Feb. 11, 1941. O. R. SCIOSCIA 2,231,197

APPLICATOR

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FIG. 1

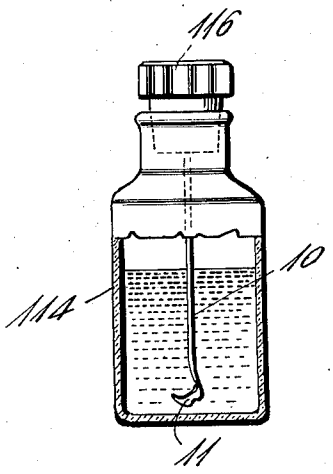


FIG. 2

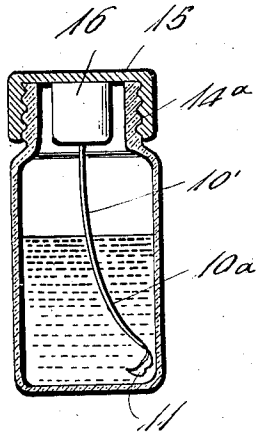


FIG. 3

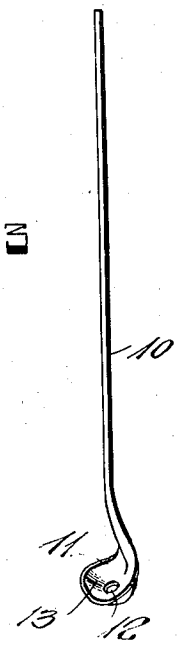


FIG. 4

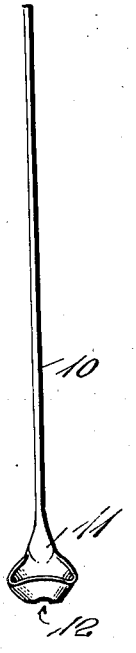


FIG. 5



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FIG. 6

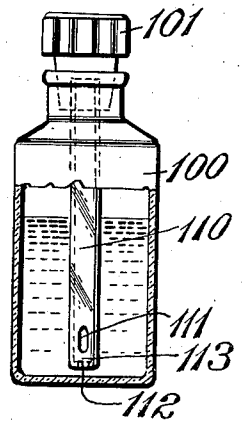


FIG. 7

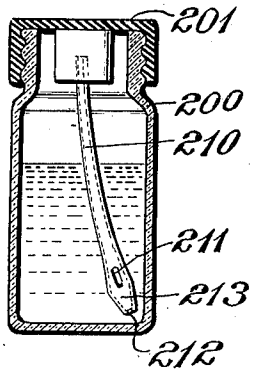


FIG. 8

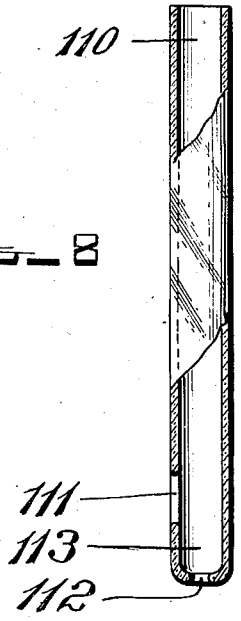
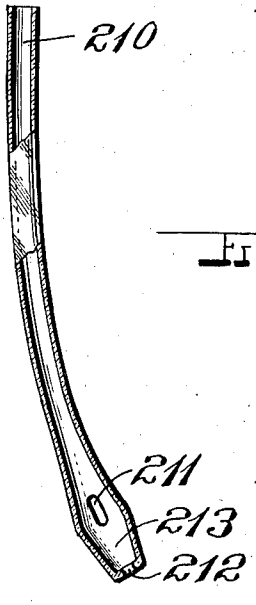


FIG. 9



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Patented Feb. 11, 1941 2,231,197

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2,231,197

APPLICATOR

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Application April 19, 1938, Serial No. 202,983

2 Claims. (Cl. 128—260)

This invention relates to applicators and has particular relation to such an applicator as may be used for removing small portions of liquid from a dish or bottle.

