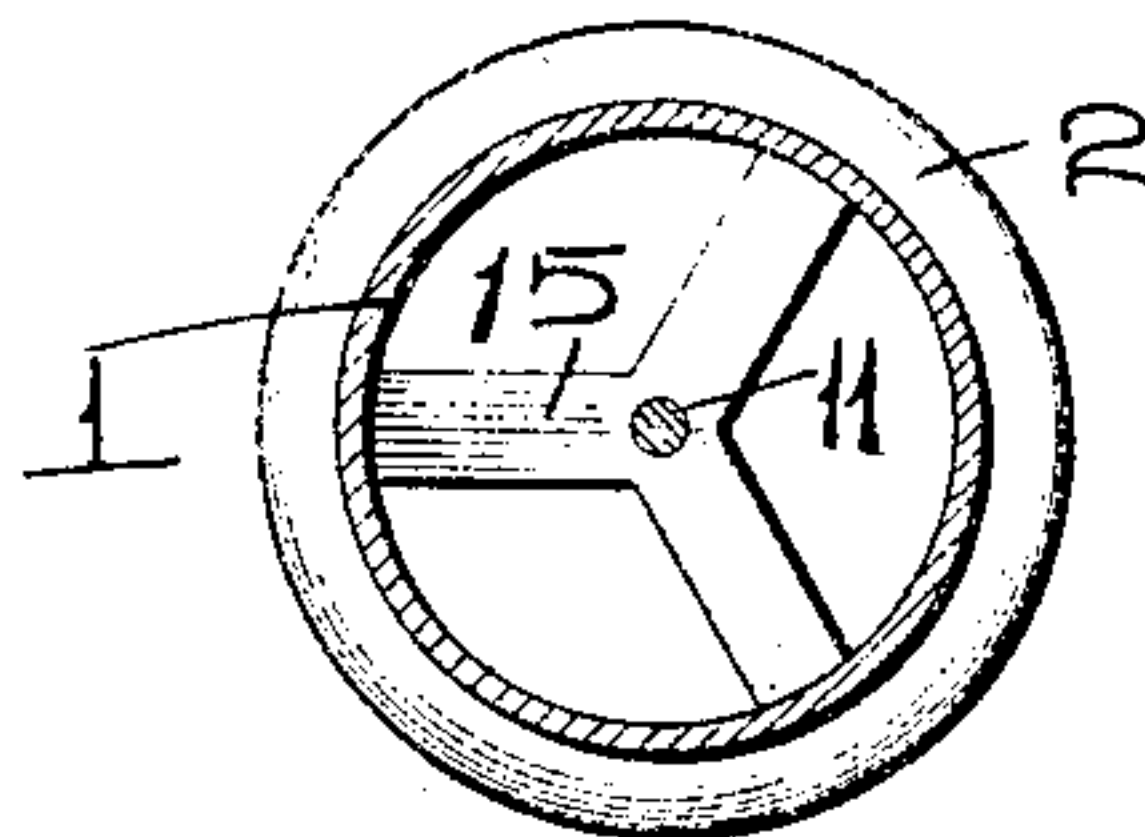
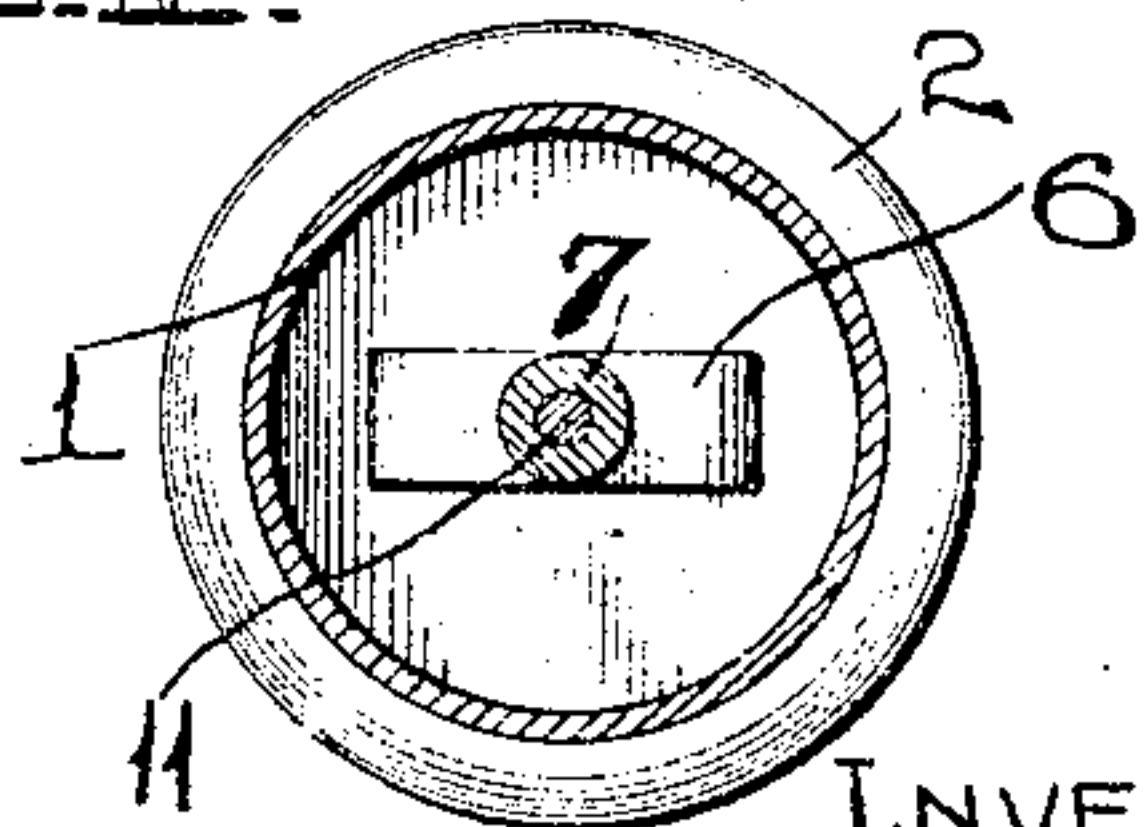


