No. 702,286. Patented June 10, 1902.

J. A. CRANDALL.

FOUNTAIN MARKING BRUSH.

(Application filed Dec. 5, 1901.)

(No Model.)

Fig. 1.

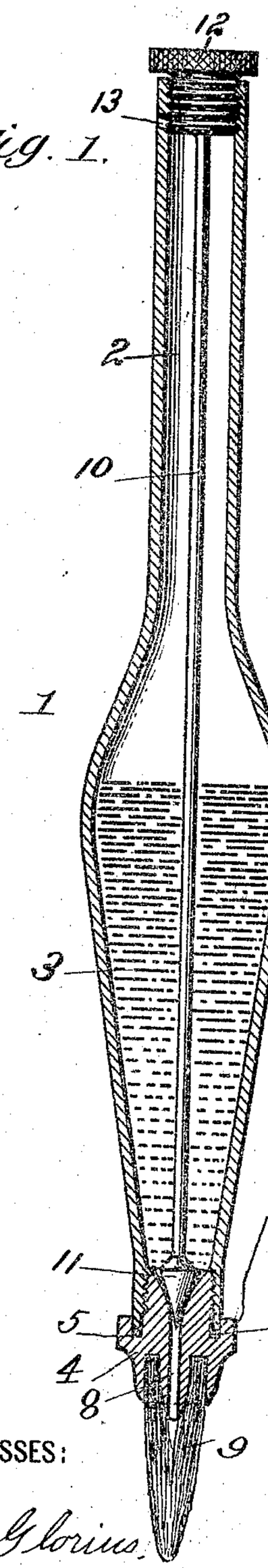


Fig. 2.

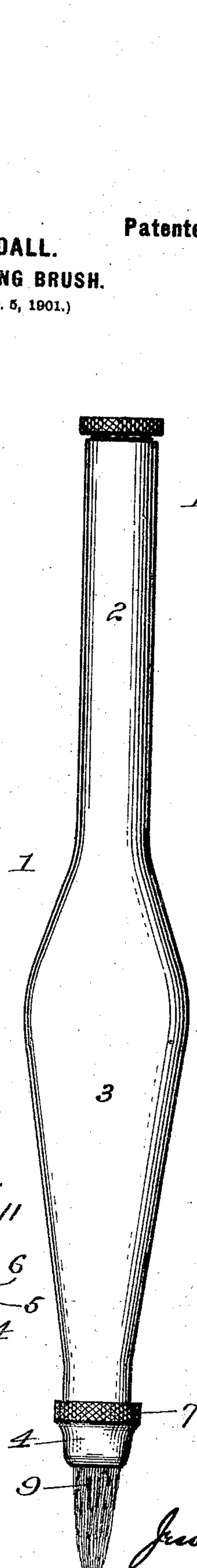
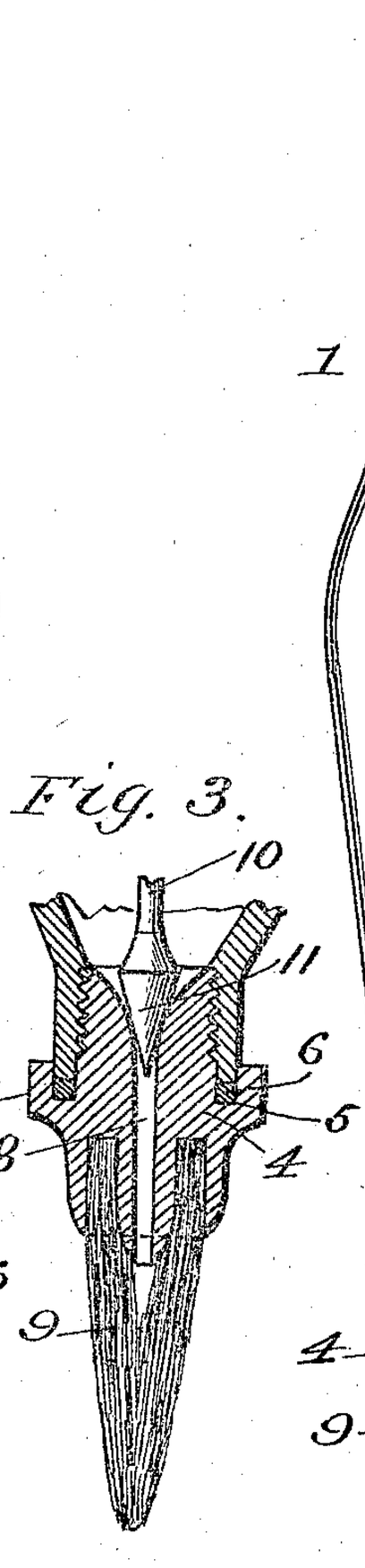


