Nov. 10, 1953 C. R. GOLDBERGER 2,658,801

PROCESS FOR MAKING PAINTBRUSHES

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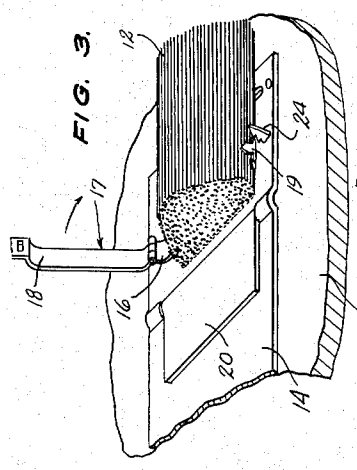


FIG. 3.

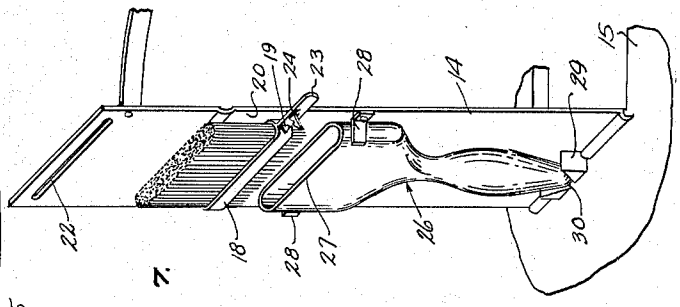


FIG. 7.

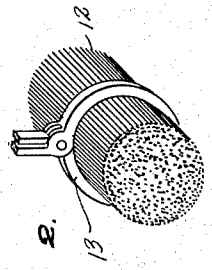


FIG. 2.

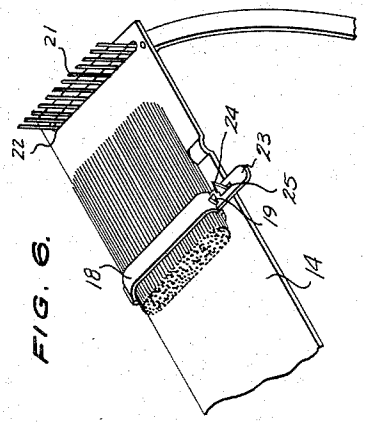


FIG. 6.

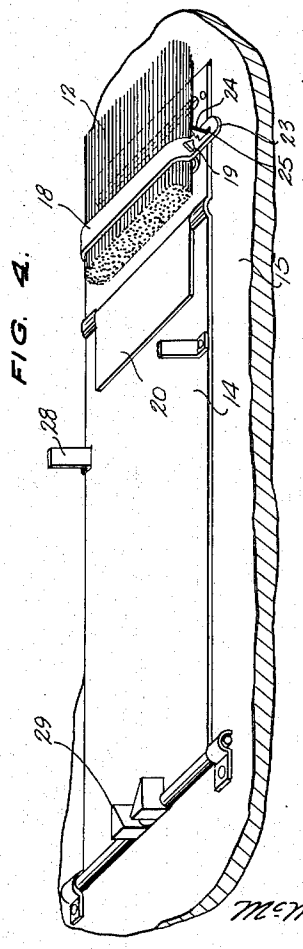


FIG. 4.

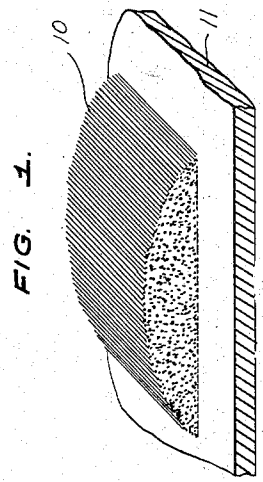


FIG. 1.

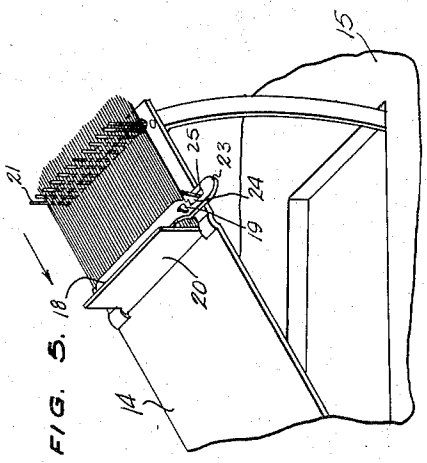


FIG. 5.

