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- (54) Title:** DETERMINISTICALLY CONTROLLED HUMIDIFICATION SYSTEM

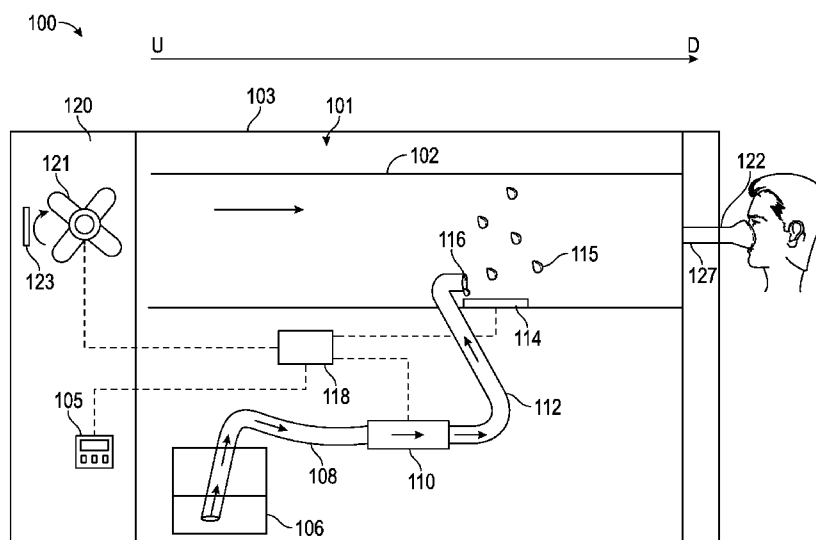


FIG. 1A

- (57) Abstract:** A respiratory humidification system for providing humidification to gases that pass through a gas passage way before being provided to an airway of a patient is disclosed. The respiratory humidification system may include a liquid flow controller providing a controlled flow of liquid, a heating system including a heating surface configured to be located in a gases passage way and provide humidification to gases passing through the passage way, wherein the heating system receives the controlled flow of liquid, and one or more hardware processors providing deterministic control of a humidity level of gases passing through the gas passage way by instructing the liquid flow controller to adjust the controlled flow of liquid received at the heating system.



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