United States Patent

Yuhas

[15] **3,693,837**

[45] **Sept. 26, 1972**

[54] **STRIPED PRODUCT AEROSOL DISPENSER**

[72] Inventor: **Edward R. Yuhas,** Yonkers, N.Y.

[73] Assignee: **Fluid Chemical Company, Inc.,** Newark, N.J.

[22] Filed: **April 23, 1970**

[21] Appl. No.: **31,154**

[52] **U.S. Cl.** **222/94,** 222/136, 222/330, 239/308

[51] **Int. Cl.** **B65d 35/22**

[58] **Field of Search**.....222/136, 129, 94, 95, 330, 222/331, 193, 209, 485, 386, 464, 402.11, 190; 239/304, 308, 363, 379, 315; 99/291

[56] **References Cited**

UNITED STATES PATENTS

3,401,844	9/1968	Hanson, Jr.	222/193
2,905,364	9/1959	Marraffino	222/94
2,925,939	2/1960	Spero	222/193 X
3,236,457	2/1966	Kennedy et al.	239/304
2,789,731	4/1957	Marraffino	222/94

Primary Examiner—Robert B. Reeves
Assistant Examiner—James M. Slattery
Attorney—Sommers & Sommers

[57] **ABSTRACT**

A striped product aerosol dispenser, adapted to provide the separate drawing of separately-contained materials therethrough, to be co-dispensed in striped product form.

3 Claims, 3 Drawing Figures

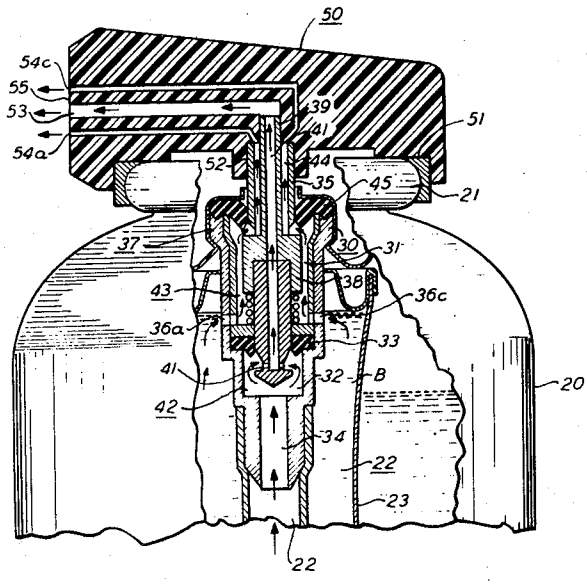
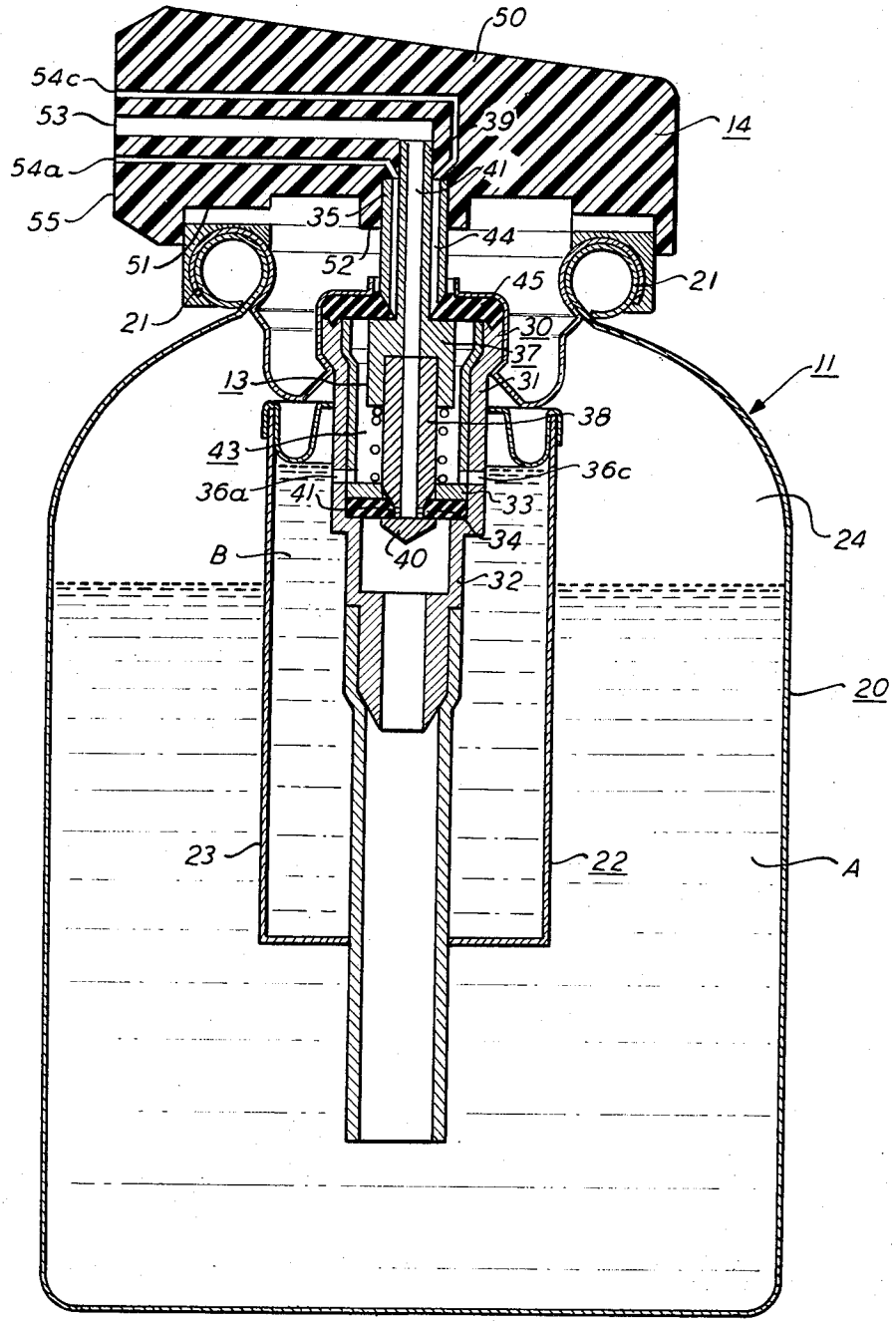