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PROCESS FOR MAKING PAINTBRUSHES

Charles R. Goldberger, Brooklyn, N. Y.

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2 Claims. (Cl. 300—21)

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This invention relates to a process for making paint brushes.

An object of the present invention is to provide a process for making a paint brush which enables the bristle part of the brush to be formed from a loose stack of bristles.

Another object of the present invention is to provide a process for making a paint brush in which the bristle part of the brush is formed from a loose stack of bristles, and the thus formed bristle part is readily received and mounted in the cavity of a brush handle.

A further object of the present invention is to provide a process for making a paint brush which is simple in execution and highly efficient and commercially feasible.

Other objects and advantages of the invention will be apparent from the following description taken in conjunction with the accompanying drawing, wherein:

Figure 1 is a fragmentary perspective view showing a loose stack of bristles supported upon a table.

Figure 2 is a fragmentary perspective view of a cluster of bristles embraced by lifting tongs.

Figure 3 is a fragmentary perspective view showing the upper portion of a backing lying upon a table with the hinge clamp in open position and the cluster of bristles straddling the leg of the clamp slidably supported on the backing plate.

Figure 4 is a fragmentary perspective view showing the backing in its entirety lying upon the table with the hinge clamp in position loosely embracing the cluster of bristles shaped to simulate the bristle part of the paint brush adjacent one end thereof.

Figure 5 is a fragmentary perspective view showing the upper portion of the backing in its partial elevated position with respect to the table and the hinge clamp in position loosely embracing the cluster of bristles shaped to simulate the bristle part of the paint brush adjacent one end thereof, with the tapping plate in engagement with one end of the shaped bristle part and the teeth of a comb projecting through the bristle part adjacent the other end thereof and in combing position.

Figure 6 is a fragmentary perspective view of the upper portion of the backing in the partial elevated position and the shaped bristle part moved out of combing position, with the hinge clamp in position tightly embracing the cluster of bristles shaped to simulate the bristle part of the brush adjacent one end thereof and the comb in combing position and the tapping plate moved to its non-tapping position.

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Figure 7 is a fragmentary perspective view of the backing in its entirety in its full elevated position with respect to the table and the hinge clamp in position tightly embracing the cluster of bristles shaped to simulate the bristle part of the brush adjacent one end thereof, with the cavity of a brush handle in position upon the backing for receiving the adjacent end portion of such bristle part.

In carrying out the process of the present invention, a loose stack of bristles suitable for brush use and indicated by the numeral 10 is placed upon the table 11, Figure 1. The bristles may be either derived from horse hair, badger hair, or synthetically prepared bristles from nylon, plastic and the like. A cluster of bristles 12 is taken by means of a lifting tong 13, Figure 2, from the stack 10 on the table 11, and is placed by such tongs upon a backing 14, Figure 3, lying flat upon a table 15 so that a portion adjacent one end straddles and lies upon the leg 16 of a hinge clamp 17 in open position, the leg 16 being suported on the backing 14 for longitudinal sliding movement. The other leg 18 of the clamp 17 is then moved to its closed position, with the prong 19 carried by the leg 16 extending through a complemental slot formed in the adjacent portion of the leg 18, Figure 4, resulting in the shaping of the cluster of bristles to simulate the bristle part of a paint brush. In this closed position of the hinge clamp 17, the bristles of the shaped bristle brush part are loosely embraced to an extent such as to retain them in shaped condition, but permit movement of the bristles longitudinally. The backing 14 is then raised to its partial elevated position with respect to the table 15, Figure 5, and while in such position the tapping plate 20 is swung to its perpendicular position with respect to the backing 14 and against the one end of the shaped bristle part, resulting in the evening of the bristles. Upon completion of the evening operation and while the backing 14 is still in its partial elevated position, the tapping plate 20 is swung to its abutting position with respect to the table 15 and a comb 21 is placed so that teeth project through the slot 22 provided in such backing 14 and through the portion of the bristle part adjacent the other end or end remote from the clamp 17, whereupon the clamp 17 is moved back and forth relative to the comb 21 and thereby effecting the combing of the bristle part longitudinally backwardly and forwardly from the other end thereof.

