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64 **Two-component applicator for liquids, particularly paint, which enables easy cleansibility and preferably has a hand-held body within which the liquid is contained.**

57 An applicator for applying a liquid, particularly a paint, to a substrate. The applicator comprises two separable components, an applicator head (4) which is preferably a brush head (4) and a body component (1) which is preferably hand held and contains the liquid to be applied. The body carries a liquid feed conduit (6) which, when the components are joined extends within the head (4) to deliver liquid from an orifice (7) which, when the components are separated the orifice (7) can be cleaned and can be closed by a plug (8) when not in use.

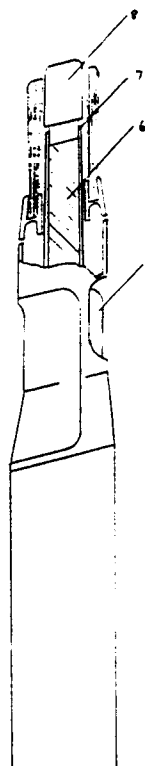


Fig. 2

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LIQUID APPLICATOR

This invention relates to an applicator for a liquid, for example a paint applicator.

The conventional hand-held paint brush comprises a handle and a brush head. The brush head usually comprises a large number of bristles arranged in a form of brush suitable for paint application and set in a stock which is permanently attached to the handle. Various modifications of the conventional paint brush have been proposed. It has been proposed, for example, to locate within the brush head one or more conduits through each of which paint to be applied to a substrate can be fed directly from an external source. The external source may be, for example, a container containing paint as supplied by a paint manufacturer, the paint being fed to the conduits within the brush head by way of an external conduit. The conduits in the brush head are usually flexible in order that they can flex with the bristles during painting and their orifices are positioned within the brush head such that the paint can readily reach the application surface of the brush.

It is a disadvantage of the type of paint brush modification just mentioned that the conduit or conduits lying within the brush head are of small bore and are, therefore, prone to blockage during use, for example by particulate matter present in the paint. Furthermore, the conduit orifices tend to become blocked and are not easy to clean once the paint has been applied and the residual paint begins to dry. A similar disadvantage is also likely to arise when the applicator head is of a related type, for example when it is a pad head or a roller head.

We have now devised an applicator in which the disadvantages as to blockage and difficulty of cleaning which are present in the above described directly-fed type paint brush are largely overcome. This applicator can be used also to apply to a substrate liquids which are similar in character to paint, for example an adhesive. In one preferred form the liquid to be applied is contained within the applicator which can be hand-held.

According to this invention we provide an applicator for applying a liquid to a substrate which comprises a body component and an applicator head component having an application surface, each component being adapted for positive engagement with and for ready disengagement from the other component, the body component comprising a liquid feed conduit which, when the two components are engaged, extends within, and provides at least one orifice lying within the applicator head such that liquid can be expelled from the orifice into the applicator head and be subsequently received at the application surface.

Preferably the liquid to be applied to the substrate is contained within the body component. However, the liquid may be contained in a container which is external to the body component and the liquid feed conduit of the body component is then connected to the external container by an external conduit. Preferably the liquid to be applied to the substrate is contained within a distinct reservoir which is enclosed by the body component. The liquid may be passed from the reservoir to the orifice of the feed conduit by a variety of means, for example by pump means. The reservoir may be rigid or it may be deformable. The body component may be of any desired form, but preferably it is of elongate form. The cross section of the body component may be constant or it may vary along its length, for example it may be circular, oval, elliptical or rectangular. Preferably the body component is adapted to be hand-held and then the primary considerations as to form relate to the comfort and ease of holding the body component. In one preferred construction the liquid is expelled from the orifice of the liquid feed conduit by means actuated by finger or thumb. For example, a pump means connected with the reservoir and with the liquid feed conduit may be actuated by a finger or thumb-operated press-button so as to expel liquid from the orifice. Preferably the orifice is situated at the termination of the liquid feed conduit, but more than one orifice may be present within the applicator head. In one embodiment the liquid feed conduit is substantially rigid, but it may be flexible.

The applicator head component may comprise, for example a brush head, a pad head or a roller head each having an application surface which is brought into contact with the substrate to be coated. Preferably the applicator head comprises bristles which are held in a stock, the orifice of the liquid feed conduit lying within these bristles.

