Sept. 16, 1952 W. C. MARSH 2,610,896

METHOD OF MAKING BRUSH TIPS

Filed July 19, 1948

Fig. 1.

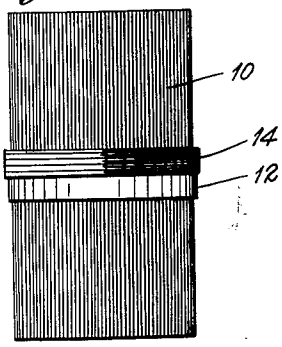


Fig. 2.

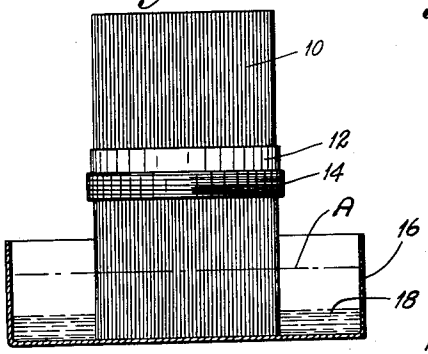


Fig. 3.

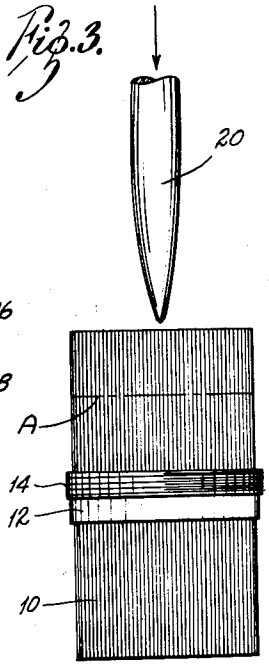


Fig. 4.

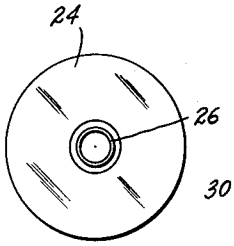


Fig. 5.

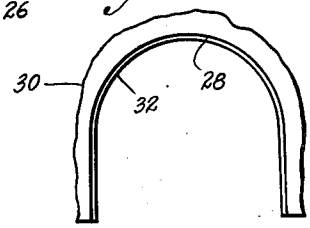


Fig. 6.

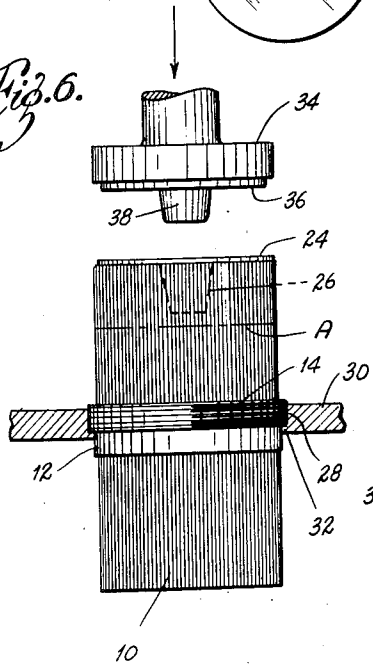


Fig. 7.

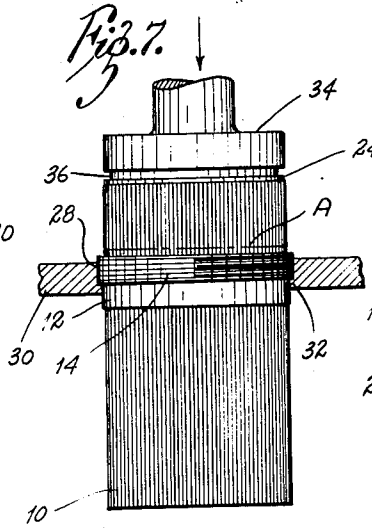
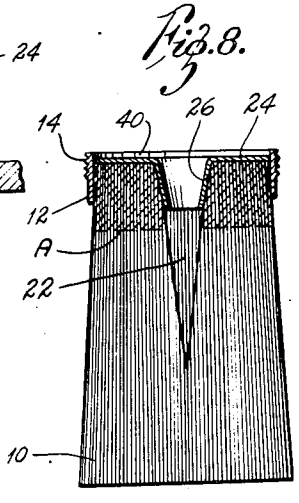


Fig. 8.



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METHOD OF MAKING BRUSH TIPS

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1 Claim. (Cl. 300—21)

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The present invention relates generally to the stenciling art, and more particularly to a method of making a stencil brush tip.

An object of the present invention is to provide a novel method of forming a brush tip by means of which an effective and durable brush tip is achieved.

Another object is to provide a novel method of making a brush tip which is simple in its step sequence and which may be readily followed without the requirement of intensive instruction.

Another object is to provide a novel method of making a brush tip by means of which a well formed wear-resisting compact brush tip adapted to readily receive and distribute stenciling ink or other fluid is effected.

