



US008573209B2

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

(10) **Patent No.:** **US 8,573,209 B2**
(45) **Date of Patent:** ***Nov. 5, 2013**

(54) **GAS DELIVERY DEVICE AND SYSTEM**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

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(57) **ABSTRACT**

A gas delivery system including a gas delivery device (100), a control module (200) and a gas delivery mechanism is described. An exemplary gas delivery device includes a valve (107) assembly with a valve and circuit including a memory (134), a processor (122) and a transceiver (120) in communication with the memory. The memory may include gas data such as gas identification, gas expiration and gas concentration. The transceiver on the circuit of the valve assembly may send wireless optical line-of-sight signals to communicate the gas data to a control module. Exemplary gas delivery mechanisms include a ventilator (400) and a breathing circuit (410). Methods of administering gas are also described.

7 Claims, 12 Drawing Sheets

(21) Appl. No.: **13/509,873**

(22) PCT Filed: **Jan. 6, 2011**

(86) PCT No.: **PCT/US2011/020319**

§ 371 (c)(1),
(2), (4) Date: **Jun. 11, 2012**

(87) PCT Pub. No.: **WO2012/094008**

PCT Pub. Date: **Jul. 12, 2012**

(65) **Prior Publication Data**

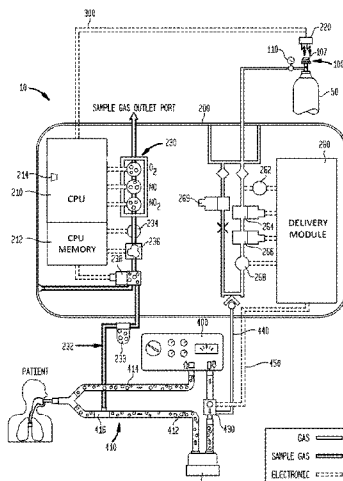
US 2013/0000643 A1 Jan. 3, 2013

(51) **Int. Cl.**
A62B 9/02 (2006.01)
F16K 31/02 (2006.01)

(52) **U.S. Cl.**
USPC **128/205.24**; 128/203.14; 128/204.21

(58) **Field of Classification Search**
USPC 128/203.12, 203.14, 204.18,
128/204.21–201.23, 205.24

See application file for complete search history.



