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3,134,124

COATING APPLICATOR

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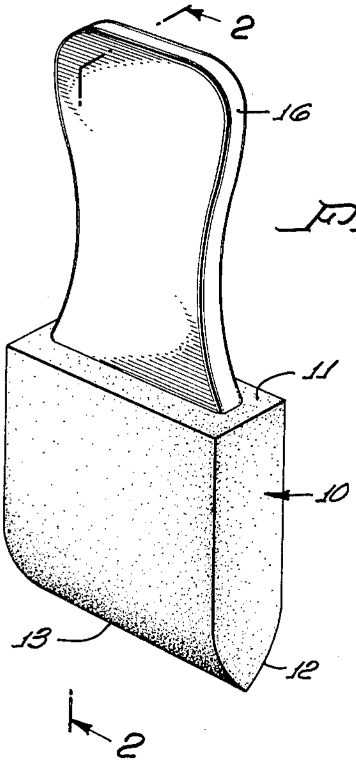


FIG. 1.

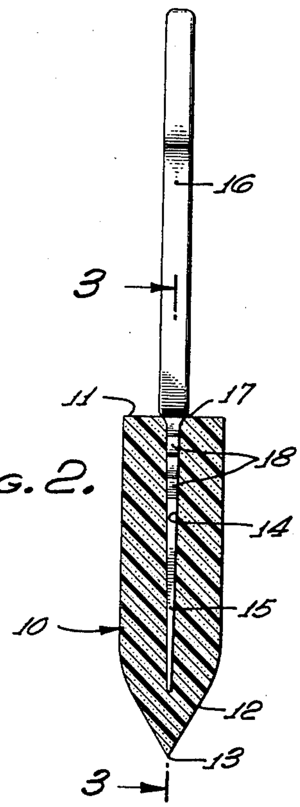
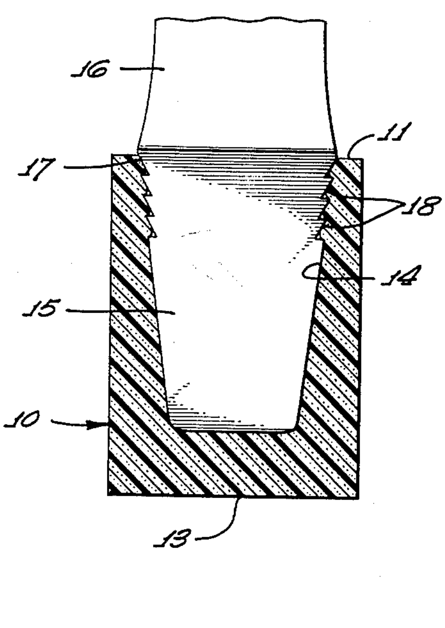


FIG. 2.

FIG. 3.



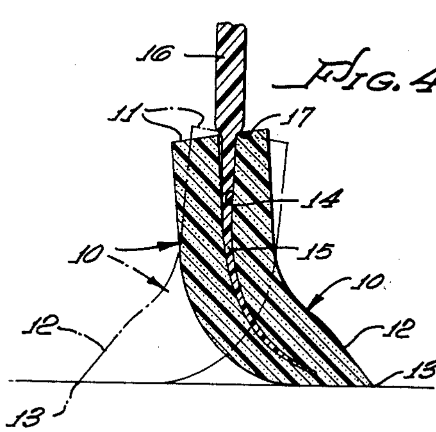


FIG. 4.

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COATING APPLICATOR
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1 Claim. (Cl. 15—244)

This invention relates to a coating applicator which can be used to apply various coatings such as paints, varnishes, and the like.

A primary object of the invention is to provide a coating applicator of such inexpensive construction that it may be discarded or disposed of after use. Coatings have heretofore been applied by conventional paint brushes consisting essentially of a handle to which bristles are secured in various manners. The usual cost of a paint brush is such that the average person is reluctant to discard it after it has been used and undertakes to clean the bristles of the brush for an anticipated succeeding use. Because of the fact that the bristles are so close together it is frequently difficult to thoroughly clean them.

In accordance with the present invention the applicator consists of a handle on which is mounted in preferably a detachable manner of flexible and compressible sponge-like head. The head can be dipped into a supply of liquid coating such as paint or varnish and can be manipulated in the same manner as a conventional paint brush in applying the coating to a selected surface. On completion of the application of the coating the sponge-like head can be removed from the handle and discarded and a new one applied to the handle at the time of a successive use.

More specifically, an object of the invention is to provide a coating applicator having the above-mentioned characteristics wherein a portion of the handle extends into a recess formed in the end of the sponge-like head. This portion is characterized by the fact that it is laterally flexible but progressively decreases in stiffness from the mentioned end of the head toward the other. Consequently, in manipulating the applicator the action of the handle and the head closely resembles the feel of a conventional paint brush. While a stiff or non-flexible handle might be employed, such handles when employed have the disadvantage that only that portion of the sponge-like head that projects beyond the end of the handle is free to flex. Furthermore, with prolonged use the end of a stiff or non-flexible handle tends to wear through a side of the head.

