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Wood

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(54) **DETECTION OF ABNORMAL AND INDUCTION OF NORMAL HEAT RATE VARIABILITY**

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(76) Inventor: **Nicholas Wood**, 16 Ensign Rd., Rowayton, CT (US) 06853
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(51) **Int. Cl.**⁷ **A61B 5/0468**

(52) **U.S. Cl.** **600/515; 600/519**

(58) **Field of Search** 600/513, 515, 600/516, 517, 518, 519

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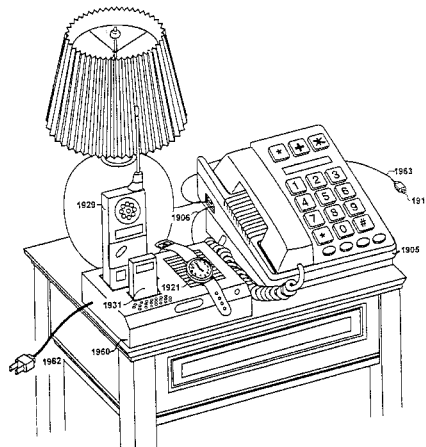
Primary Examiner—Scott M. Getzow

(74) *Attorney, Agent, or Firm*—Stevens, Davis, Miller & Mosher, LLP

(57) **ABSTRACT**

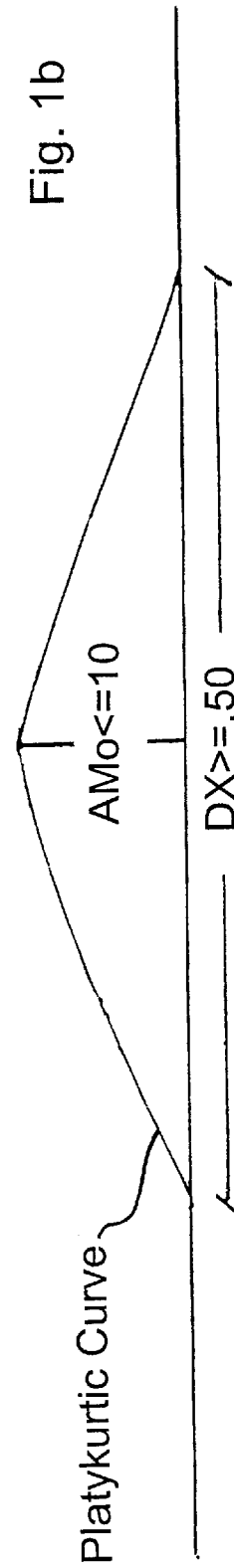
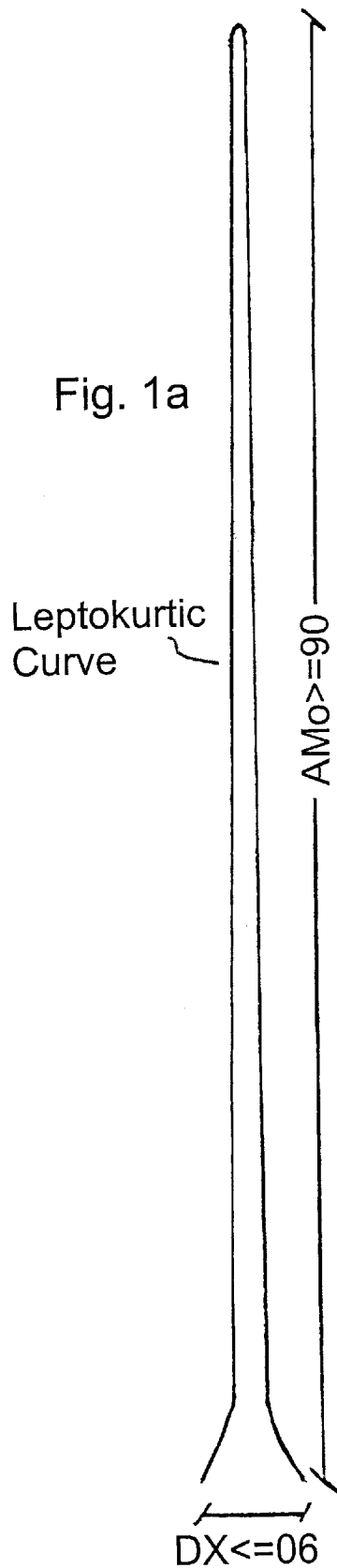
An apparatus and method for predicting potentially fatal arrhythmias up to twenty four hours in advance of the event by employing formulas indicating either too little or too much heart rate variability. A number of these formulas have both predetermined upper and lower limits, which if exceeded for a period of time are a predictor of a potentially fatal arrhythmia. When a patient's ALARM condition is predicted, whether the patient is indoors or outdoors, conscious or unconscious, a redundant protocol is utilized to relay that ALARM condition to a central monitoring station. The central monitoring station informs the patient's doctor, and then uses what ever means are available to transport the patient to the nearest emergency room for treatment. An apparatus and method for pacing the heart in a natural way, once a potentially fatal arrhythmia has been predicted is also disclosed.