FIG. IV.



ATTEST.

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FOUNTAIN MARKING AND STENCIL BRUSH.

No. 875,422.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, EDWARD A. GARVEY and CHRISTOPHER A. GARVEY, both citizens of the United States of America, residing at the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Fountain Marking and Stencil Brushes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification.

Our invention relates to a fountain brush for use in marking packages of merchandise either with or without the use of a stencil and the present invention has for its object to provide the fountain of a brush of this character with simple and efficient valve controlling means separable from the shell of the fountain to permit thorough cleansing of the parts so constructed as to effectually obviate the possibility of escape of ink from the fountain when the brush is not in use and lying in a horizontal position.

Figure I is a longitudinal section taken through our brush with the outlet valve and air valve shown in open positions. Fig. II is a similar view to Fig. I with the outlet valve in a seated position and the air valve retracted from the valve rod, the central portion of the reservoir being broken out and the bristles of the brush being omitted. Fig. III is a cross section taken on line III—III, Fig. II. Fig. IV is a cross section taken on line IV—IV, Fig. II.

Referring to the accompanying drawings: 1 designates the cylindrical shell of the fountain of our brush which consists of a single tube that is threaded internally at its ends.

2 is a socket piece that is screw-threaded internally and provided with an externally screw threaded neck 3 removably attached to the inner end of the fountain shell 1 and which is provided with a diaphragm 4 that contains a central orifice 5. The diaphragm bears a bridge or spider 6 located at the outer side of the diaphragm and from which projects a tubular guide stem 7, the bore through said guide stem being in line with the central orifice 5 in the diaphragm of the externally screw-threaded socket piece 2.

8 is a flanged pocket piece that is removably held in the socket piece 2, due to screw threaded engagement between these members and in which the bristles 9 are seated. The pocket piece is provided with a nipple 10 located centrally of it and through which

marking fluid may pass from the space A within the socket piece 2 to the bristles of the brush.

11 designates a valve rod that is loosely seated in the guide stem 7 carried by the bridge 6 of the socket piece 2, and 12 is a valve fixed to said valve rod and located in the space A within the socket piece. The valve just mentioned is adapted to seat in the central orifice 5 of the socket piece diaphragm to prevent flow of marking fluid from the main chamber of the fountain shell of the brush to the space A and therefrom through the nipple 10 to the brush bristles and said valve is also adapted to be unseated from its position in said central orifice to the position shown in Fig. I, whereby the marking fluid may flow into the space A and therefrom to the brush bristles.

13 is a retracting spring that is connected to the guide stem 7 and surrounds the valve rod 11, the spring being confined between said guide stem and a collar or button 14 that is fixed to the valve rod in order that the spring may act upon said valve rod for the purpose of moving the valve 12 to its seat when the valve rod is free of restraint.

15 is a guide spider that is carried by the valve rod and the arms of which are adapted to move freely within the main chamber of the shell 1 of the brush fountain for the purpose of directing the movement of said valve rod longitudinally of said fountain shell.

