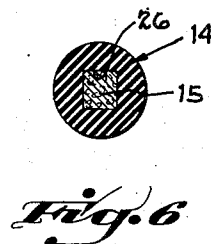
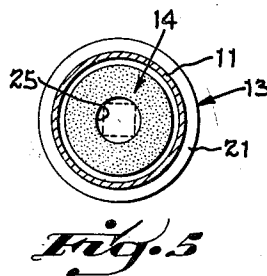
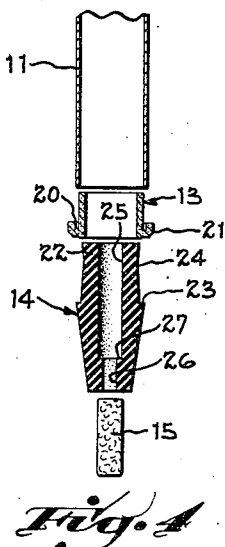
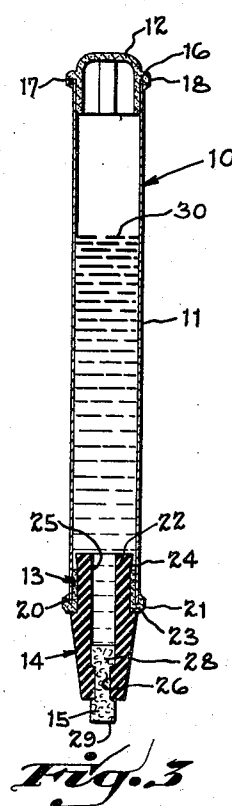
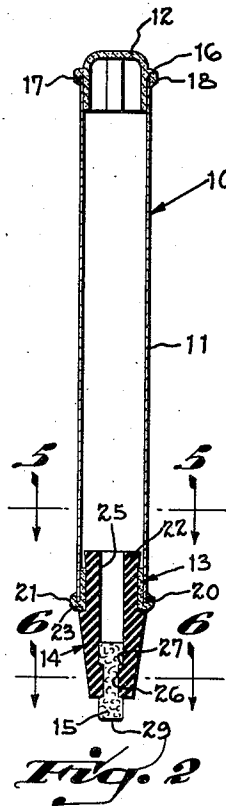
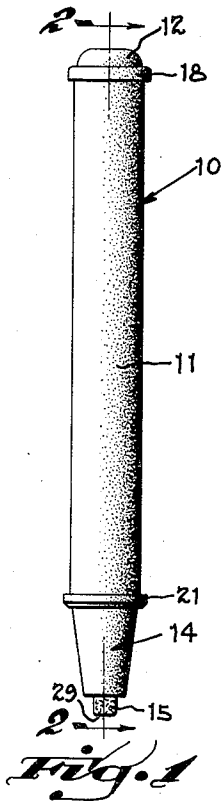


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FOUNTAIN PAINT BRUSH

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2,820,233

FOUNTAIN PAINT BRUSH

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1 Claim. (Cl. 15—136)

This invention relates to a fountain brush for use, principally by children, in painting with water colors. It is particularly, although not exclusively, adapted for use in conjunction with liquid paint preferably formed from water and water soluble color tablets.

Brushes of the general type of the invention have been suggested in the past and some have proven generally adequate for the purposes intended. The particular object of the present invention has been to provide an improved water color fountain paint brush in which various problems incident to the construction and use have been completely eliminated, but one which, at the same time, is of relatively simple construction and inexpensive to manufacture.

In the drawings:

Figure 1 is a front elevational view of a preferred embodiment of a fountain brush constructed in accordance with the principles of the invention.

Figure 2 is a sectional view along the line 2—2 in Figure 1, showing the brush empty.

Figure 3 is a view similar to Figure 2 showing the brush filled with water color paint.

Figure 4 is an exploded view of the lower end of the brush illustrating the details of construction of the various component elements.

Figure 5 is a sectional view along the line 5—5 in Figure 2.

Figure 6 is a sectional view along the line 6—6 in Figure 2.

Referring now to the drawings for a further and more detailed description of the invention, the brush, as shown in Figure 1 and designated generally as 10, includes the component elements of a substantially thin-walled, hollow tube 11, preferably formed from plastic or other flexible material, an upper end cap 12 of hard material, such as butyrate plastic, a bottom sleeve or bushing 13, preferably formed of the same material as the upper cap 12, a wick holder 14 which may be made from compressible material such as rubber or the like, and a wick 15 preferably formed from felt or other absorbent material.

The assembly of the component elements is illustrated in Figures 2—4. Considering first the upper end of the brush, it will be noted that the rim 16 at the upper edge of the tube 11 is adapted to be inserted in an annular groove 17 formed at the underside of a bead 18 which is on upper end cap 12. Since a permanent connection is desired at this point the tube preferably is heat sealed to the cap. However, adhesive or a plastic solvent may be used if desired.

