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(54) **METHOD AND APPARATUS FOR PREDICTING WORK OF BREATHING**

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(52) **U.S. Cl.** **600/529; 600/533; 600/538**

(58) **Field of Classification Search** **600/529, 600/533, 538, 300**

See application file for complete search history.

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(57) **ABSTRACT**

A method of creating a non-invasive predictor of both physiologic and imposed patient effort from airway pressure and flow sensors attached to the patient using an adaptive mathematical model. The patient effort is commonly measured via work of breathing, power of breathing, or pressure-time product of esophageal pressure and is important for properly adjusting ventilatory support for spontaneously breathing patients. The method of calculating this non-invasive predictor is based on linear or non-linear calculations using multiple parameters derived from the above-mentioned sensors.

28 Claims, 4 Drawing Sheets