The foregoing and other objects and advantages are apparent from the following description taken with the accompanying drawing, in which:

Fig. 1 is a side elevational view of a bundle of bristles bound centrally of the ends by a threaded brush tip ring;

Fig. 2 is a side elevational view of the bundle of bristles of Fig. 1 shown disposed in a pan of cement, the pan being shown in vertical cross section;

Fig. 3 is a side elevational view of the ring-bound bundle of bristles with the lower end of a pointed member disposed adjacent to and centrally of the glue-applied end of the bristles;

Fig. 4 is a bottom plan view of a plunger forming part of a pressure-applying machine which is not shown;

Fig. 5 is a plan view of a ring supporting platform of a pressure-applying machine;

Fig. 6 is a side elevational view of the ring-bound bundle of bristles supported in a pressure-applying machine, a cap member and the plunger of the machine being shown adjacent the glue-applied end of the bristles;

Fig. 7 is a view similar to Fig. 5, but with the machine plunger against the cap disposed on the glue-applied end of the bristles, the bristles being shown forced partly through the ring; and

Fig. 8 is a vertical cross-sectional view through a completed stencil brush tip formed in accordance with the teachings of the present invention.

The present novel method of making stencil brush tips is best explained by reference to the accompanying drawing. A predetermined quantity or batch of bristles 10, preferably China bristle and about two and one-half inches in length, is inserted through a ring 12 having exterior threads 14 for a portion of the depth thereof. The ring 12 is initially located substantially midway between the ends of the bristles 10 and fits snugly. The batch of ring-bound bristles 10 is disposed on one end in a pan 16 of cement 18 and permitted to remain there for substantially an hour. It has been determined that in about an hour a suitable cement 18 of shallow depth will rise into the bristles 10 to a height of substantially one-half inch, or to about the broken line A.

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The batch of bristles 10 is removed from the cement 18, and, while the cement within the end of the bristles 10 is still unset, a pointed member 20 is inserted into the glue-applied end of the bristles 10 to form a well 22 of substantially the configuration shown in Fig. 8. An annular cap member 24 of substantially the inner diameter of the ring 12 having a centrally located frusto-conical depending flange 26 is disposed on the glue-applied end of the bristles 10 with the flange 26 depending into the well 22.

The batch of bristles 10 is then disposed in the U-shaped opening 28 of a supporting anvil or platform 30 of a pressure-applying machine (not shown), the lowermost of the threads 14 of the ring 12 resting upon a shoulder 32 preferably having the same pitch as the threads 14 in order to dispose the ring 12 and bristles 10 vertically, as is shown in Figs. 6 and 7. A plunger 34 having an annular inset platform 36 from which a frusto-conical shaped centrally disposed projection 38 extends, forming part of the pressure-applying machine, is brought against the cap 24 and pressure applied to force the bristles 10 downwardly through the ring 12 until the upper end of the bristles 10 and the cap 24 are in positions in respect to the ring 12 as is clearly shown in Fig. 8. It is to be noted that the cap 24 is a fraction of an inch below the upper edge of the ring 12 to provide a recess 40 which snugly receives a washer (not shown). The platform 36 is of smaller diameter than the internal diameter of the ring 12.

The bristles 10 and the cap 24 will be firmly held in the ring 12. The bristles 10 will be secured to the interior face of the ring 12 both by cement 18 and friction, the latter due to the fact that the depending frusto-conical flange 26 of the cap 24 reduces the cross section of the space originally provided for the bristles 10, and, hence, provides a very snug fit at the top, as is evidenced from Fig. 8. The bristles 10 are held firmly to each other by the cement 18, and, hence, do not pull out in use.

It is manifest from the foregoing that the applicant's novel method of forming a brush tip achieves the objects and advantages sought therefor.

It is to be understood that the foregoing description and the accompanying drawing have been given by way of illustration and example. It is also to be understood that substitution of equivalent steps and rearrangement of steps, which will be readily apparent to one skilled in the art, are contemplated as within the scope of the present invention, which is limited only by the claim which follows.

What is claimed is:

A method of making fountain brush tips comprising the steps of inserting a selected batch of bristles in longitudinal relationship into a ring and disposing the ring in a position well removed from one end of said batch so as to leave said bristles at said end in loose, uncompressed relation, submerging said end in a liquid cement to a level below said ring for further capillary rise of the cement between the bristles of said brush to a level above said liquid level, but below said ring, withdrawing the ring and the enclosed bristles, inserting and removing a forming tool in the cement-applied end of the bristles while

the cement is still wet so as to form a well in said end extending through and beyond the cement-applied portion of said bristles and to expand the diameter of said end, applying to the expanded cement-applied end a flat cap having an open frusto-conical projection extending partially into the formed well, supporting the ring, bristles and cap by engaging the ring and applying pressure to the expanded cement-applied end of said brush through the cap to cause said expanded end to move toward and through said ring in forcing engagement therewith until the cap at said expanded end is within the inner wall of said ring at a predetermined depth.

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