16 designates a stopper or plug that has an externally screw-threaded neck which is detachably fitted to the end of the fountain shell 1 opposite that to which the socket piece 2 is attached and which is adapted to be disconnected from the fountain shell to permit filling of the fountain in the brush. In the center of the stopper 16 is a screw threaded bore 17.

18 is a valve controlling screw that is seated in the screw threaded bore of the stopper and is adapted to be moved inwardly and outwardly in said screw threaded bore for the purpose of moving the valve rod 11 to unseat the valve 12 or permit said valve and valve rod to be carried outwardly under the influence of the retracting spring 13.

At the inner end of the valve controlling screw is a pocket 19 which is preferably of concave shape and in which the outer end of the valve rod 11 seats when the valve controlling screw is moved inwardly in the stopper containing it, for the purpose of

causing impingement thereof against the outer end of the valve rod. The pocket in said valve controlling screw that receives the valve rod is made of the shape stated in order that the end of the valve rod will move to the center of the valve controlling screw when the valve rod is engaged by the valve controlling screw, thereby avoiding the occurrence of any binding action of the guide spider 15 against the fountain shell 1 or strain upon the valve rod.

In the valve controlling screw is an angular air duct 20 that extends longitudinally of the valve controlling screw from its outer end and then transversely of the valve controlling screw to the exterior thereof at a point intermediate of the ends of the valve controlling screw, this angular air duct having the utility of permitting the entrance of air into the main chamber of the brush fountain when the valve controlling screw is moved inwardly in the act of unseating the valve 12 in order that the requisite amount of air may be supplied in said main chamber to occasion the flow of marking fluid therefrom to the bristles of the brush. The air duct terminates at its inner end at a point that permits of communication of the air duct with the main chamber of the fountain of the brush when the valve controlling screw is moved inwardly to the extent illustrated in Fig. I and which provides for the air duct being closed at its inner end when the valve controlling screw is retracted into the position seen in Fig. II at which time the inner end of the air duct is confined within a central sleeve 16' forming a part of the stopper 16 and through which the valve controlling screw extends.

When the valve controlling screw is retracted in the position last referred to, the marking fluid cannot, if the valve controlling screw is snugly fitted in the stopper 16, flow from the fountain of the brush to the bristles thereof when the brush is not in use, due to the inner end of the air duct in the valve controlling screw being out of communication with the main chamber and the fountain of the brush.

To afford additional security against the entrance of air into the fountain chamber and thereby occasion flow of marking fluid therefrom to the brush bristles when the brush is not in use, we provide upon the valve controlling screw between the inner end of the air duct 20 and the inner end of said screw, an annular rib or collar 21 that opposes the central sleeve 16' of the stopper 16 and is adapted to serve as a packing or closure by contact with said central sleeve whereby any air that might find its way between the valve controlling screw and the bore in the stopper 16 is prevented from gaining access to the main chamber of the brush fountain.

The annular rib 21 preferably has seated upon it a leather or other pliable washer 22 adapted to contact with the inner end of the central sleeve instead of such contact being provided for by direct contact between the annular rib 21 and said central sleeve.

We wish to direct particular attention to the fact that the construction of the brush herein described is such that the various parts may be separated from each other in a manner that will permit of the parts being thoroughly cleansed from time to time, whereby much more efficient service may be secured in the use of the brush. It will be seen in this connection that the socket piece 2 may be readily disconnected from the fountain shell 1 and when it is so disconnected the fluid controlling valve and the parts appertaining thereto are withdrawn from the fountain shell. It will also be seen that when the stopper is removed from the fountain shell, said fountain shell contains no interior obstruction from end to end thereof. It will also be noted that the pocket piece in which the bristles of the brush are seated may be readily detached from the socket piece 2 thereby rendering said socket piece as well as the parts associated with it, readily accessible to be thoroughly cleansed.

Claims:

1. In a fountain brush, the combination of a fountain shell, a stopper in the outer end of said fountain shell, a valve for controlling the flow of fluid from said fountain shell having a spring controlled rod, a valve controlling screw fitted in the stopper and provided with an air duct extending longitudinally of the valve controlling screw and then transversely of the valve controlling screw to the surface thereof and an annular rib having a washer and carried by said valve controlling screw, substantially as set forth.

2. A fountain brush comprising a shell providing a main chamber, a socket piece having a neck, a diaphragm having an orifice, and a bridge having a tubular guide stem, and secured at one end of the shell, a valve controlling the orifice, and having a valve rod extending through the tubular guide stem and provided with a collar, a retracting spring mounted on the valve rod between the guide stem and the collar, and a stopper secured to the other end of the shell, and a valve controlling screw having an air duct.

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In the presence of—
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