In the past it has been common to use applicators but many of these have certain objectionable features which are eliminated from the present invention.

The primary object of the present invention is to provide an improved applicator.

Another object of the invention is the provision of an applicator which will lift liquid and will immediately discharge the same when desired.

Still another object of the invention is the provision of an applicator which when being used, does not have to actually touch the body to which it is being applied in order to discharge the liquid.

Still another object of the invention is the provision of an applicator which will pick up a uniform and substantial amount of liquid and which is easily discharged when desired.

Another and still further object of the invention is the provision of an applicator which will remove substantially all of the liquid from a bottle and when being drawn out therefrom, less care is necessary in avoiding touching the sides of the bottle.

Other and further objects of the invention will be apparent to those skilled in the art from a reading of the complete specification and claims.

Referring to the drawings wherein I have illustrated embodiments of my invention,

Fig. 1 shows the applicator in a bottle of the cork type, the latter being partially sectioned for the purpose of clearness;

Fig. 2 is another form of the invention as applied to a screw-type closure member of a bottle, the bottle being sectioned for clearness;

Fig. 3 is a perspective view of my invention.

Figs. 4 and 5 are front and rear views respectively of the applicator when used alone not attached to the cork or closure member of the bottle.

Figs. 6 and 7 are cross-sectional views of bottles having modifications of my invention.

Figs. 8 and 9 are respectively enlarged views of the forms of the invention shown in Figs. 6 and 7.

Similar reference characters refer to the same or similar parts throughout the specification and drawings.

In providing my improved applicator, I have utilized the surface tension of liquids to serve my purpose in carrying the liquid to be dispensed and in discharging the same at the desired time.

In Figs. 3, 4, and 5 a shaft or shank 10 is provided with a lifting spoon or dipper located at the lower end and which I have designated generally as 11. In the bottom of the dipping spoon is an opening 12 in the form of a round hole as illustrated but this opening may be any one of many various shapes. The size of the opening 12, and its proportions will, naturally, depend upon the type of liquid being used. For example, a larger opening could be used if it was intended to use this applicator with a heavier liquid having a greater surface tension. The body portion of the dipping spoon 11 is so shaped that there will be within a bowl 13 for holding a substantial amount of liquid. The actual amount which can be carried will depend upon the size of the bowl 13 and the characteristics of the liquid being used. In Fig. 2 I have shown a bottle 14 having a threaded portion 14a adjacent its opening and being provided with a screw-top 15 to fit the threaded portion of the bottle. Beneath the center of the screw top I have illustrated an applicator holder 16, in which the shank of the applicator 10' is embedded. It will be noted that this applicator shank 10' is bent as at 10a and is of sufficient length and proper shape to reach one side of the bottle adjacent the line where the side and bottom come together. The purpose of this particular shape will be readily understood if it is imagined that a small amount of liquid remains in the bottle. The small amount of liquid is made to come within the applicator bowl and the screw top 15 unscrewed and removed. By this method, practically all of the liquid may be removed from the bottle. This liquid is applied as will later be described.

In Fig. 1 I show a bottle 114 having a cork top closure member 116, in the lower portion of which is embedded the shank 10 of the applicator. In this form, the shank is straight and the bowl is located adjacent to the bottom of the bottle when the closure member 116 is in place.

After the applicator has received its load of liquid it has been observed that touching the side of a bottle or dish with the edge of the bowl, does not remove the liquid. The liquid when in the bowl extends slightly below the opening in the bowl and does not run out due to the fact that surface tension holds the liquid together.

When it is desired to apply the liquid as for example to a cut, it is only necessary to bring the slight protrusion of the liquid in contact with the affected part without a necessity of touching the affected portion with the body portion of

the applicator itself. This is particularly advantageous in applying antiseptics to cuts, sores, or burned portions of the body. Because the affected portion receives the liquid without actually being touched, this applicator affords efficiency of operation without irritation due to the contact by the applicator.