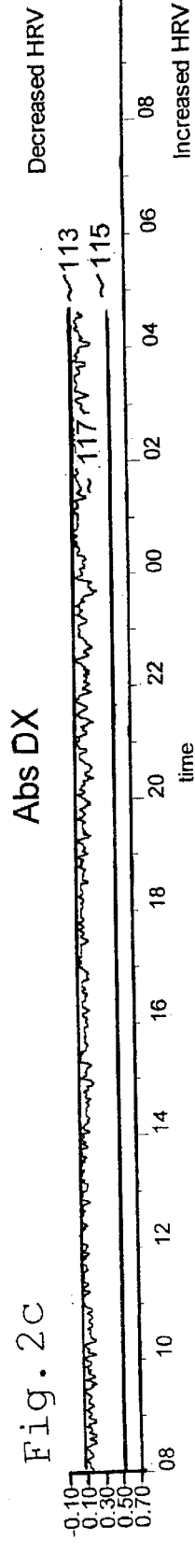
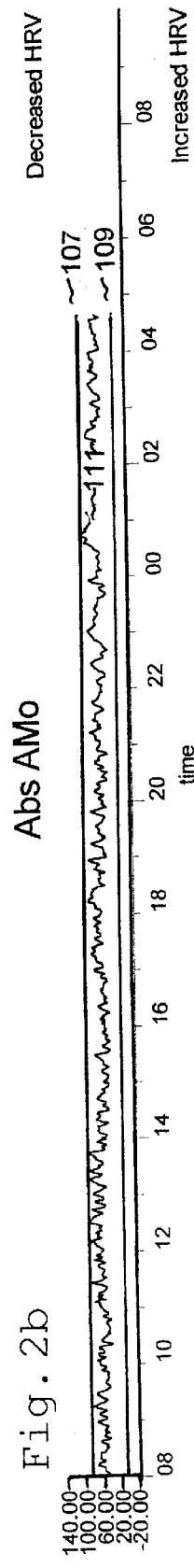
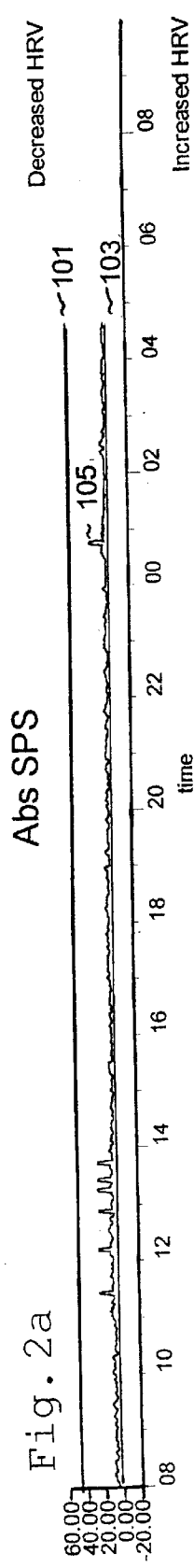
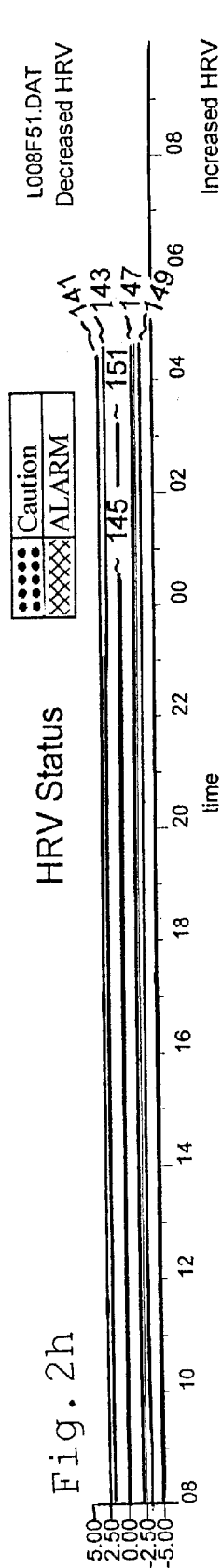
42 Claims, 22 Drawing Sheets