FIG. 1



INVENTOR
EDWARD R. YUHAS
BY
Sommers & Sommers
ATTORNEYS

FIG. 2

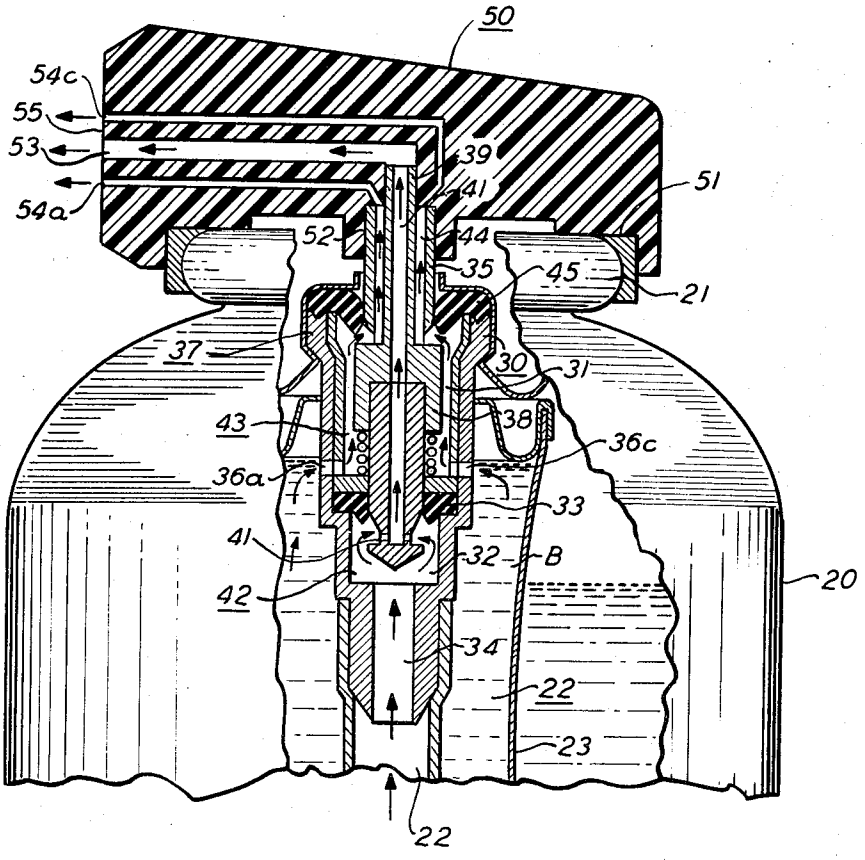
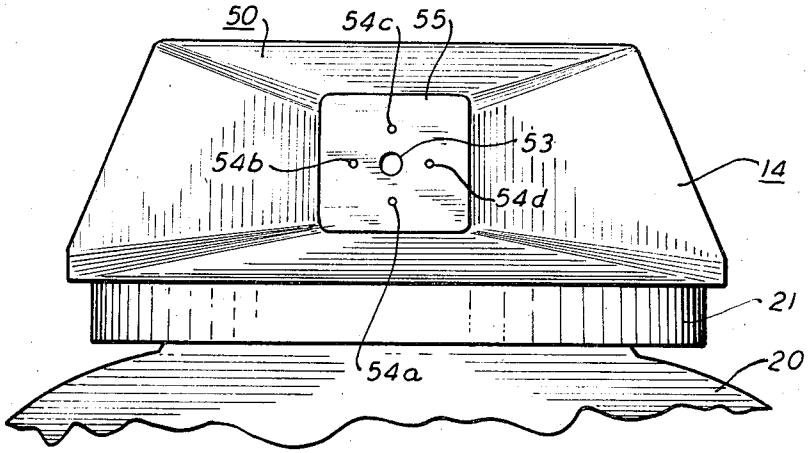


FIG. 3



INVENTOR
EDWARD R. YUHAS

BY
Sommers & Sommers
ATTORNEYS

STRIPED PRODUCT AEROSOL DISPENSER

BACKGROUND OF INVENTION

This invention relates generally to aerosol dispensing devices, for the co-dispensing of contained separated materials through an actuated dispense system, and more specifically relates to a striped product aerosol dispenser, adapted to provide striped product form co-dispensing of separately drawn and separately contained materials.

Pursuant to the invention, the striped-product aerosol dispenser provides simplified, safe and efficient co-dispensing, as striped product, of contained materials which are to be drawn separately through the actuator means and co-dispensed only at the point of actual dispensing.

In accordance with the foregoing, it may be regarded as among the objects of the present invention to provide a novel actuation and dispense system for separate drawing of materials therethrough and for co-dispensing the separate materials at the point of dispense as striped product, to be utilized for dispensing dissimilar materials which would be damaged by intermixing prior to dispense thereof, or for striped toothpaste, or glamour treatment of other products, or for a similar use.

Now in accordance with the present invention, the foregoing object and others as will become apparent in the course of the ensuing specification are achieved through use of a striped-product aerosol dispenser operating, as will be described below, so that the materials which are to be co-dispensed as striped product are contained in isolated containers in said aerosol device and are actuated and drawn through separated channels in said actuator and dispenser by novel segregated and separated dispensing means to be co-dispensed, at the point of dispensing, in striped product form.