Fig. 3.



WITNESSES:

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INVENTOR,

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UNITED STATES PATENT OFFICE.

JESSE A. CRANDALL, OF BROOKLYN, NEW YORK, ASSIGNOR TO S. V. WHITE, OF BROOKLYN, NEW YORK.

FOUNTAIN MARKING-BRUSH.

SPECIFICATION forming part of Letters Patent No. 702,286, dated June 10, 1902.

Application filed December 5, 1901. Serial No. 84,798. (No model.)

To all whom it may concern:

Be it known that I, JESSE A. CRANDALL, a citizen of the United States, residing in the borough of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Fountain Marking-Brushes, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 is a longitudinal sectional view of the brush; Fig. 2, a side elevation thereof, and Fig. 3 an enlarged sectional view of the brush end of the device.

The object of this invention is to provide a simple device which may be used for marking shipping cases and packages and which will carry within itself a supply of marking-ink or other marking fluid.

Another object of the invention is to provide means whereby the flow of marking fluid to the brush may be controlled—that is, increased or diminished or entirely cut off from the brush.

Another object of the invention is to so construct the brush that its parts may be readily separated for the purpose of cleaning, the body portion of the brush being shaped in such a manner that there will be no shoulders on its interior for the lodgment of sediment.

Referring to the various parts by numerals, 1 designates the hollow body portion of the device, which is formed with the narrow upper part or handle 2 and the enlarged bulb-like lower portion 3, the walls of the lower half of the bulb-like portion inclining inwardly and downwardly, as shown, the whole of this body portion forming a reservoir, within which is contained the marking fluid. To the lower contracted end of the body portion is screwed the brush-head 4, the interior of the body portion being threaded to receive the threads formed on the exterior of the brush-head. In this head, below the threads thereon, is formed an annular groove or channel 5, in which is placed a packing-ring 6, upon which bears the lower edge of the body portion, thereby forming a liquid-tight joint. Formed integral with the brush-head is a radial flange 7, whose cylindric surface is milled to furnish a roughened part, which may be readily grasped by the fingers and the brush-head unscrewed from the body portion. In this head is formed a central longitudinal channel or passage 8, whose upper portion flares, the upper end of this passage being equal in diameter to the diameter of the interior of the body portion at this point in order that there shall be no shoulders at the upper end of the brush-head for the lodgment of sediment. Secured to the lower end of the brush-head and surrounding the passage therethrough is the brush 9, which may be of a suitable size and form best adapted for the purposes for which this device is designed.

Extending longitudinally through the reservoir is a valve-rod 10, on the lower end of which is formed a conical valve 11, which seats in the flaring upper end of the passage 8. The walls of the flared portion of the passage 8 are convexed, so that the valve 11 seats on a curved surface. The purpose of this is that should the long valve-rod be flexed or bent when forcing the valve to its seat the valve may assume a slightly-distorted or inclined position with respect to the central passage 8 without destroying the liquid-tight joint between the valve and the valve-seat. On the upper end of the valve-rod is secured a closure-cap 12, which is exteriorly threaded and is adapted to engage threads formed on the interior of the reservoir at the upper end of the narrow portion 2. A radial flange is formed on the upper end of this closure-cap, the cylindric surface of which is milled in order that it may be securely grasped when screwing the cap into the body part of the device.

