

[54] **ACTUATOR OVERCAP**

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[52] U.S. Cl. **222/153, 222/402.11**

[51] Int. Cl. **B67d 5/32**

[58] Field of Search **222/153, 182, 402.11, 222/402.12, 402.13, 402.14**

[56] **References Cited**

UNITED STATES PATENTS

3,386,631 6/1968 Kotuby **222/402.11**

Primary Examiner—Robert B. Reeves

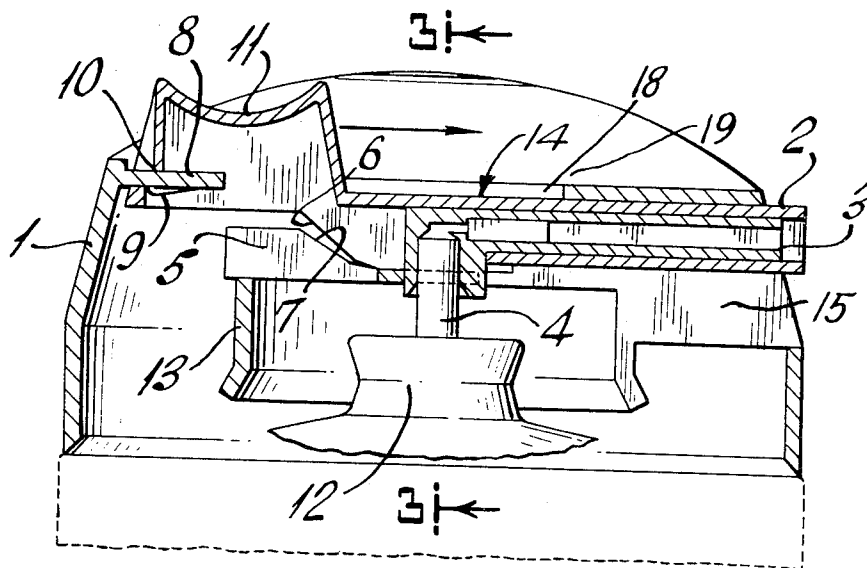
Assistant Examiner—Larry Martin

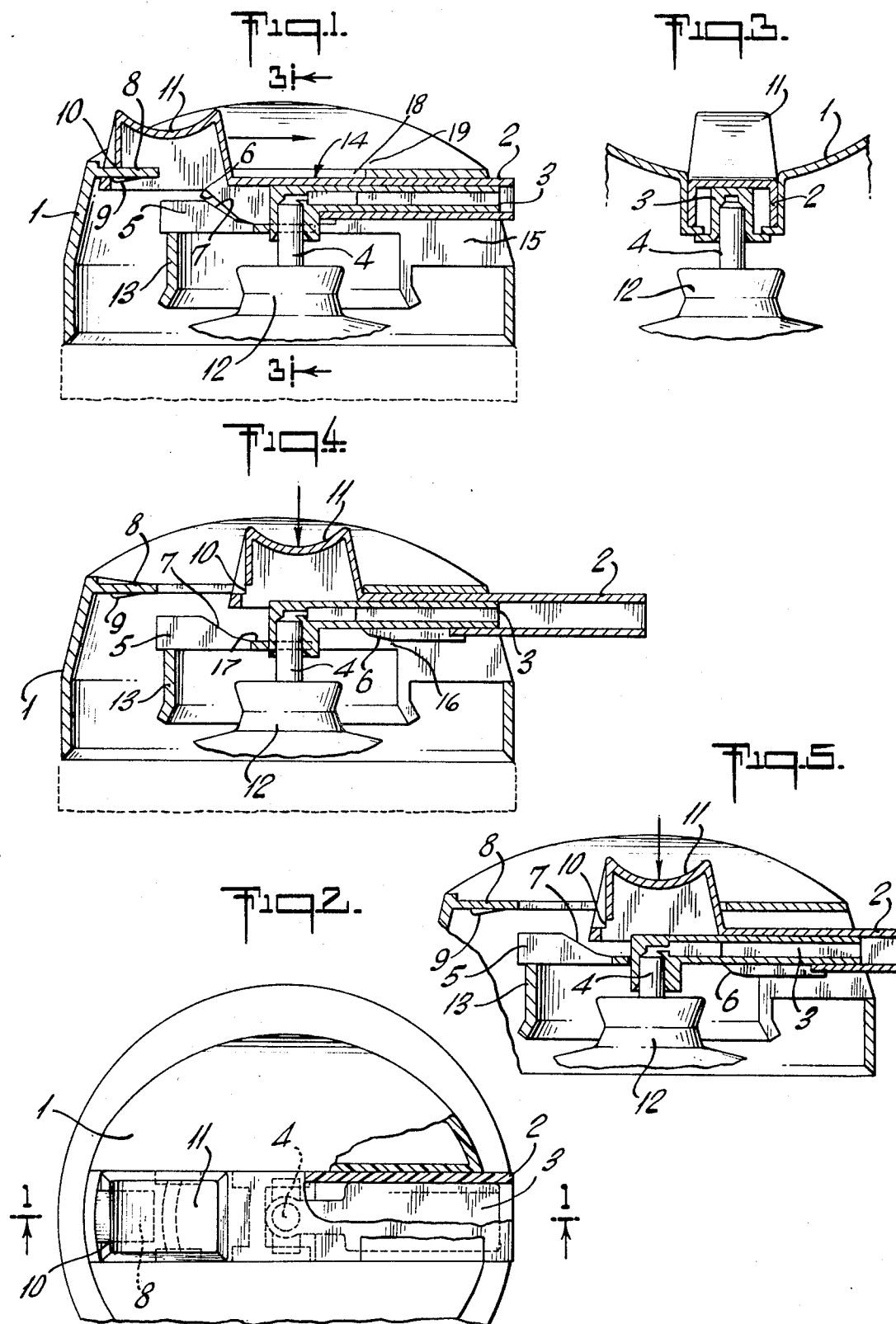
Attorney—William F. Moss, III, David J. Mugford, Irving Holtzman et al.