The lower end of the tube 11 preferably is inserted in a groove 20 which is similar to the groove 17 in cap 12. Groove 20 is in the upper surface of a bead 21 which is formed on sleeve 13. The lower end of the tube and sleeve are permanently secured together in the same manner that the cap and the upper end of the tube are secured together. The inner end 22 of the wick holder 14 is then inserted through the open lower end of sleeve 13 until a shoulder 23 on the wick holder contacts the under-

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side of the bead 21 on the sleeve. As is illustrated in Figure 4, the inner end 22 of the wick holder has a slight inward taper above shoulder 23 to an area of lesser diameter indicated at 24 which corresponds to the point at which the upper end of the sleeve 13 contacts the periphery of the inner end of the wick holder. It is found that this configuration provides an efficient leak-proof seal between the wick holder and sleeve.

The wick holder 14 is hollow, having a substantially cylindrical bore 25 at the inner end thereof and a substantially rectangular bore 26 at the outer end thereof. Where the two bores 25 and 26 meet they provide an internal shoulder 27. Wick 15, which is illustrated in Figures 4 and 6 is rectangular in cross section and is inserted through the outer bore 26 in the wick holder until a substantial portion, indicated at 28, has entered the cylindrical bore 25 above the internal shoulder 27. The wick is substantially longer than the length of rectangular bore 26 so that another portion 29 extends beneath the lower end of the wick holder to form the painting medium.

In the assembly of the unit, the wick 15 is first inserted in the wick holder 14 as illustrated and described. The wick is then soaked in water which causes it to swell and to fit very tightly in the wick holder bore. After the portion 28 above the shoulder 27 has once assumed its enlarged position as illustrated in Figures 2 and 3, it is almost impossible to remove the wick from the wick holder inadvertently or otherwise.

While the securance between the wick holder and the sleeve 13 is only a press fit, the tapered surfaces on the wick holder provide a very secure attachment sufficient to prevent dripping of the painting fluid or inadvertent disengagement of the wick holder.

In loading the brush the wick holder is first removed and a water soluble color tablet (not shown) is dropped into the tube 11. The tube is then filled about $\frac{3}{4}$ full of water to form a paint solution indicated at 30. The wick holder is then re-inserted and the brush turned to its normal vertical position. After the wick has become saturated, the liquid paint flows through it. From time to time it may be necessary to squeeze the tube to force the proper amount of color through the brush. Since the tube is formed of compressible material, squeezing the side walls tends to accomplish this effectively.

One of the chief objections to former constructions has been the difficulty in providing in a compressible tube fluid tight seals at the critical points. This difficulty has been met in the present structure by the use of relatively heavy re-inforcing elements including particularly the upper end cap 12 and the bottom sleeve 13.

As previously stated, the wick is preferably rectangular in cross section. This enables the user to paint a thin line by painting with the edge or the corner of the wick, and a broad line by painting with the lengthwise dimension. Small dots of paint can be made by touching a corner of the wick to the paper.

It will be appreciated that the structure as herein described presents only a preferred embodiment of the invention and that various changes and modifications may be made without departing from the principles thereof.

Having described my invention, I claim:

A fountain paint brush comprising an elongated cylindrical hollow tube made of thin, flexible, plastic material, an end cap permanently secured to the upper end of said tube to seal the same, said end cap made of substantially rigid plastic material, a sleeve made of substantially rigid plastic material seated within the lower end of said tube, said sleeve being permanently secured to said tube in sealing relationship therewith, the inner edge of said sleeve forming a shoulder on the inner surface of said tube, a wick holder made of resilient material, said wick holder

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having an inner end removably seated within said sleeve in liquid tight relationship, an annular shoulder on said wick holder engageable with the outer end of said sleeve when the wick holder is seated therein, said wick holder having a convergent-divergent configuration inwardly of the annular shoulder thereof, the minimum diameter of said configuration being located at the shoulder formed by the inner edge of said sleeve to provide a pressure seal, a central bore extending through the center of said wick holder longitudinally thereof, said central bore having an outer portion which is substantially rectangular in cross section and an inner portion which is substantially cylindrical, said cylindrical inner portion of the central bore being substantially larger in diameter than the distance between opposite sides of the rectangular outer portion of said central bore to provide an internal shoulder where said inner and outer portions of the central bore meet, and an elongated wick which is substantially rectangular in cross section and which is made of liquid absorbent material, said wick seated within the outer portion of said central bore with the inner end of said wick above said internal shoulder and the outer end

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thereof extending to the outside of said wick holder, and the felt from which said wick is made being characterized by expanding when wetted, whereby the inner end of said wick above said internal shoulder swells to lock said wick firmly in place in the wick holder, whereby the engagement of the wick with said internal shoulder and the engagement of said wick holder with the shoulder formed by the inner edge of said sleeve seals said wick and said wick holder in said tube preventing dislodgement therefrom when pressure is applied to said tube to force fluid into said wick.

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