



US006131571A

# United States Patent [19] Lampotang et al.

[11] Patent Number: **6,131,571**  
[45] Date of Patent: **Oct. 17, 2000**

- [54] **VENTILATION APPARATUS AND ANESTHESIA DELIVERY SYSTEM**
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- [21] Appl. No.: **08/848,339**
- [22] Filed: **Apr. 30, 1997**
- [51] Int. Cl.<sup>7</sup> ..... **A61M 16/00**
- [52] U.S. Cl. .... **128/204.21; 128/204.18; 128/204.23**
- [58] Field of Search ..... **728/204.21, 205.18, 728/203.28, 205.12, 204.28, 203.12, 203.14, 205.25, 204.23, 204.24, 205.19, 205.11, 202.27**

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### [57] ABSTRACT

A combination ventilation apparatus and anesthesia delivery system comprises a circulation loop within which oxygen and air or other clinical gas, or a mixture of air, oxygen, nitrous oxide or other clinical gas and anesthetics, are circulated by a variable speed centrifugal blower to a Y-piece which connects the circulation loop to an endotracheal tube or other airway device communicating with a patient. A proportional flow control valve is operative to actively control the pressure or flow at the Y-piece in response to signals from pressure or flow sensors which are positioned to provide measurements representative of the actual pressure and flow conditions within the patient's lungs. Constant circuit volume is maintained by computer control of gas make-up valves in response to the movement of a weighted bellows located between the proportional flow control valve and centrifugal blower.

**88 Claims, 5 Drawing Sheets**

