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B. F. KRAUTH
LIQUID DISPENSERS
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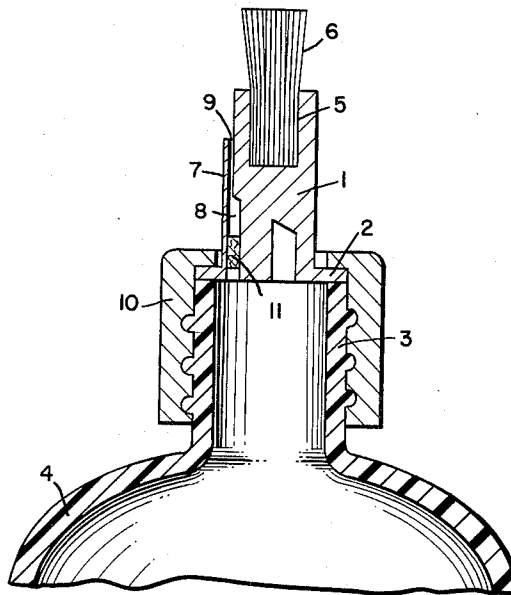


FIG. 1

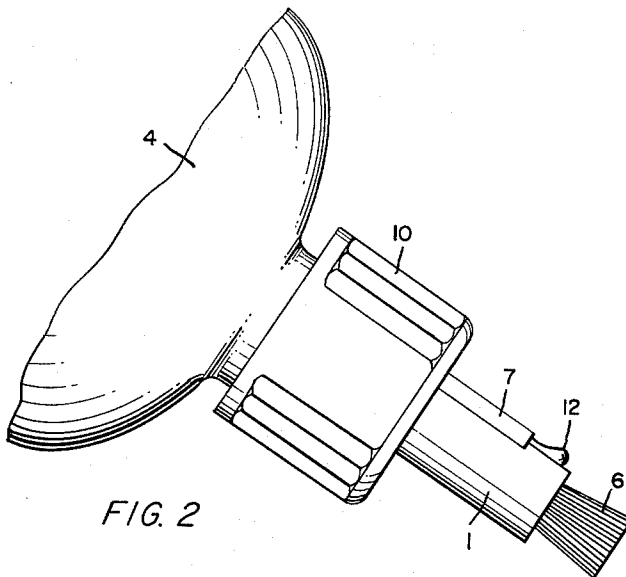


FIG. 2

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LIQUID DISPENSERS

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2 Claims. (Cl. 15—541)

This invention relates to dispenser units for use with squeeze bottles.

It is an object of the present invention to provide a unit of the kind stated that is capable of dispensing, in a visual manner, droplets of fluid onto a brush, pad, or the like, forming part of the dispenser unit.

It is a further object of the invention to provide a unit of the kind stated and in which the aperture through which the drops of fluid can escape includes a capillary section ensuring that only predetermined sized droplets can be forced therefrom.

According to the present invention a dispenser unit for use with squeeze bottles comprises a neck portion having a flanged base adapted to rest upon the neck of the squeeze bottle, a recess in said neck portion in which is housed a brush, pad or like member extending from said recess, a liquid flow bore leading from the flanged end of the neck portion to a point on the exterior surface of the neck portion spaced from said brush, pad, or the like such that when the bottle is squeezed, droplets of liquid emerging from said liquid flow bore are visible as they pass along the exterior surface of the neck portion and onto said brush, pad, or the like, a capillary section in said flow bore, and a screw cap through which said neck portion extends, said screw cap being capable of mating with a screw thread on the neck of the squeeze bottle to clamp said flange against said neck.

The capillary section is of such size as to prevent flow therethrough unless pressure is applied to the liquid in the bottle by squeezing.

The flow bore leading to the upstream side of the capillary preferably contains a pad of filter material.

In order that the invention may be clearly understood reference will now be made to the accompanying drawing, in which:

FIG. 1 is a cross-section through the top of a squeeze bottle top with the dispenser unit secured thereto; and

FIG. 2 is a view of the dispenser when inclined downwardly and in use.

As illustrated the dispenser unit comprises a neck portion 1 having a flange 2 at its lower end that is of a size suitable to rest upon the neck 3 of a squeeze bottle 4.

The neck portion 1 is formed with a recess or blind bore 5 in which is housed a brush head 6 extending from the bore.

Extending up one side of the neck portion 1 is a side formation 7 formed at its lower end with a flow bore 8, the bore 8 leading to a capillary section 9 at the upper end of the side formation. The capillary section 9 terminates at a point that is spaced from the brush head 6 and leads onto the side surface of the neck portion 1.

A screw cap 10 mates with the screw-threaded top 3 of the squeeze bottle 4 and serves to clamp the flange 2 against the mouth of the bottle.

Housed in the flow bore 8 is a filter pad 11.

FIG. 2 illustrates how, when the squeeze bottle is tilted downwardly in use and the bottle is squeezed, a droplet of liquid 12 can be forced to emerge from the outlet end of the capillary section 9 to flow down the surface of the neck portion 1 and onto the brush head 6.

The squeezable bottle 4 is preferably fitted with a removable plug that seals the neck 3 until such time as

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the bottle has been sold, the plug being removed before the bottle is ready for use.

A dispenser unit according to the present invention enables the droplets emerging from the capillary section 9 to be counted visually before they merge with the brush head 6 and the user is thus able to regulate to a fine degree the volume of liquid applied to the brush head 6.

The dispenser unit, moreover, is so designed that it can be made from synthetic plastics, the capillary section 9 being capable, if necessary, of being formed after the moulding of the remainder of the unit.

It will be appreciated that the particular embodiment described is capable of many modifications as may fall within the scope of the appended claims. Thus, for example, the brush element 6 may be replaced by a pad of felt or foamed plastic. It is also possible, for the neck portion 1 to be formed with a groove leading from the outlet of the capillary 9 to the brush head 6 to guide the droplets 12 along the desired flow path.

What I claim is:

1. A dispenser unit for use with squeeze bottles, the unit comprising a neck portion, a recess in one end of said neck portion in which is housed an applicator means extending from said recess, a liquid flow bore having a capillary section which insures that uniform size drops pass through said bore, said liquid flow bore having an outlet on the surface of said neck portion, said outlet being located at a point spaced from said one end of said neck portion and said applicator means by a distance in excess of the length of one uniform drop, such that when the bottle is squeezed, droplets of liquid emerging from said liquid flow bore are visible and must pass along the exterior surface of the neck portion before reaching the aforesaid end and passing onto said applicator means.

2. A dispenser unit for use with a squeeze bottle having a threaded neck, the unit comprising a neck portion having at one end thereof a flanged base adapted to rest upon the neck of the squeeze bottle, a recess in the other end of said neck portion in which is housed an applicator means extending from said recess, a liquid flow bore having a capillary section which insures that uniform size drops pass through said bore leading from the flanged end of the neck portion to a point on the exterior surface of the neck portion spaced from said other end of said neck portion and said applicator means by a distance in excess of the length of one uniform drop, such that when the bottle is squeezed, droplets of liquid emerging from said liquid flow bore are visible and must pass along the exterior surface of the neck portion before reaching said other end and passing onto said applicator means, and a screw cap through which said neck portion extends, said screw cap being capable of mating with threads on the neck of a squeeze bottle to clamp said flange against said neck.

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LOUIS J. DEMBO, Primary Examiner.