BRIEF DESCRIPTION OF DRAWINGS

The invention is diagrammatically illustrated, by way of example, in the appended drawings, in which:

FIG. 1 is a side sectional elevational view of a striped product aerosol dispenser embodying the invention, in non-actuated position;

FIG. 2 is a side fragmentary partly broken sectional view thereof, in closed actuated position, showing lines of material flow therethrough; and

FIG. 3 is a front fragmentary view of the striped product aerosol dispenser pursuant to the invention.

DESCRIPTION OF PREFERRED EMBODIMENTS

In accordance with the preferred mode of practicing the invention, the striped product aerosol dispenser **11** (FIG. 1), for example, comprises container means **12**, actuation means **13**, and dispensing member **14**. The container means **12**, for example (FIG. 1), consists of a first container **20** (for example, a metal container) which contains a material A to be dispensed therefrom, and which has in the embodiment of the invention shown a top rim **21** thereon, and a second container **22** (for example, a collapsible plastic bag having flexible collapsible walls **23**) which contains a material B to be dispensed therefrom, the second container **22** being enclosed within the first container **20** and being sealed

therefrom to prevent leakage from one container to the other, and pressurization gas (not indicated) generally occupying the space **24** above the material A in the first container **20** to exert pressure on the material A and on the collapsible walls **23** of second container **22** in order to effectuate pressurized dispensing of materials on actuation of said actuation means **13**.

The actuation means **13** (FIGS. **1** and **2**), for example, comprises an actuator frame member **30**, having a hollow upper portion **31** and a hollow lower portion **32**, divided by resilient guard member **33** having a central aperture **34** therein, with resilient member **45** therein, the frame member further comprising a hollow frame tip portion **35** and frame apertures **36** therein (in the embodiment shown, four such apertures [*a,c*, shown, *b,d* not shown] are located at 90° intervals circumferentially adjacent the top portion of resilient guard member **33**), an aerosol actuator member **37** extending through said frame tip portion **35**, resilient member **45**, upper frame portion **31**, lower frame portion **32** and resilient guard member **33** for movement therein and therethrough, having a hollow body portion **38**, a hollow tip portion **39**, a head portion **40**, and actuator apertures **41** therein.

Actuation means channels, for separate movement of contained materials therethrough are embodied, for example, (FIGS. **1** and **2**) in first channel **42**, for movement of material A therethrough, which comprises the hollow in lower frame portion **32**, actuator apertures **41**, the hollow in body portion **38** and the hollow in tip portion **39**, and second channels **43** for movement of material B therethrough, comprising frame apertures **36**, the hollow in upper frame portion **31**, and actuator channel **44** in the space between the outer surface of actuator tip **39** and the inner surface of frame tip **35**.

The dispensing member **14** (FIGS. **1** and **3**) comprises, for example, an overcap dispenser member **50** which has bottom rim recess **51** to interfit on depression thereof with top rim **21** of first container **20** to serve as a limit for actuation, thereby controlling the amount of materials dispensed, bottom tip recess **52** to receive frame tip portion **35** and actuator tip portion **39** therein, and further embodying channel passages therein comprising first channel **53** for interconnection with said actuator tip portion **39** for drawing material A therethrough, and second channels **54** (in the embodiment shown, four such channels [**54***a,b,c,d* in FIG. **3**] are located at 90° intervals circumferentially about said first channel **53**) for interconnection with said actuator channel **44** for drawing material B therethrough, and front dispenser surface **55** which is the point of co-dispense of materials A and B in striped (or other desired effect) product form.

