March 16, 1943. J. DWORKIN 2,313,865

POCKET FOUNTAIN BRUSH

Filed Jan. 27, 1942

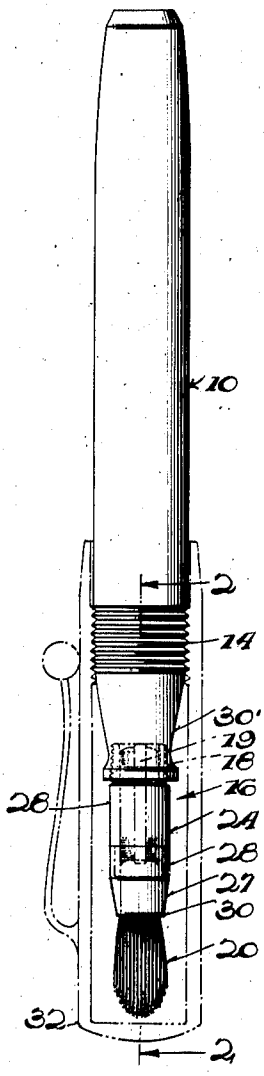


FIG. 1.

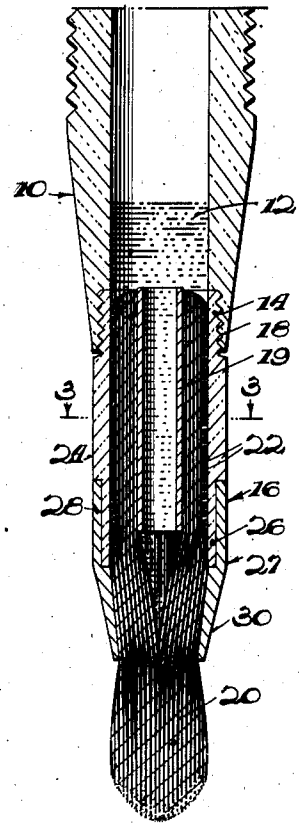


FIG. 2.

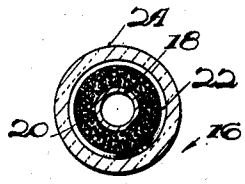
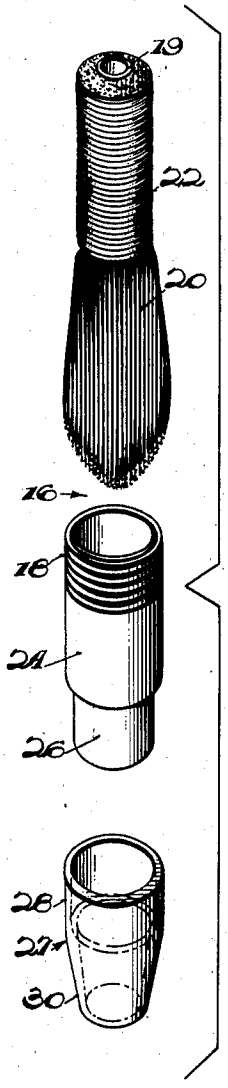


FIG. 3.

FIG. 4.



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POCKET FOUNTAIN BRUSH

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1 Claim. (Cl. 15—133)

The improved fountain brush comprising the present invention is primarily adapted for use as a pocket article for moistening postage stamps, envelopes, sealing tape and similar articles having prepared gummed surfaces. The invention however is susceptible to other uses and the same may be employed, with or without modification, as a fountain mucilage or glue brush for application of the mucilage or glue to ungummed surfaces for sealing purposes. The fountain brush is also capable of use as a lettering device in which instance suitable modification of the actual brush form may be resorted to. In addition the brush may, if desired, be designed as a medicant applicator for spreading iodine or similar tinctures on human tissues. Irrespective however of the particular use to which the fountain brush may be put, the essential features of the invention are at all times preserved.

The principal object of the invention is to improve the constructional features of fountain brushes of this type, both as regards the maintenance of the brush bristles in place against dislodgment, as well as the utility of the brush when performing the actual sealing operation.

More specifically, an important object of the invention is to provide a fountain brush having a reservoir for liquid and a bristle unit associated therewith including means whereby liquid from the reservoir may be conducted freely to the interior of the bristle group and thereafter restricted to prevent too free a flow thereof so that the actual applying surfaces or regions of the brush will remain moist at all times without any tendency for the brush to shed liquid even when the brush as a whole is maintained vertical with the reservoir positioned above the brush unit.

Another object of the invention is to provide a fountain brush having a cylindrical barrel portion providing a liquid chamber or reservoir to which there is removably secured a brush unit capable of easy removal for the purpose of filling the liquid chamber or for the purpose of substitution of a different brush unit which may have a different shape characteristic, depending upon the character of the sealing or other operation to be performed.

A still further object of the invention is to provide a fountain brush of this character which is extremely simple in its construction, consisting as it does of a minimum number of parts and which therefore may be manufactured at a low cost. A similar object is to provide a brush which is rugged and durable and which therefore is unlikely to get out of order.