[57] **ABSTRACT**

An actuator overcap for an aerosol container including an actuator member having an elongate spout slidably receiving an elongate nozzle which communicates with a valve stem extending from the aerosol container, the actuator member being slidable in a top portion of the overcap between an inoperative position with the spout withdrawn into the overcap to inhibit dispensing from the aerosol container, and an operative position with the spout extending from the overcap to permit movement of the valve stem to dispense material from the aerosol container.

7 Claims, 5 Drawing Figures





ACTUATOR OVERCAP

BACKGROUND

The purpose of this invention is to provide an actuator overcap which is lockable, in order to eliminate the messy problem of accidental or premature release of material from an aerosol can. This invention provides a two position slide type actuating action which is both positive and easy to accomplish. In one position a slidable actuator member is locked against movement in any direction. However, a slight sliding force will release the actuator member from its slide lock and allow movement of the actuator member to a second position where it can be depressed to release material through a valve in the aerosol can.

Another purpose of this invention is to provide a spout which is retractable. This makes the overall package more attractive and also more streamlined for ease of storage.

One problem of many spout type aerosol actuators is that they are susceptible to clogging or restriction of the outlet due to residue. The actuator overcap of this invention facilitates self-cleaning of the spout and inhibits a buildup of residue in that the spout slidably receives an elongate nozzle which clears the spout when the spout is withdrawn into the overcap.

The present invention is generally characterized in an actuator overcap for an aerosol container having a valve operated by movement of a valve stem, the overcap including an elongate nozzle adapted to communicate with the valve stem, an overcap body having a top portion with a lateral channel therein receiving the nozzle and an actuator member having an elongate spout slidably receiving the nozzle and slidably disposed in the channel, the actuator member having an inoperative position with the spout withdrawn into the overcap body and an operative position with the spout extending from the overcap body to permit movement of the valve stem to operate the valve in the aerosol container.

Many additional advantages will become apparent from the more detailed description which follows.

The following illustrations are provided:

FIG. 1 is a side view of a section of the overcap taken along section lines 1 — 1 showing the spout in the locked position.

FIG. 2 is a cut away top view of the overcap.

FIG. 3 is a sectional view of the overcap along section lines 3 — 3.

FIG. 4 is the same view of the overcap as FIG. 1 showing the spout in the unlocked position.

FIG. 5 is a view similar to FIG. 4 showing the spout and aerosol valve stem depressed.

DESCRIPTION

The overcap of this invention basically is constructed of three elements; overcap body 1, actuator member 14 and an elongate connector nozzle 3. The actuator member (14) includes an elongate spout 2 slidably mounted in a lateral channel (15) in a top portion of the overcap body 1, and the actuator member (14) is allowed to move between an inoperative position where it is substantially locked from movement as in FIG. 1 and an operative position shown in FIG. 4. In the operative position the actuator member 14 can be depressed as best shown in FIG. 5 thereby releasing material from the aerosol can 12. Slidably received in the

spout 2 and communicating directly with a valve actuator stem 4 is the nozzle 3. The engagement of the nozzle 3 with the valve stem 4 maintains the nozzle 3 in a stationary position while the spout 2 slides back and forth over the nozzle.