The applicator head component may be detachably engaged with the body component by a variety of known means, for example by a screw thread, by a spring detent mechanism or by a bayonet type fitting.

The principal structural elements of the two components are preferably made from a relatively light but strong material, for example a plastics material. The application surface of the applicator head will be as conventionally employed, for example, for brushes, pads and rollers.

Preferably, when the applicator is not in use, the orifice of the liquid feed conduit is fitted with a close-fitting plug in order to prevent any undesired loss of liquid and to avoid the accumulation of

any solid matter which may occur around the orifice due to the volatilisation of a volatile constituent of the liquid and consequent deposition of a solid constituent of the liquid.

Preferably, the application surface of the applicator head is protected by a removeable cover.

One suitable form of applicator according to the invention comprises,

1. an elongate body component of cross-section such as will enable it to be held between the finger and thumb and which is adapted to contain within it the liquid to be applied, the body being shaped at one end to converge to an orifice through which the liquid can be expelled from the body when pressure is applied to it by pressure application means integral with the body, and

2. a detachable brush-head component comprising bristles which are set in a stock, the stock being adapted for separable engagement with the body component so that the orifice of that component lies within the brush head.

The invention is now illustrated with reference to the accompanying drawings wherein,

Figure 1 represents an external side view of an applicator according to the invention.

Figure 2 represents a similar view to that in Figure 1 but is in part-section to show the relationship of the liquid feed conduit of the body component to the applicator head component; and

Figure 3 represents a view of the applicator in a direction at right angles to the view of Figures 1 and 2, which is in part section to show the means of engagement between the two components.

Referring to Figure 1 the elongate body component 1 comprises a barrel-like main portion 2 which encloses a reservoir (not shown) for containing paint or a similar liquid, and shaped portion 3 which permits a comfortable grip by the hand. The means of engagement between the body component 1 and the brush head component 4 is shown in detail in Figures 2 and 3.

Referring to Figure 2, a finger-operated button 5, which is normally urged towards a non-operative position, can be urged towards an operative position in order to feed paint from the reservoir (not shown) through the liquid feed conduit 6 and then to be expelled through the orifice 7. The removeable plug 8 seals the orifice 7 when the applicator is not in use.

Referring to Figure 3, after use the brush head component (4) may be removed from the body component (1) by squeezing at points 9 and the brush may then be cleaned easily. The end of the liquid feed conduit of the body component may also be wiped externally prior to inserting the plug 8.

Claims

1. An applicator for applying a liquid to a substrate which comprises a body component and an applicator head component having an application surface, each component being adapted for positive engagement with and for ready disengagement from the other component, the body component comprising a liquid feed conduit which, when the two components are engaged, extends within and provides at least one orifice lying within the applicator head such that liquid can be expelled from the orifice into the applicator head and be subsequently received at the application surface.

2. An applicator according to claim 1 wherein the liquid to be applied to the substrate is contained within the body component.

3. An applicator according to claim 1 or claim 2 wherein the liquid to be applied to the substrate is contained within a distinct reservoir enclosed by the body component.

4. An applicator according to anyone of claims 1-3 wherein the body component is of elongate form.

5. An applicator according to any one of claims 1-4 wherein the applicator is adapted to be hand-held.

6. An applicator according to any one of claims 1-5 wherein liquid is expelled from the orifice of the liquid feed conduit by means actuated by finger or thumb.

7. An applicator according to any one of claims 1-6 wherein the orifice is situated at the termination of the liquid feed conduit.

8. An applicator according to any one of claims 1-7 wherein the applicator head comprises bristles which are held in a stock, the orifice lying within the bristles.