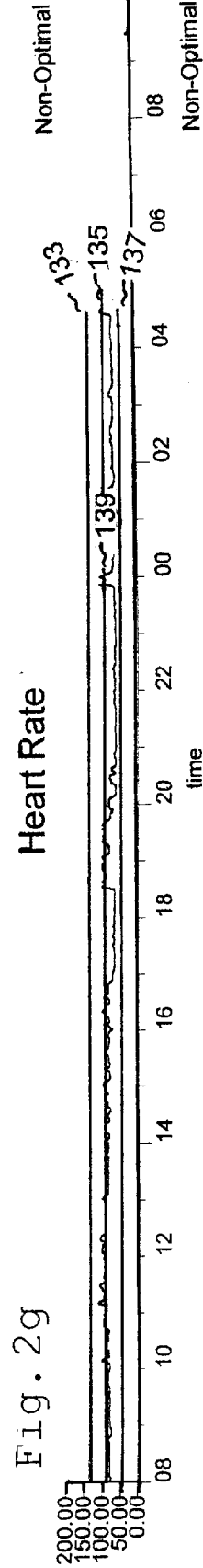
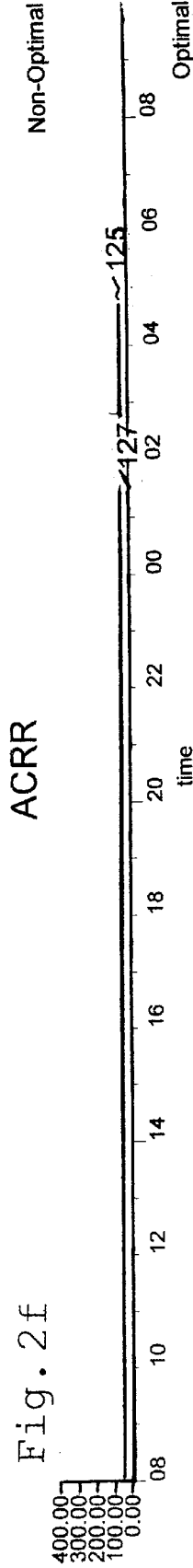
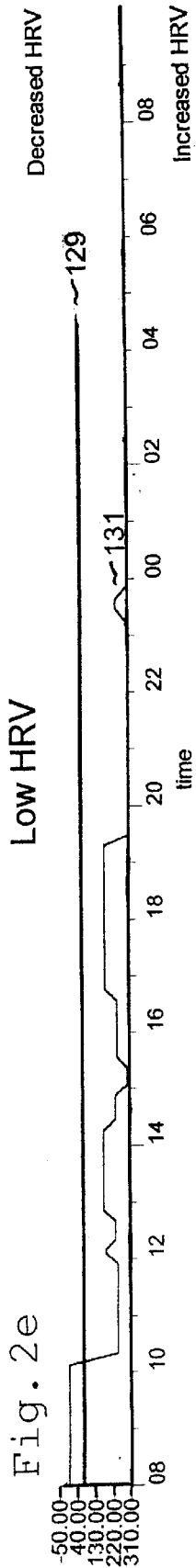
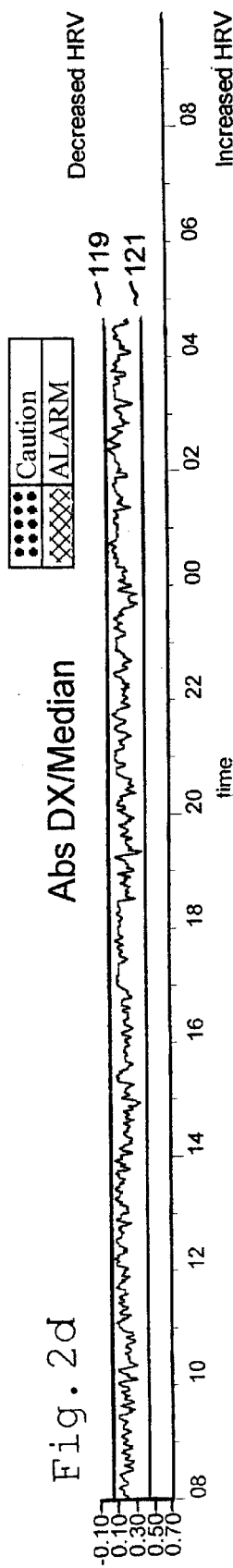


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