Upon completion of the combing operation and while the backing 14 is still in its partial elevated position, the clamp 17, Figure 6, is moved away from the comb 21, and the projecting end 23 of the leg 18 of the clamp 17 is pressed toward the backing 14, whereupon the serrated latch 24 connected to the backing 14 for back and forth transverse movement and projecting through a slot 25 provided in the projecting end 23 of the clamp leg 18 is moved to cause engagement of one of its serrations with the adjacent wall of the slot 25 thereby causing the clamp 17 to tightly embrace the thus held bristle part. At this point, the comb 21 is withdrawn from the slot 22 in the backing 14, and the backing is then raised to its full elevated position, Figure 7.

While the backing 14 is in its full elevated position or the position of Figure 7, a handle 26 is positioned upon the backing 14 so that the end carrying the cavity or socket 27 is embraced by the opposed spring clips 28 carried by the backing and faces the end portion of the thus formed bristle part below the clamp 17 with the pointed other end 30 supported in the V-shaped block 29 also carried by the backing 14. The socket 27 of the handle 26 carries a mass of molten moldable plastic material settable upon heating which material, after setting, forms a hard integral mass. To effect the setting of such plastic material it is required that it be heated to the prescribed elevated temperature. The liquid moldable plastic materials settable upon heating which may be used are:

Any one of adhesive compositions marketed by Armstrong Products Co., of Warsaw, Indiana, and containing a thermosetting resin and inorganic filler materials and capable of being cured at an elevated temperature of less than 250° Fahrenheit. Such compositions are designated A–1 (Brown, A–2 (Electrical Grade) and A–3 (Black), and may be employed alone or in combination with an activator selected from the group of activators also marketed by the aforesaid company and designated as Activator "A," Activator "B" and Activator "C."

At this point, the clamp 17 is moved toward the handle socket or cavity 27 until the end portion of the thus held bristle part therebelow is completely inserted within the cavity, resulting in the embedding of such end portion in the plastic mass contained in the handle cavity or socket 27. At this point, the latch 24 is moved to cause disengagement of the serration with the adjacent wall of the slot 25, and the leg 18 of the clamp 17 swung to its open position. The handle 26 carrying the attached bristle part is then freed from its engagement with the clips 28, placed in a proper tray, and then subjected to the setting operation, resulting in the bonding of the embedded bristle part portion to the handle cavity. The backing 14 is then returned to its position of abutment against the table 15, Figure 3, for forming another paint brush.

Having fully described the invention, what I claim as new and desire to secure by Letters Patent is:

1. The process for making a paint brush comprising shaping a cluster of bristles to simulate the bristle part of a paint brush, embracingly engaging the thus shaped bristle part adjacent one end thereof, combing the thus shaped bristle part longitudinally backwardly and forwardly from the other end thereof while being embracingly engaged, embedding the portion of the thus shaped bristle part adjacent said one end thereof in a mass of molten moldable plastic material settable upon heating contained in a handle cavity, and subjecting said plastic material to an elevated temperature to effect bonding of said embedded bristle part end portion to said handle cavity.

2. The process for making a paint brush comprising shaping a cluster of bristles to simulate the bristle part of a paint brush, embracingly engaging the thus shaped bristle part adjacent one end thereof, tapping said one end of the thus shaped bristle part to even the bristles, combing the thus shaped bristle part longitudinally backwardly and forwardly from the other end thereof while being embracingly engaged, embedding the portion of the thus shaped bristle part adjacent said one end thereof in a mass of molten moldable plastic material settable upon heating contained in a handle cavity, and subjecting the plastic material to an elevated temperature to effect bonding of said embedded bristle part end portion to said handle cavity.

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