In operation (FIGS. **1** and **2**) the striped product aerosol dispenser **11**, for example, is actuated by depressing the overcap dispenser member **50**, which is in the non-actuated embodiment of FIG. **1**, seated atop frame tip portion **35** and tip portion **39** with a space between dispenser bottom rim recess **51** and container top rim **21**, to a position in the actuated embodiment of FIG. **2** where dispenser bottom rim recess **51** is in contact with container top rim **21**, depressing therewith actuator hollow body portion **38** which moves in plunger-type movement through resilient member **45** and resilient guard member **33** to thereby open first chan-

nel 42 and second channel 43 to enable the drawing of materials A and B therethrough. Material A is pressurized, by pressurization gas occupying space 24, to flow through first channel 42 in actuation means 13 through the hollow in lower frame portion 32, actuator apertures 41, the hollow in body portion 38 and the hollow in tip portion 39 and through intercommunicating first channel 53 in dispensing member 14; material B is pressurized, by pressurization gas acting on the collapsible walls 23 of the second container 22, to flow through second channels 43 in actuation means 13, through frame apertures 36, (*36a*, *36c* shown, *36b*, *36d* not shown) for example, through the hollow in upper frame portion 31, and through the actuator channel 44 space between the outer surface of actuator tip 39 and the inner surface of frame tip 35, and to then flow through intercommunicating second channels 54 (*54a*, *54c* shown, *54b*, *54d* not shown), for example, in dispensing member 14; this procedure thereby draws materials A and B to the front dispenser surface 55 where the materials are co-dispensed in striped product form.

The striped product aerosol dispenser of my invention operates to draw two segregated separately contained materials to be co-dispensed, to give a striped product (or other desired) effect. Such striped product could constitute any product wherein actual intermixing of the dissimilar materials prior to final dispensing would be harmful, or to add striped glamour to a product, such as toothpaste, for marketing and commercial utilization. Other desired products could be achieved, such as one comprising a marblelized foam, for example, which can be formulated by using materials which are less dense and less stable to thereby provide an intermittent foam marblelized effect.

While the present invention has been particularly set forth in terms of specific embodiments thereof, it will be evident in view of the instant disclosure, that numerous variations upon the invention are now enabled to those skilled in the art, which variations in propriety are yet within the true scope of this teaching. Accordingly, the invention is to be broadly construed, and limited only by the scope and spirit of the claims now appended hereto.

I claim:

1. Apparatus for aerosol dispensing of a striped product, to co-dispense separately contained materials to be dispensed as striped product therefrom, which comprises:

a. means for separately and independently containing each of the materials;

b. means for actuating the materials to draw the material from the container means, including a plurality of separated channel portions therein to enable, on actuation, the drawing of the materials separately therethrough, further comprising a hollow frame member, having a hollow tip portion thereof, and a resilient guard member, positioned in said frame member, having an aperture therein, said resilient guard member dividing said hollow frame member into upper and lower hollow portions, with frame apertures positioned at circumferential locations on the surface of said upper frame portion, and a hollow actuated member, seated in said frame member extending through said resilient guard member aperture, which on movement thereof enables the drawing of said materials through said separated channel portions in actuation of said aerosol dispenser, having a hollow tipped portion thereof, a head portion, and actuator apertures positioned at circumferential locations adjacent said head portion, said actuator separated channel portions of said actuation means comprising a first channel portion, for flow of a first material therethrough, extending generally through the hollow lower portion of said frame member, through said actuator apertures, and through said hollow portion of said actuator member, said actuator separated channel portions further comprising a plurality of second channel portions for flow of a second material therethrough, extending generally through said frame apertures, through the hollow upper frame portion, and through the space between the inner surface of said hollow frame tip portion and the outer surface of said hollow actuator tip portion;

c. a dispensing member, which on depression thereof activates the actuation means, including a front dispenser surface, and further having a plurality of separated channels therein which abut with the separated channel portions of the actuation means to provide means for separated flow of the separate materials and co-dispensing in stripe product form therefrom at the front dispenser surface thereof.

2. In a striped product aerosol dispenser as described in claim 1, said dispenser member having a first channel, and a plurality of second channels therein, said first channel interconnecting with said first separated channel portion of said actuation means for movement of a first material therethrough, said second channels interconnecting with said separated second channels of said actuation means for movement of a second material therethrough.

3. In a striped product aerosol dispenser as described in claim 2, said dispenser member further comprising a front dispenser surface, at which point actual co-dispensing of the separately contained and separately drawn materials occurs.

* * * * *