The overcap body 1 is provided with a track 5 aligned with channel 15 on which the actuator member 14 rides in sliding motion. Both the actuator member 14 and the track 5 are provided with engaging steps 6 and 7 respectively, step 6 of actuator member 14 terminating at a shoulder 16 for engaging a stop 17 formed by the track 5. In the locked inoperative position the steps are fully engaged, and in the depressible operative position where the steps are disengaged. In order to provide a lock in the direction of sliding action, a tab 8 is provided on the overcap body 1 at the end of an opening 18 in the top portion. The tab 8 has a tapered bead (9) which engages a slot 10 formed in the side wall of a button 11 which extends through opening 18 and facilitates manual movement of the actuator member.

In operation the actuator member 14 is generally kept in the locked inoperative position at one end of its sliding motion. In this position it can be seen from FIG. 1 that the bead 9 is received in slot 10 and that steps 6 and 7 are abutting with shoulder 16 and stop 17 fully engaged preventing downward or sliding motion of the spout. By exerting a slight force, the engagement of bead 9 and slot 10 may be overcome and the actuator member moved to position the operative where the actuator member is supported only by the resiliency of the aerosol valve stem 4. A downward force on button 11 will now actuate the aerosol valve and release material from the can 12.

It is observed that, when the actuator member is locked in the inoperative position, the spout 2 is almost completely retracted within the overcap body, and in addition the nozzle extends practically the entire length of the interior of the spout. The nozzle 3, therefore, acts to clear the spout 2 of residue.

The overcap body 1 is provided with a seat 13 which engages the aerosol can 12 to secure the overcap on the can in a force fit.

I claim:

1. An actuator overcap for an aerosol container having a valve operated by movement of a valve stem, said overcap comprising

an elongate nozzle adapted to communicate with the valve stem;

an overcap body having a top portion with a lateral channel therein receiving said elongate nozzle; and an actuator member having an elongate spout slidably receiving said elongate nozzle therein and slidably disposed in said channel, said actuator member having an inoperative position with said spout withdrawn into said overcap body and an operative position with said spout extending from said overcap body to permit movement of the valve stem to operate the valve in the aerosol container.

2. The actuator overcap as recited in claim 1 wherein said top portion of said overcap body includes a stop aligned with said channel, and said actuator member has a shoulder engaging said stop when said actuator member is in said inoperative position to prevent movement of the actuator stem, said shoulder being moved out of engagement with said stop when said actuator member is in said operative position.

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3. The actuator overcap as recited in claim 2 wherein said top portion of said overcap body has an opening therein aligned with said channel, and said actuator member includes a button extending through and slidable in said opening.

4. The actuator overcap as recited in claim 3 wherein said top portion of said overcap body includes a tab at one end of said opening, and said button has a side wall with a slot therein, said tab extending through said slot when said actuator member is in said inoperative position to prevent movement of the valve stem by said actuator member.

5. The actuator overcap as recited in claim 4 wherein said top portion of said overcap body includes a tapered bead protruding from said tab, said side wall of

said button riding over said bead to lock said actuator member in said inoperative position.

6. The actuator overcap as recited in claim 5 wherein said top portion of said overcap body includes a wall defining an edge of said opening opposite said one end, said button abutting said edge when said actuator member is in said operative position.

7. The actuator overcap as recited in claim 6 wherein said top portion includes a track aligned with said channel and including said stop, said track having a step formed therein, and said actuator member includes a step engaging said track step when said actuator member is in said inoperative position.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,734,353 Dated May 22, 1973

Inventor(s) Dudley F. McIlhenny

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

In Column 1, line 57, after "elements"; insert.....an.....

In Column 1, line 57, after "body 1," insert....an.....

In Column 2, line 12, before "track 5" delete "the"

In Column 2, line 29, delete "position the operative" and insert therefor.....the operative position with the side wall of button 11 abutting an edge of the opening (18) defined by a wall (19) of the top portion of the overcap body (1)....

Signed and sealed this 5th day of March 1974.

(SEAL)
Attest:

EDWARD M. FLETCHER, JR.
Attesting Officer

C. MARSHALL DANN
Commissioner of Patents