9. An applicator according to any one of claims 1-8 wherein the orifice is closeable by a plug.

10. An applicator according to any one of claims 1-9 for applying paint.

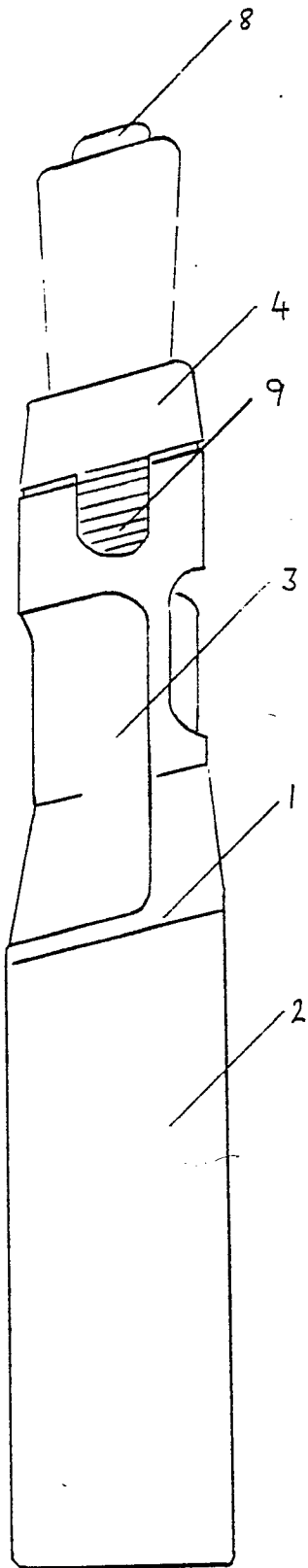


Fig.1

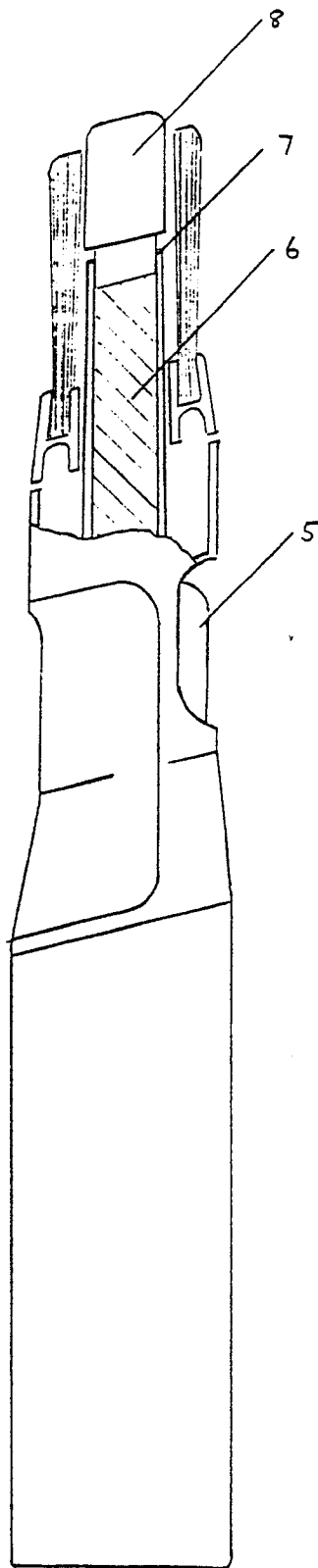


Fig.2

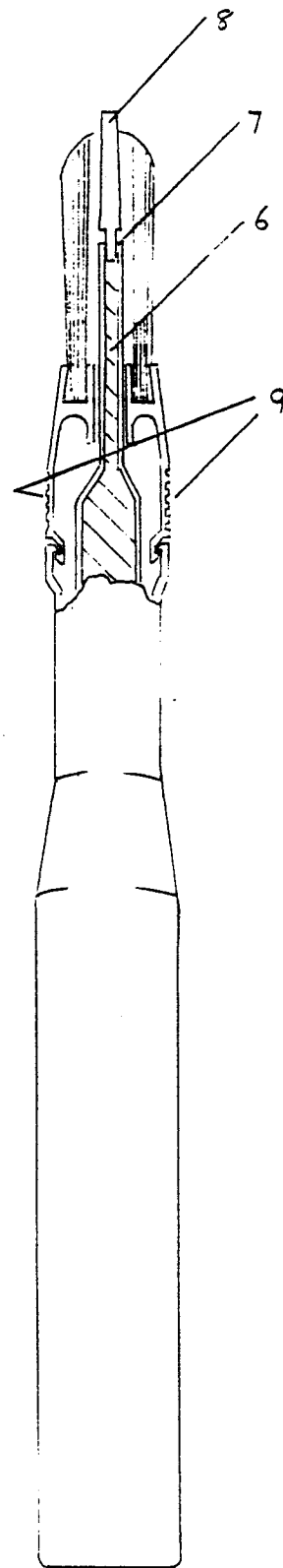


Fig.3