



US007117867B2

(12) **United States Patent**  
**Cox et al.**

(10) **Patent No.:** **US 7,117,867 B2**  
(45) **Date of Patent:** **\*Oct. 10, 2006**

(54) **AEROSOL GENERATOR AND METHODS OF MAKING AND USING AN AEROSOL GENERATOR**

(75) Inventors: **Kenneth A. Cox**, Midlothian, VA (US); **Timothy Paul Beane**, Richmond, VA (US); **William R. Sweeney**, Richmond, VA (US); **Walter A. Nichols**, Chesterfield, VA (US); **F. Murphy Sprinkel, Jr.**, Richmond, VA (US)

(73) Assignee: **Philip Morris USA**, Richmond, VA (US)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 9 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **10/438,329**

(22) Filed: **May 15, 2003**

(65) **Prior Publication Data**  
US 2004/0050383 A1 Mar. 18, 2004

**Related U.S. Application Data**  
(63) Continuation of application No. 10/247,776, filed on Sep. 20, 2002, now abandoned, which is a continuation of application No. 09/479,597, filed on Jan. 7, 2000, now Pat. No. 6,516,796, which is a continuation of application No. PCT/US99/24080, which is a continuation of application No. 09/172,023, filed on Oct. 14, 1998, now Pat. No. 6,234,167.

(51) **Int. Cl.**  
**A61M 11/00** (2006.01)  
**A61M 15/00** (2006.01)  
**A61M 16/00** (2006.01)  
**F16K 11/00** (2006.01)

(52) **U.S. Cl.** ..... **128/200.14**; 128/200.18; 128/200.21; 128/203.12; 128/203.21; 128/203.25; 128/203.26

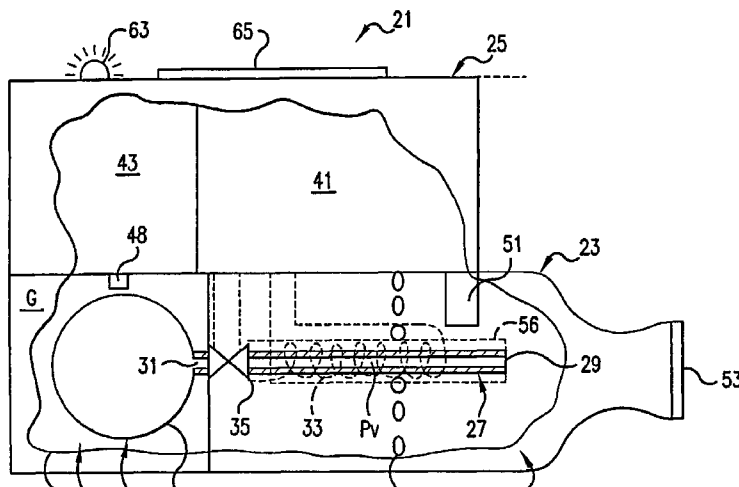
(58) **Field of Classification Search** ..... 128/200.14, 128/200.18, 200.21, 203.12, 203.21, 203.25, 128/203.26

See application file for complete search history.

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Primary Examiner—Henry Bennett

Assistant Examiner—Nihir Patel

(74) Attorney, Agent, or Firm—Buchanan Ingersoll & Rooney PC

(57)

ABSTRACT

An aerosol generator includes a flow passage having an inlet and an outlet, a heater arranged relative to the flow passage for heating the flow passage, a source of material to be volatilized in communication with the inlet of the flow passage, a valve to open and close communication between the source of material and the inlet of the flow passage, and a pressurization arrangement for causing material in the source of material to be introduced into the flow passage when the valve is in an open position. The aerosol generator further includes a source of power for operating the heater and the valve, and a control device for controlling supply of power from the source of power to the heater and the valve. A metering device in an inhaler includes a pressurized source of medicated fluid and a metering chamber configured to deliver a predetermined volume of fluid to a heated flow passage in the inhaler. The metering chamber can be part of a rotary valve having a bore and a displacement member moveable within the bore from a first position where the fluid is loaded into the bore to a second position where the predetermined volume is ejected out of the bore. Another metering chamber has an elastic portion of a delivery passage in fluid communication with the pressurized source of liquid and the elastic portion of the delivery passage is deformed to eject the predetermined volume.