It will be clear from the above that I have provided an applicator which can be used independently or in connection with the top of a bottle of the cork top, screw cap, or any other type of closure member for a bottle.

It will also be clear that as illustrated in Fig. 1, practically all of the liquid can be removed from a bottle with this applicator. Because of its shape a substantial quantity can be carried, this quantity varying, of course, with the size of the bowl and the type of liquid.

Not the least important feature of this invention is that the applicator does not have to be removed from the bottle without touching the sides. The skin friction of the liquid holds the liquid adjacent the center and the touching of the sides of the bottle does not cause the liquid to be lost from the applicator.

It will be observed that the applicator can be used effectively in applying liquid on the sides and even on the bottom of, for example, the arm of a patient.

The material of which this applicator is made, is not essential. It may be made not only of stainless steel or other metal but it may also be made of glass, porcelain or even resinoid products.

In the form of the invention illustrated in Figs. 6 and 8, a bottle 100 has a top 101 which carries a tubular shank portion 110 made of a hollow piece of pipe as for example of glass or any other suitable material. Along the sides of the tubular body portion 110 are one or more openings 111. At the bottom of the tubular shank body portion 110 is an opening 112 in a bowl-shaped end 113 which is designed to hold the liquid and corresponds to the bowl 13 already described.

The actual amount of liquid which may be taken up by the lower portion 113 of the body portion 110 will, of course, depend upon the characteristics of the liquid and also upon the size of the opening 112, the inside diameter of the bowl-shaped end 113 and the positions of the openings 111. The operation of this applicator is very similar to the operation of the applicator illustrated in Figs. 1, 2, 3, 4 and 5, the opening or openings 111 admitting air to the top of the liquid being carried. As the opening 112 is spaced away from the edge of the tube 110, the liquid will not be drawn out of the bowl 113 if the side of the lower portion of the tube 110 should touch the side of the bottle as the applicator is withdrawn therefrom.

In Figs. 7 and 9, a slightly different form of the invention is illustrated. In these figures the bottle 200 has a stopper 201 which carries the shank portion 210. In this form, the shank portion is curved to reach the space at the side of the bottom of the bottle 200 somewhat in the manner as the form illustrated in Fig. 2.

The openings 211 in the sides of the tube 210 supply the air to the top of the liquid within the bowl 213. This air provides pressure to promote the discharge of the liquid through the opening 212 when the liquid which hangs at the opening, touches the place where the liquid is to be applied.

These applicators may be made of any of the materials already described or of any other suitable material.

The applicator, which I have described as for applying antiseptics to cuts, sores, etc. has other uses where a small amount of liquid is needed.

While I have shown and described in detail embodiments of my invention, it is desired to have it understood that modifications and changes may be made without departing from the spirit of the invention of its scope as claimed.

Having described my invention, what I claim is:

1. An applicator having a shank portion, an open bowl-shaped end on the shank for carrying the liquid, the bowl having an opening from the inside of and at the lower portion of the bowl-shaped end to the outside thereof, the periphery of the sides of the bowl being above the opening, the periphery and the opening being sufficiently small to support the skin tension of the liquid to substantially maintain the shape of the latter as the angular position of the shank of the applicator is varied relative to the vertical and to insure substantially the same amount remaining in the bowl on successive dippings in the liquid.

2. In combination, a bottle having a closure member, an applicator having a shank, one end of which is secured to the closure member, an open bowl-shaped end on the shank for carrying the liquid and normally out of contact with but adjacent that point where the side and bottom come together when the closure member is in place, the bowl having an opening from its inside to the outside at its lower portion, the periphery of the sides of the bowl being above the opening, the periphery and the opening being sufficiently small to support the skin tension of the liquid to substantially maintain the shape of the latter as the angular position of the shank of the applicator is varied relative to the vertical and to insure substantially the same amount remaining in the bowl-shaped end on successive dippings in the liquid.

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