The provision of a brush which is attractive and ornamental in appearance and which constitutes a pleasing vest-pocket article; and one which is efficient in its operation and which otherwise is well adapted to perform the services required of it, are further desirable features that have been borne in mind in the production and development of the present invention.

With these and other objects in view, which will become more readily apparent as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts shown in the accompanying sheet of drawing, in which:

Fig. 1 is a side elevational view of a fountain brush constructed according to the present invention.

Fig. 2 is a sectional view taken substantially along the line 2—2 of Fig. 1 and slightly enlarged.

Fig. 3 is a sectional view taken substantially along the line 3—3 of Fig. 2.

Fig. 4 is an exploded view of a brush unit employed in connection with the invention.

In all of the above described views, like characters of reference are employed to designate like parts throughout.

Referring now specifically to the drawing, the reference character 10 designates a holder or receptacle for the moistening fluid and the hollow interior thereof provides a fluid chamber or reservoir 12. The holder 10 is preferably formed of hard vulcanized rubber or of a suitable thermoplastic or thermosetting resin. The upper end of the holder is closed while the lower end is open and internally threaded as at 14. Removably secured to the lower open end of the holder 10 is a brush unit or assembly 16 having a threaded portion 18 designed for threaded engagement with the threaded portion 14 of the holder 10.

The details of construction of the brush unit 16 are best illustrated in Fig. 4 and, as may be seen from this figure, the unit includes a central liquid feed tube 19 around which a series of brush bristles 20 are arranged in parallelism and to which the bristles are securely bound by means of a wire 22 (see also Fig. 2) which is coiled around the latter with a considerable degree of tension. The upper ends of the bristles 20 terminate substantially flush with the upper end of the feed tube 19 and the bristles extend outwardly or downwardly beyond the lower end of the tube 19 and the extreme lower ends thereof, considered collectively, may be given any desired shape such as the generally rounded shape shown in Figs. 1, 2 and 4.

Surrounding the bristle assembly just described is an outer sleeve or casing 24 having a reduced portion 26 at the lower end thereof and also having a slightly reduced portion at its upper end which constitutes the threaded portion 18 previously referred to. The lower end of the sleeve 24 terminates in a plane slightly below the plane of the lower end of the feed tube 19 and receives thereover a tapered open-ended confining sleeve or ferrule 27 having a cylindrical portion 28 which terminates flush with and forms a continuation of the cylindrical wall of the sleeve 24. The tapered lower portion 30 of the ferrule 27 has an open end which is slightly smaller in diameter than the diameter of the lower end of the sleeve 24 and larger than the overall diameter of the feed tube 19 and thus the brustles 20 are drawn together and compressed in the region where they emerge from the ferrule.

From the above description it will be seen that the feed tube 19 affords a more or less unrestricted flow of the moistening liquid from the reservoir 12 to a region well within the confines of the bristles 20 and adjacent the bottom of the brush unit. Below this region the bristles are compressed and further flow of liquid is restricted except for a certain amount of seepage which may take place due to the phenomenon of capillary attraction. Thus there is little danger of the brush shedding liquid freely and only sufficient liquid will be carried into the extreme lowermost regions of the brush for application to the gummed surfaces of the envelopes, postage stamps or other articles to be sealed.

If desired, a suitable protective cover or cap, shown in dotted lines at 32 in Fig. 1, may be employed to fit over the brush end of the article to conceal the brush bristles 20 when not in use. The cover or cap 32 may be received over the other end of the article during use of the brush.

The invention is not to be limited to the exact arrangement of parts shown in the accompanying drawings or described in this specification as various changes in the details of construction may be resorted to without departing from the spirit of the invention. Only insofar as the invention has particularly been pointed out in the accompanying claim is the same to be limited. For example, while the upper end of the holder has been shown as being permanently closed, it is obvious that the same may be provided with a suitable filling cap or the like if desired. Likewise the holder may be provided with any suitable self-filling apparatus for automatically drawing fluid upwardly through the brush bit unit thereinto.

What is claimed is:

A fountain brush comprising a cylindrical liquid holder having internal threads at one end thereof, a brush assembly comprising an elongated hollow open-ended tubular feed member arranged axially and centrally of the assembly and of a diameter sufficiently large to permit free flow of liquid into the assembly directly from the holder, a plurality of brush bristles surrounding said feed member and arranged in parallelism and extending parallel to the axis of the feed member throughout the length thereof, means compressing the bristles and binding the same to the feed member and extending throughout the length of the same, a sleeve surrounding the feed member, bristles and binding means and of a length greater than the length of the feed member and extending from the inner end thereof and projecting beyond the feed member to shield the bristles from exterior compression in the region of the outer end of the feed member to prevent the bristles from choking said outer end, said sleeve, bristles, binding means, and feed member extending into the threaded end of the holder so that the feed tube and inner ends of the bristles have direct contact with the liquid interiorly of the holder, the inner end of the sleeve having a threaded engagement with the threads of the holder and a ferrule telescopically received on the outer portion of the sleeve and in frictional engagement with the latter and provided beyond the sleeve with an outer tapered portion compressing the bristles in a region spaced from the outer end of the said tube and restricting the flow of liquid through the bristles to the outer portions thereof.

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