11 Claims, 15 Drawing Sheets

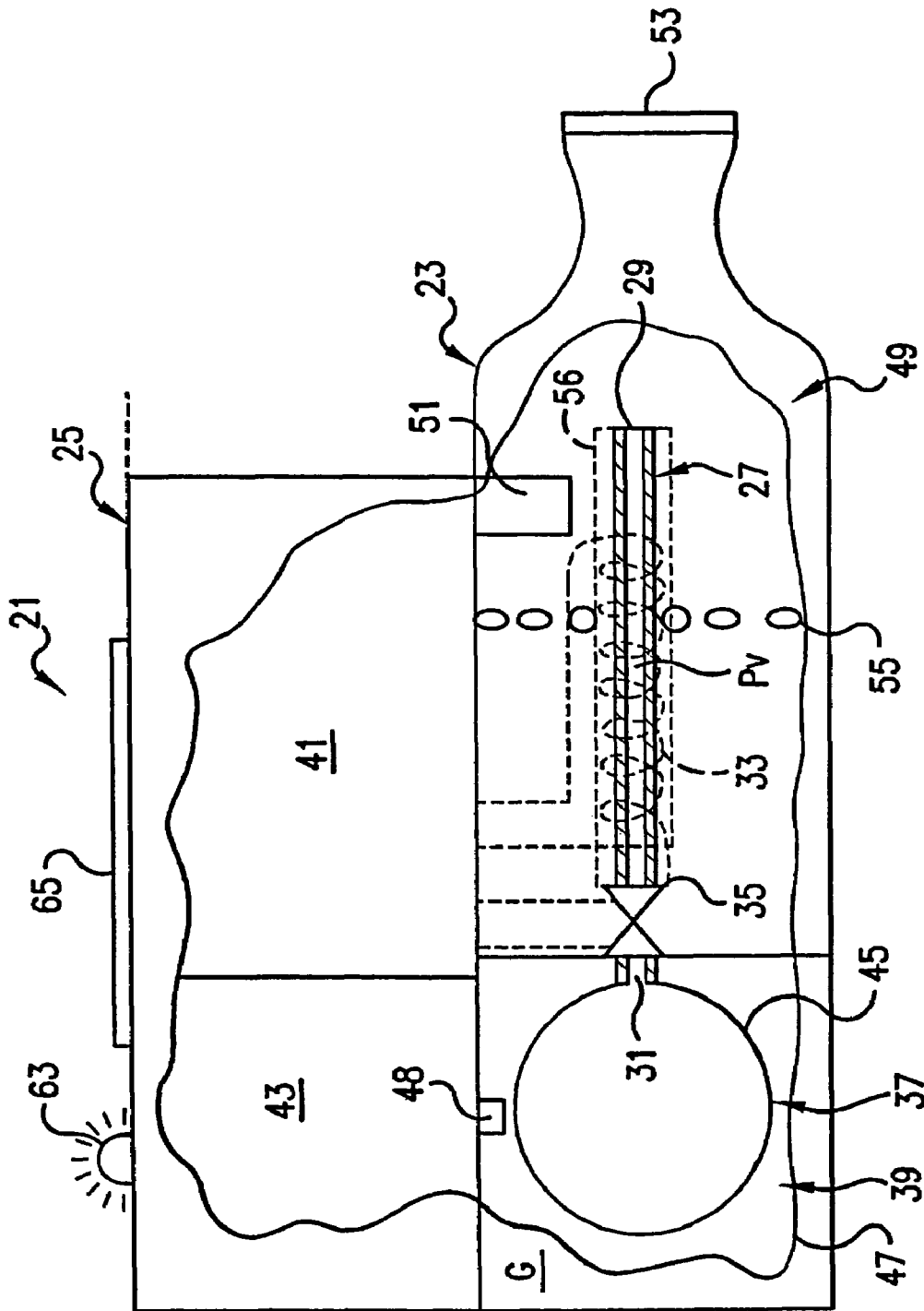


FIG.1

