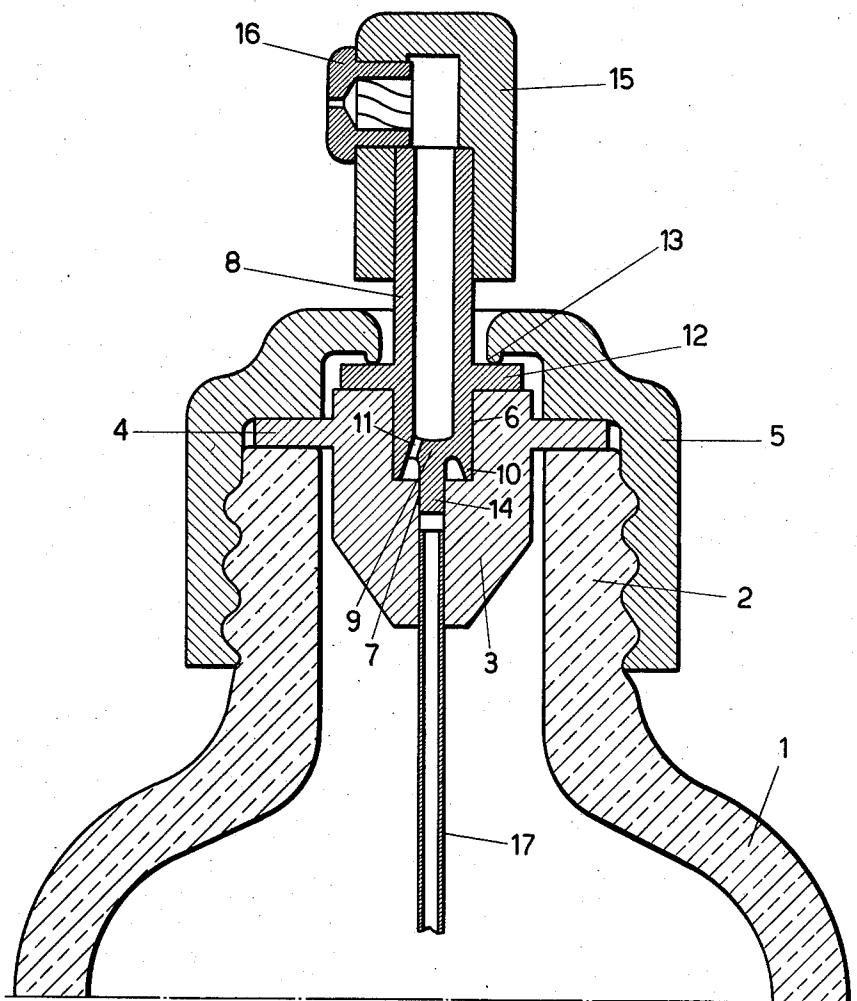


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F. GALEAZZI
SPRAYING VALVE FOR CONTAINERS OF SUBSTANCES
MIXED WITH A VOLATILE PROPELLANT
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INVENTOR.

Franco Galeazzi
BY
Storrs, Davis, Keller & Knicker
his attorneys

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SPRAYING VALVE FOR CONTAINERS OF SUBSTANCES MIXED WITH A VOLATILE PROPELLANT

Franco Galeazzi, Milan, Italy

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3 Claims. (Cl. 222-394)

It is an object of the present invention to provide a particularly simple and economical valve for spraying liquids or other substances contained in a vessel together with a volatile propellant such as for instance a halogenated methane derivative.

Said valve comprises a body of elastic and yielding material provided with a flange adapted to be locked and sealed tightly by a tightening means at the mouth of the vessel and passed through axially by a bore that over an upper section has a comparatively great diameter and over the remaining lower section has a comparatively small diameter, and comprises moreover a tubular body partly inserted in the wider portion of said bore and provided with an intermediate flange pressed on the upper plane of said yielding body by the aforesaid tightening means itself, with a lower peduncle penetrating for a short distance into the more restricted portion of said bore, with an orifice at the bottom of said tubular body and with a spraying nozzle at the summit.