With the foregoing and other objects in view, which will be made manifest in the following detailed description and specifically pointed out in the appended claims, reference is had to the accompanying drawings for an illustrative embodiment of the invention, wherein:

FIGURE 1 is a perspective view of a coating applicator embodying the present invention;

FIG. 2 is a vertical section taken substantially upon the line 2—2 upon FIG. 1 in the direction indicated;

FIG. 3 is a partial view in vertical section taken substantially upon the line 3—3 upon FIG. 2, in the direction indicated; and

FIG. 4 is a partial view similar to FIG. 2, but illustrating the action of the head and the handle in the course of use.

Referring to the accompanying drawings wherein similar reference characters designate similar parts throughout, the improved applicator comprises a sponge-like head 10 preferably having a flat upper end 11 and a tapered or wedge-shaped lower end 12 terminating in a central edge 13. This head is formed of flexible and compressible cellular sponge-like material. A very inexpensive material which I prefer to use is flexible polyurethane foam as this material is relatively inert to the solvents used in most coatings, such as paints and varnishes. Equivalent cellular materials or sponge-like materials can be employed if desired. The cells of the cellular head may be of various sizes depending upon the nature of the coating that is to be applied. Usually a polyurethane foam having a fine cell structure will be used in applying varnishes and lacquers, and a coarser cell structure may be employed in applying paints.

In the upper end 11 a recess 14 is formed in the head which extends downwardly toward the lower end 12 through a major portion of the vertical dimension of the head. This recess is to accommodate a blade portion 15 of a one-piece handle 16 which may be formed of polyethylene or similar plastic that is likewise inert to the solvents that are usually present in varnishes, lacquers, and paints. The material used for the handle may vary considerably but should possess the property of being somewhat flexible particularly if made sufficiently thin. As illustrated, the upper portion of the handle that extends above the upper end 11 is adequately thick to resist flexure.

The portion 15 which occupies the recess 14 is made somewhat thinner and tapers from the upper end 11 of the head or from the shoulder 17 downwardly both in thickness as illustrated in FIG. 2, and in width as illustrated in FIG. 3. The recess 14 tapers in width complementary to the taper in width of the handle portion 15, and is widest at its top. These tapers either of which may be used alone, but which are preferably used together cause the portion 15 to possess the property of progressively decreasing in stiffness against lateral bending from the upper end 11 toward the lower end 12. Consequently, at the time of use, as depicted in FIG. 4 not only may the sponge-like head 10 flex laterally throughout a major portion of its length but the portion 15 may also flex somewhat in sympathy therewith. As a means of retaining the head 10 on the handle the side edges of the portion 15 are provided with upwardly directed teeth or serrations 18 designed to bite into the end walls of the recess to retain the head on the handle. This bite, however, is not sufficient to prevent the head from being forcibly pulled from the handle. The upper end of the head 10 engages the downwardly facing shoulders 17 of the handle.

At the time of use, only the open cells adjacent the surface of the head pick up paint or varnish when dipped therein. These coating materials can be spread on a surface by the applicator in very much the same manner as a conventional paint brush and as illustrated in FIG. 4. As the portion 15 is laterally flexible with progressively increasing flexibility from top to bottom the feel of the applicator in the course of painting or varnishing is very much akin to that of a conventional paint brush. When the varnishing or painting is completed the head 10, because of its inexpensive construction, can be removed from the handle and discarded and a new head substituted therefor at the time of further use. In actual practice, however, due to the fact that the head is largely composed of open cells, it will be found that if the head is merely dropped into a container of paint thinner or similar solvent, which is much thinner than paint or varnish, and squeezed out two or three times, that the coating material within the cells will be quickly and completely cleaned therefrom so that the same head is susceptible of successive use.

Various changes may be made in the details of construction without departing from the spirit and scope of the invention as defined by the appended claim.

I claim:

A coating applicator comprising: a one-piece handle of flexible material having a relatively thick and stiff upper portion by which it may be grasped and a relatively thin lower blade portion tapering uniformly downwardly both as to thickness and in dimensions from side to side to a relatively thin lower edge so that the lower portion decreases in its resistance to lateral bending steadily from top to bottom, the upper handle portion presenting downwardly facing shoulders contiguous to the lower handle portion, the side edges only of said lower handle portion having upwardly directed serrations; and a head of flexible compressible cellular material of uniform thickness throughout most of its length and having only its lower portion tapered in thickness to a terminal lower edge, said head having a recess thereinto from its top which recess is widest at its top; said lower handle portion being received in said head recess with the lower handle portion serrations engaging the end walls of the head recess to retain the head on the handle, said lower

handle portion being of such a size that it substantially fills said recess and the upper end of said head engaging said handle shoulders.

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