The operation of the device will be obvious from the foregoing description and may be briefly set forth as follows: The reservoir is filled with the marking fluid and the valve is inserted therein and the cap 12 screwed into place sufficiently to cause the valve to enter the passage 8 and seat on the rounded wall of the flaring portion of said passage. A vent 13 is formed near the upper end of the narrow portion 2 of the reservoir and is so located that when the cap 12 is screwed in sufficiently to cause the valve 11 to close the passage 8 the vent will be closed by the inner

end of the cap 12, but when the cap is unscrewed to raise the valve from the seat the vent will be uncovered. The extent of the uncovering of the vent will be dependent upon the extent of the opening of the valve, so that when the valve is fully open the vent will be correspondingly open and when the valve is only slightly open the vent will be slightly uncovered. In this way an even flow of the marking fluid is assured through the passage 8 to the brush.

The reservoir may be filled by removing the brush-head and leaving the valve and cap in place. The valve-rod is made shorter than the reservoir, so that when the brush-head is removed the valve will be protected by the reservoir and will not be in danger of being bent or broken. Another advantage of this structure is that as the brush-head is screwed into the reservoir the flared portion of the passage 8 will center the valve.

It will be readily understood that a marking-brush of this design will be invaluable to shipping-clerks and others desiring to mark a great many packages for shipment or for any other purpose. The peculiar shape of the device makes the same convenient for handling and the provision of the valve and the cap for positively moving the valve is of importance in that it will prevent the leakage of marking fluid out through the brush when the brush is not being used, a simple turn of the cap 12 being sufficient to effectually seal the passage 8. The peculiar shape of the reservoir is also of great advantage in that it may be thoroughly cleaned by removing the cap 12 and the valve attached thereto and also the brush-head and permitting water to flow therethrough. It is also important that the inner surface of the walls of the lower portion of the bulb-like part 3 of the reservoir should incline inwardly and downwardly and that there should be no shoulder at the junction of said walls with the upper end of the wall of the flaring part of the passage 8 in order that the fluid will readily flow down the walls of the bulb-like part 3 into the passage 8, every drop of liquid being thus permitted to flow to the brush.

An important feature is the annular flange 7 on the brush-head, which is formed by the groove-socket and which nicely fits and embraces the lower end of the reservoir and is externally milled. The object of this construction is not only to provide an effective liquid-tight joint, but also to afford a convenient means for removing and replacing the brush-head, the milled flange being at a position sufficiently remote from the brush to avoid soiling the fingers in manipulating it.

It will be readily understood that, if desired, an independent filling-opening may be formed in the reservoir at a suitable point and that a suitable liquid-tight closure may be provided therefor in order that the reservoir may be filled while the valve is closed.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a marking-brush, the combination of a tubular reservoir open at its ends and internally threaded at each end and provided at its upper end with a lateral vent 13, a brush-head externally threaded and screwed into the lower end of the reservoir and provided with a central passage leading to the brush and flared upward and outward at its upper end, said brush-head being provided with an annular groove or socket 5 below its threaded portion to receive the lower end of the reservoir, said groove or socket forming an annular upwardly-extending flange 7 fitting and embracing the lower end of the reservoir, the external surface of this flange being milled, a packing-ring in the annular groove, an externally-threaded cap screwed into the upper end of the reservoir and adapted to open and to close said vent 13, a valve-rod secured to this cap and carrying a tapered valve at its lower end adapted to seat in the flared passage of the brush-head, as and for the purposes set forth.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 2d day of December, 1901.

JESSE A. CRANDALL.

Witnesses:

JAMES A. ROSE,

JOHN T. SMITH.