Opening and delivery are effected by inclining said tubular body as will be better apparent hereinafter with reference to the accompanying drawing which shows in axial section one form of embodiment of the invention.

In the drawing, the vessel is indicated with 1; in its neck 2 there is inserted the rubber body 3 provided with a flange 4 resting on the summit of the neck 2.

A plug 5 is screwed-on or clamped to the neck 2 and presses with its abutment the flange 4 against the summit of the neck 2 thereby providing sealing.

The rubber body 3 has an axial bore having two different diameters, larger in the upper section 6 and smaller in the lower section 7. In the section 6 there is inserted the lower part of a tubular body 8 the bottom 9 whereof has a projecting border 10 and is passed through by a bore 11. A flange 12 projecting at an intermediate point from the tubular body 8 rests on the upper plane of the rubber body 3 and is pressed thereonto gently by the border 13 of the plug 5.

From the bottom 9 of the tubular body 8 there projects axially a peduncle 14 that penetrates in sealed condition into the upper portion of the more restricted section 7 of the axial bore passing through the body 3.

On the upper portion of the tubular body 8 there is applied a hollow cap 15 containing a nozzle 16 that is in communication with the inside of the body 8.

In the lower portion of the section 7 of the bore that passes through the body 3 there is inserted a small dipping tube 17 which reaches the bottom of vessel 1.

The device hereinbefore described, in the position indicated in the drawing, provides a sealing closure of the vessel 1. On exerting a lateral pressure upon the cap 15, the tubular body 8 inclines while rotating about a point of the border 13 and compressing from the opposed

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side the rubber of the body 3; in said position the flange 12 continues providing tight seal against the body 3, but the peduncle 14 in such conditions presses against the wall of the bore 7 and deforms it so that there opens a communication between the dipping tube 17 and the nozzle 16 through the bore 11 and the cavity of the tubular body 8 and of the cap 15. This communication is cut off when the lateral pressure upon the cap 15 ceases, since the elasticity of the body 3 brings the various parts back to the position indicated in the drawing.

I claim:

1. A spraying valve for containers of substances mixed with a volatile propellant, comprising a one-piece resilient body fitted into the mouth of a container and having means for positioning it in place, said body having a vertical bore extending therethrough and through its upper and lower ends, a dipping tube fitted in the lower end of the bore and extending downwardly into the container, said upper end of the bore being counter-bored, a tubular outlet member seated in the counterbore and having a closed lower end provided with an inlet means and having a solid depending valve projection fitted in the bore and closing off the bore to control the flow of the substance therethrough, said means for positioning the body in place including a laterally outstanding flange on the body adapted to seat on the outer end of the mouth and said tubular member having a laterally outstanding flange adapted to seat on the upper end of the body and a cap member adapted to be fitted onto the container and having inwardly extending vertically spaced shoulders adapted to seat on the flanges to hold the body in place and the tubular member in the body.

2. In combination with a container for a substance mixed with a volatile propellant and having a neck portion defining an open mouth, a spraying valve comprising a one-piece resilient body disposed within the neck of the container and having a laterally outstanding flange seated on the outer end of the neck for locating it in place, said body having a vertical bore extending therethrough and through its upper and lower ends, a dipping tube fitted in the lower end of the bore and extending downwardly into the container, said bore being counter-bored at its upper end, a tubular outlet member seated in the counterbore and having a laterally outstanding flange resting on the upper end of the body, said tubular member having a closed lower end provided with an off-center port and having a peripheral skirt portion seated on the inner end of the counterbore, a solid valve projection depending centrally from the lower end of the outlet member and fitted in the upper end of the bore to control the flow of the substance through the bore and a cap member fitted on the neck and engaging both flanges to hold the body in the neck and the tubular outlet member in the body.

3. The combination of claim 2 wherein said cap member is provided with vertically spaced and offset internal shoulders seated on the flanges.

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