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Bathe et al.

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(54) **NITRIC OXIDE DELIVERY DEVICE**

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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; 251/129.04;
700/282

See application file for complete search history.

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Primary Examiner — Justine R Yu

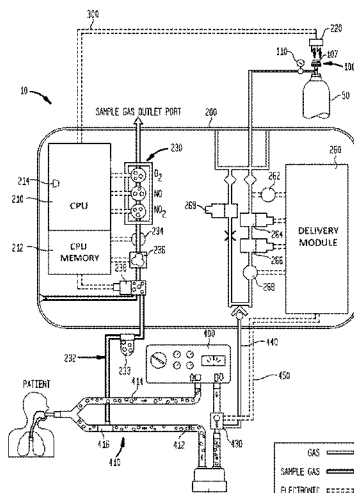
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(57) **ABSTRACT**

A nitric oxide delivery device including a valve assembly, a control module and a gas delivery mechanism is described. An exemplary gas delivery device includes a valve assembly with a valve and circuit including a memory, a processor and a transceiver 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 and a breathing circuit. Methods of administering gases containing nitric oxide are also described.

16 Claims, 12 Drawing Sheets



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FIG. 1

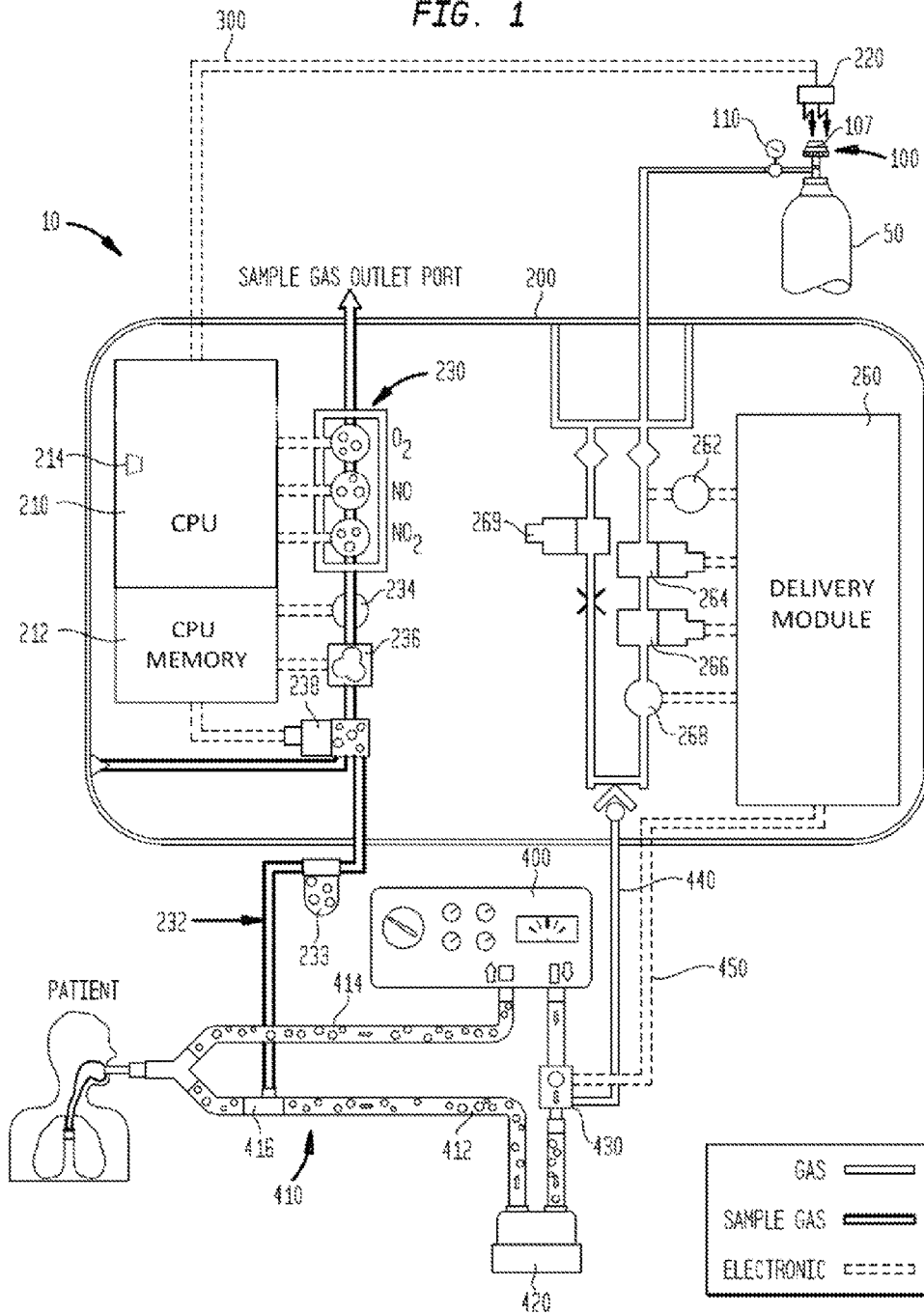


FIG. 2

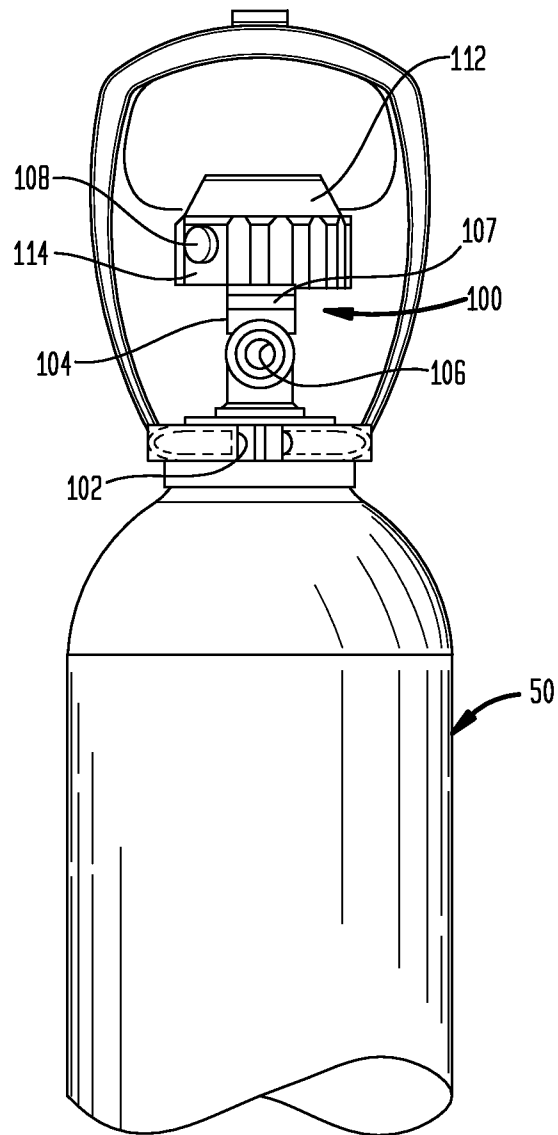
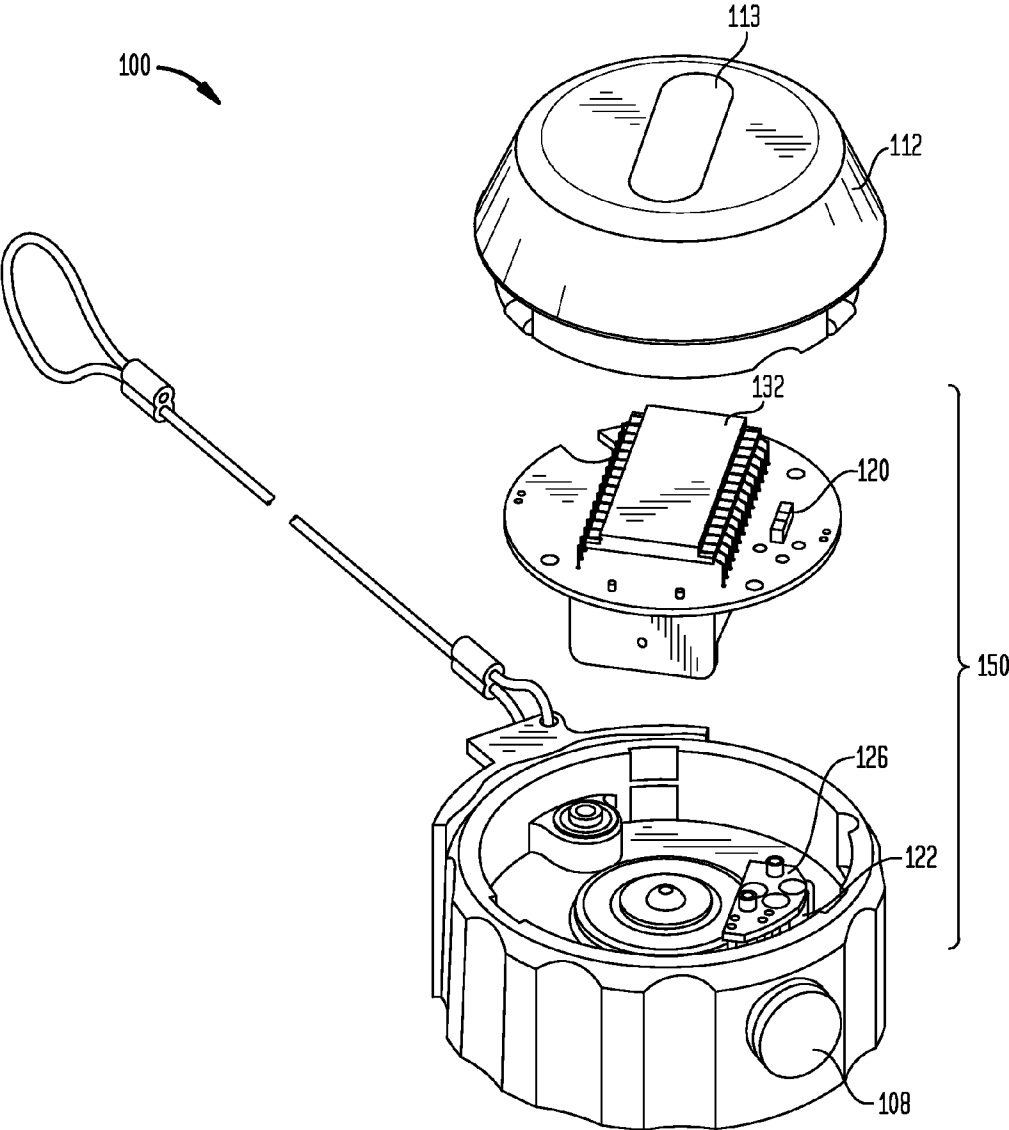


FIG. 3



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