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(54) **INTERACTIVE SIMULATION OF A PNEUMATIC SYSTEM**

(75) Inventors: **Samsun Lampotang**, Gainesville, FL (US); **David Erik Lizdas**, Gainesville, FL (US); **Edwin Boediono Liem**, Louisville, KY (US)

(73) Assignee: **University of Florida Research Foundation, Inc.**, Gainesville, FL (US)

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(58) **Field of Classification Search** 434/118, 434/219, 262, 307 R, 308, 365; 128/204.21, 128/204.23, 205.11; 600/529, 532; 376/245
See application file for complete search history.

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Primary Examiner—Joe H. Cheng

(74) *Attorney, Agent, or Firm*—Akerman Senterfitt

(57) **ABSTRACT**

A method, system and apparatus for simulating a pneumatic system. The method can include dividing a pneumatic system into logical component sections. Each of the logical component sections can be visually rendered in a graphical user interface. Also, user modification of control element settings in the logical component sections can be permitted. Subsequently, gas flows within the logical component sections can be animated using individually rendered gas molecule icons coupled to corresponding animation scripts. Each of the scripts can determine an animation direction and animation rate for a corresponding one of the gas molecule icons. In particular, the actual pneumatic system can be an anesthesia machine.

33 Claims, 7 Drawing Sheets