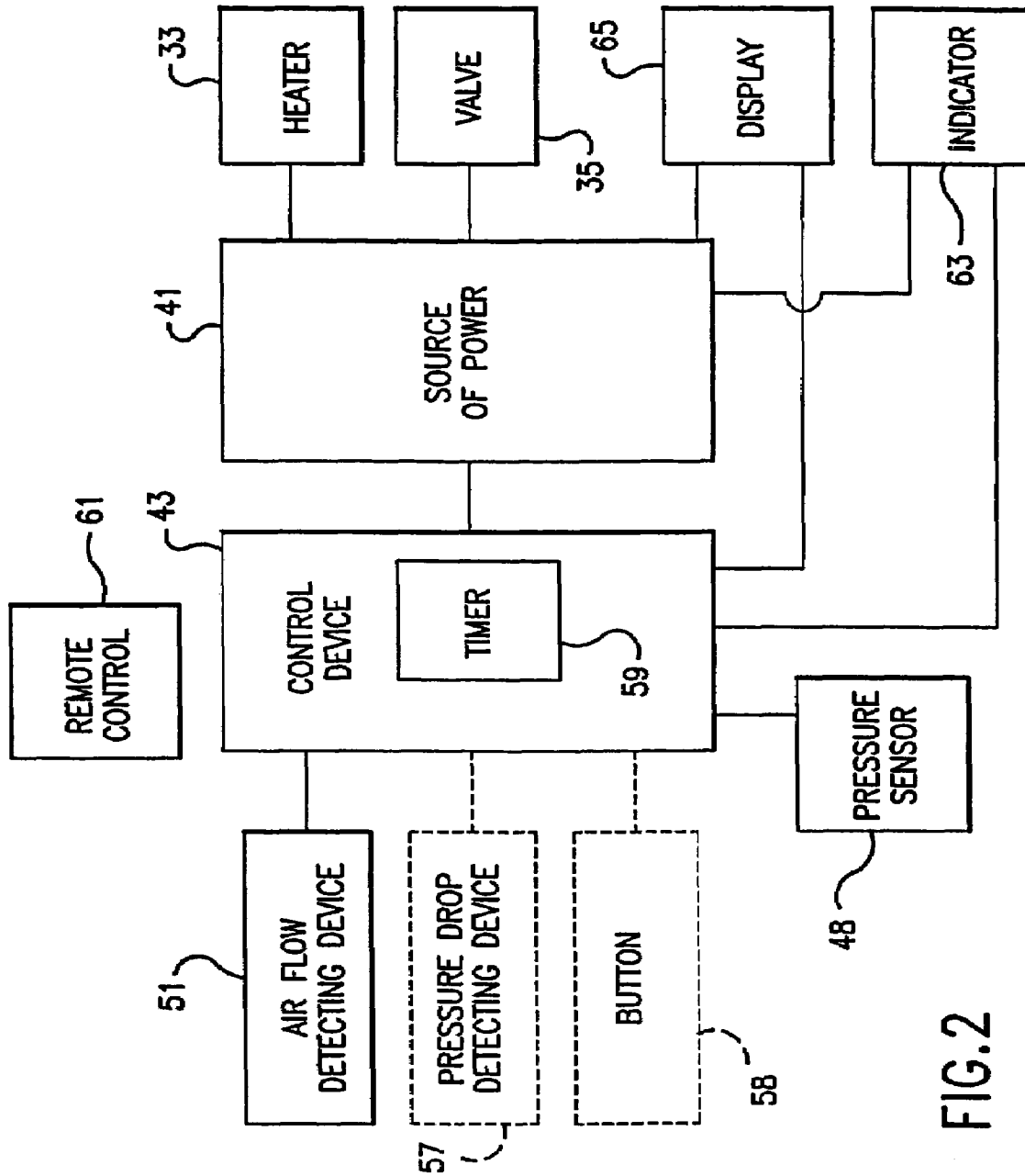


FIG. 2

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