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FIG. 1

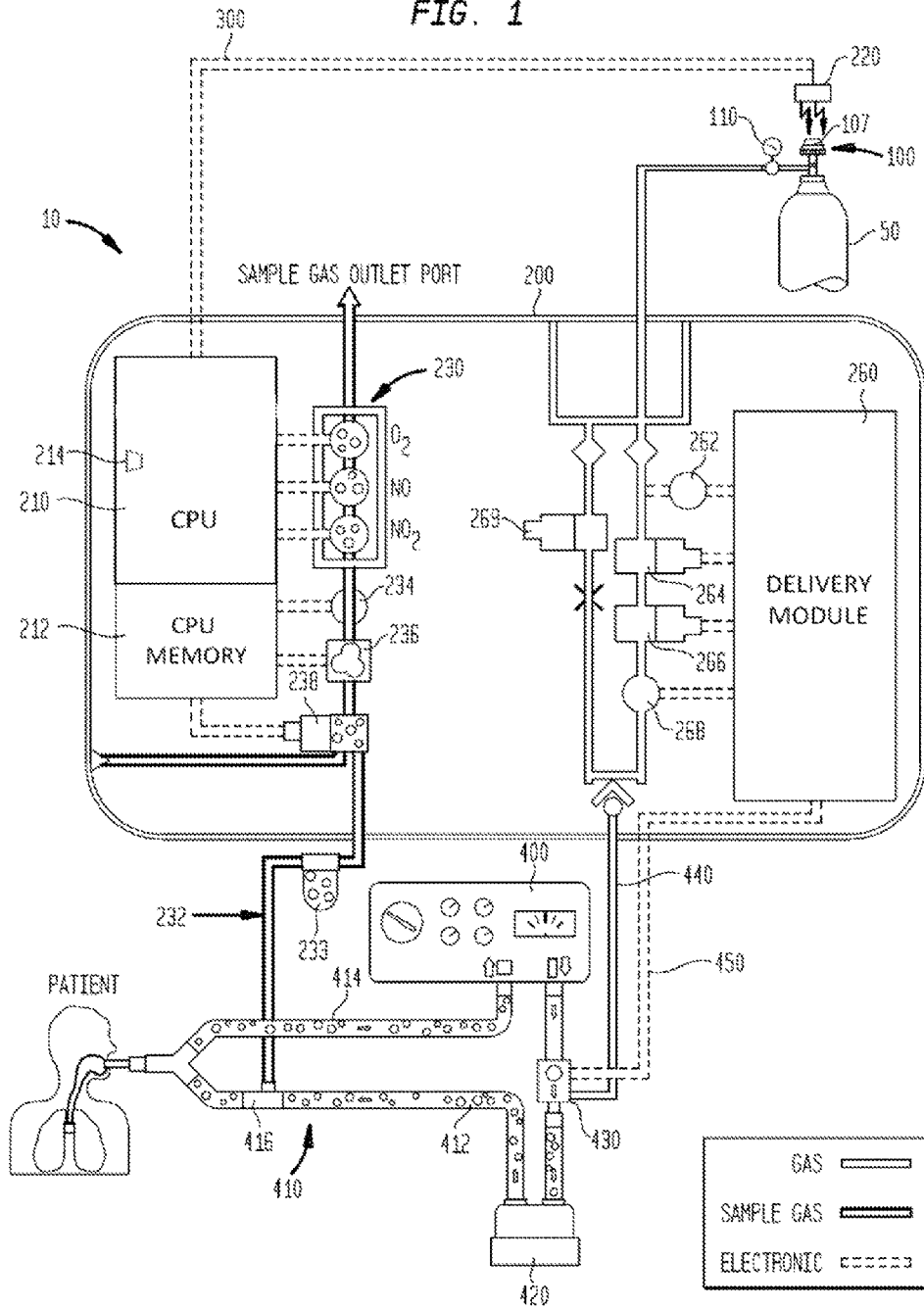


FIG. 2

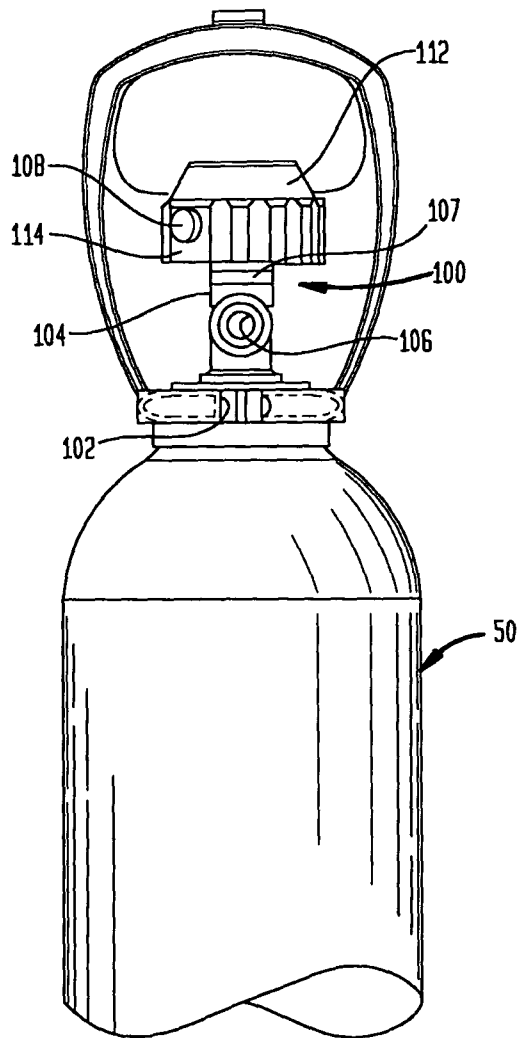
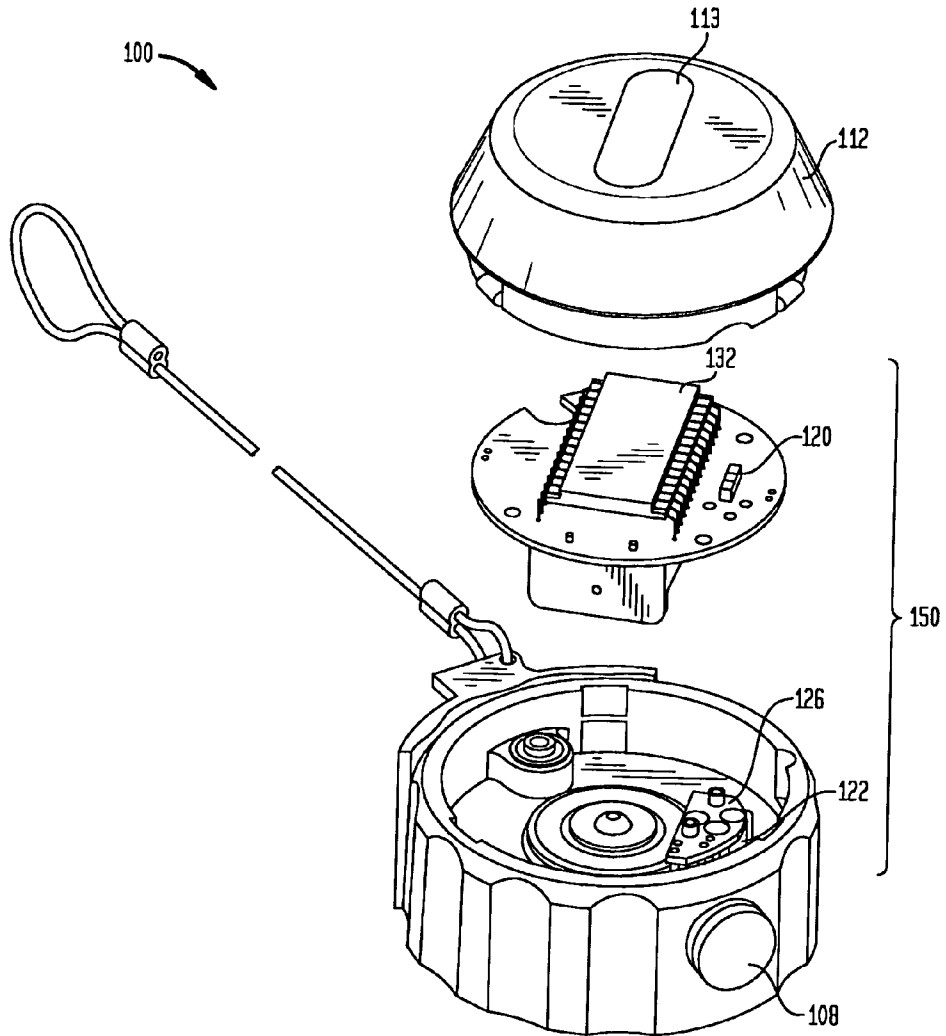


FIG. 3



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