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(54) **HEART FAILURE DECOMPENSATION PREDICTION BASED ON CARDIAC RHYTHM**

**Related U.S. Application Data**

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(52) **U.S. Cl.** ..... **607/17**; 600/518; 600/515; 600/513  
(57) **ABSTRACT**

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Systems and methods of detecting an impending cardiac decompensation of a patient measure an electrocardiogram signal of the patient. An incidence of cardiac arrhythmias is determined from the electrocardiogram signal. A risk of impending decompensation is determined in response to the incidence of cardiac arrhythmias. In many embodiments, the impending decompensation can be detected early enough to avoid, or at least delay, the impending decompensation, such that patient trauma and/or expensive ICU care can be avoided. Although embodiments make specific reference to monitoring electrocardiogram and other physiological signals with an adherent patch, the system methods and devices are applicable to many applications in which physiological monitoring is used, for example wireless physiological monitoring with implanted sensors for extended periods.

(73) Assignee: **Corventis, Inc.**, San Jose, CA (US)

(21) Appl. No.: **12/402,318**

(22) Filed: **Mar. 11, 2009**

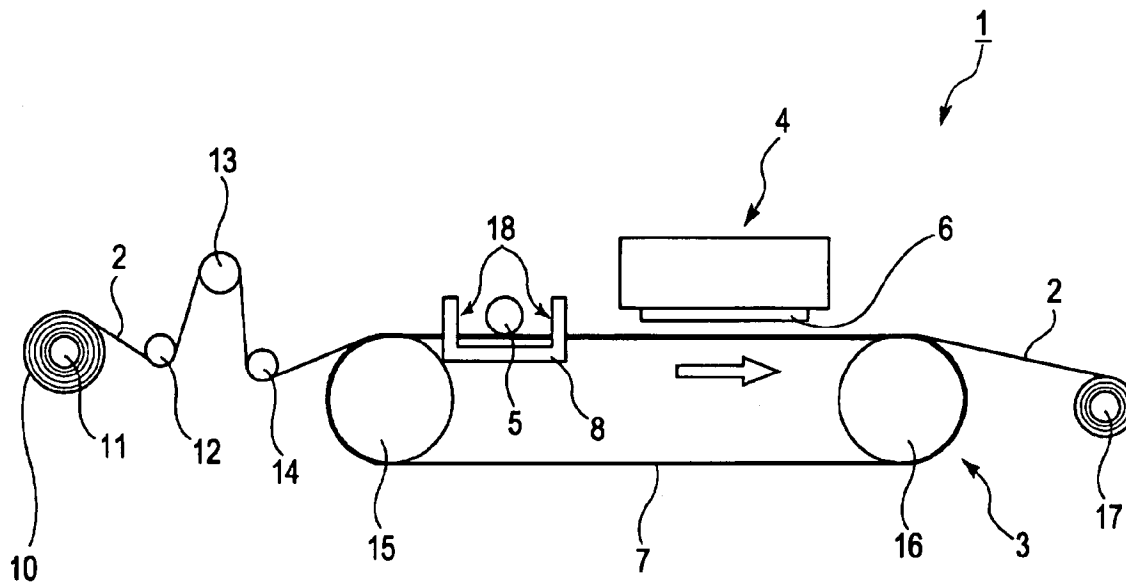


FIG. 1

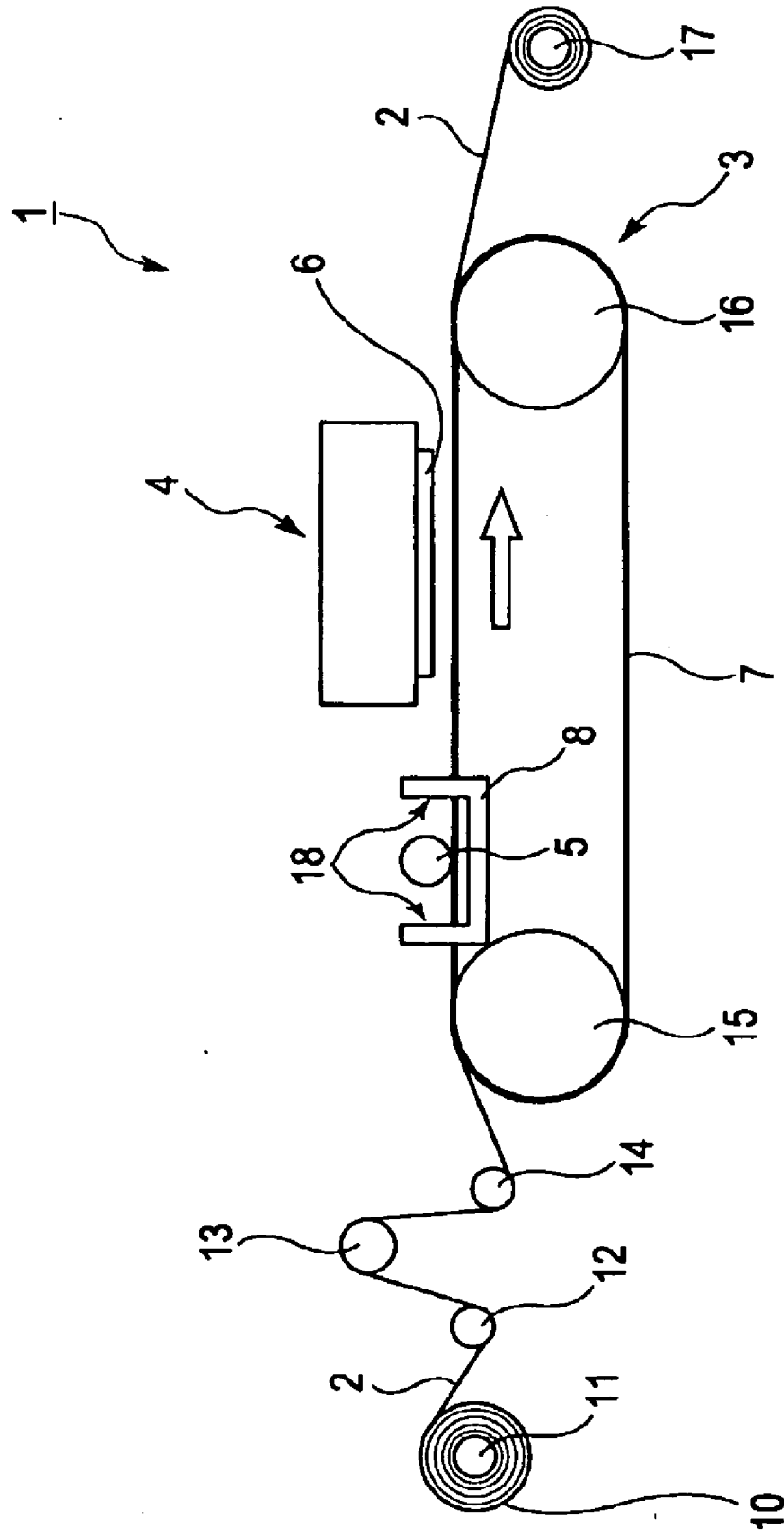


FIG. 2

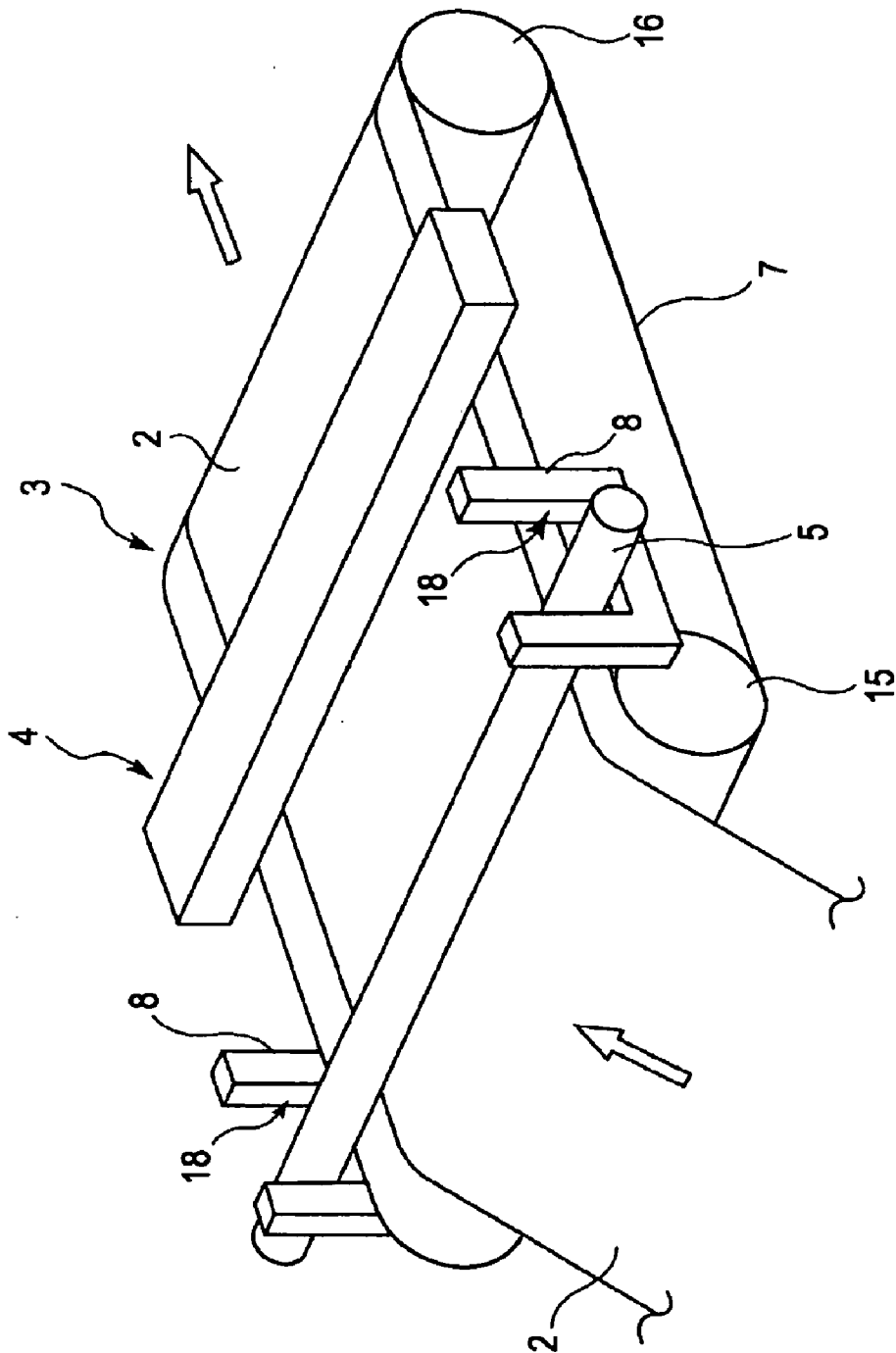


FIG. 3

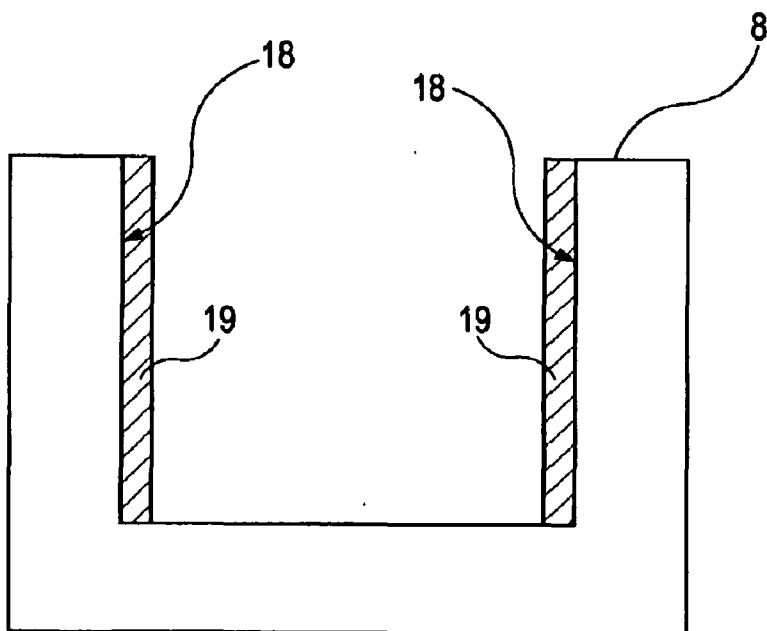


FIG. 4

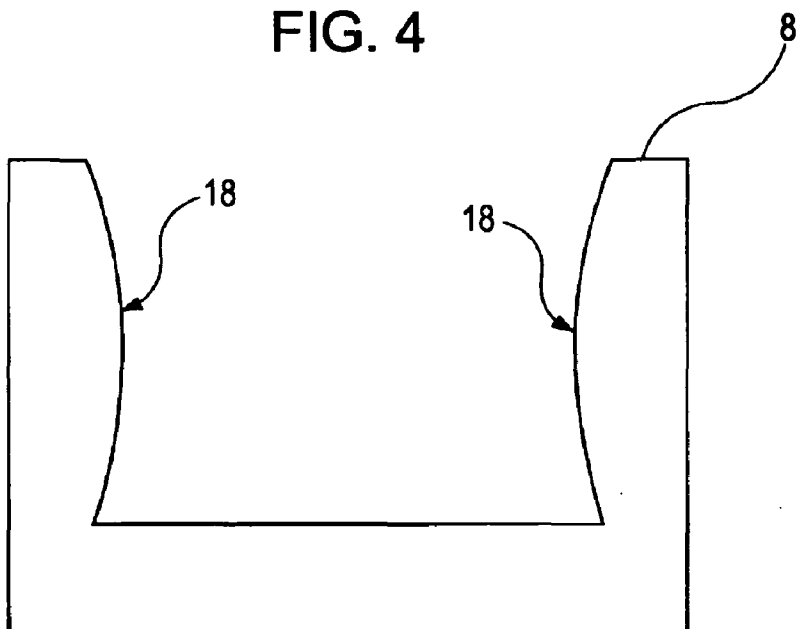


FIG. 5A

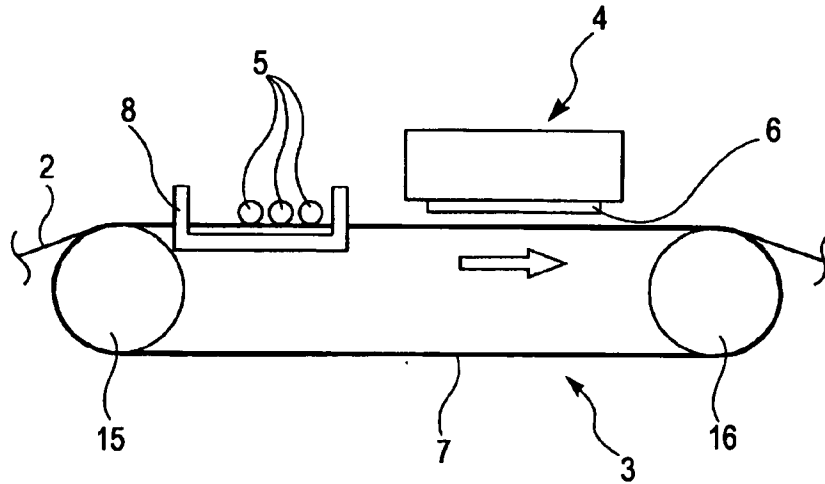
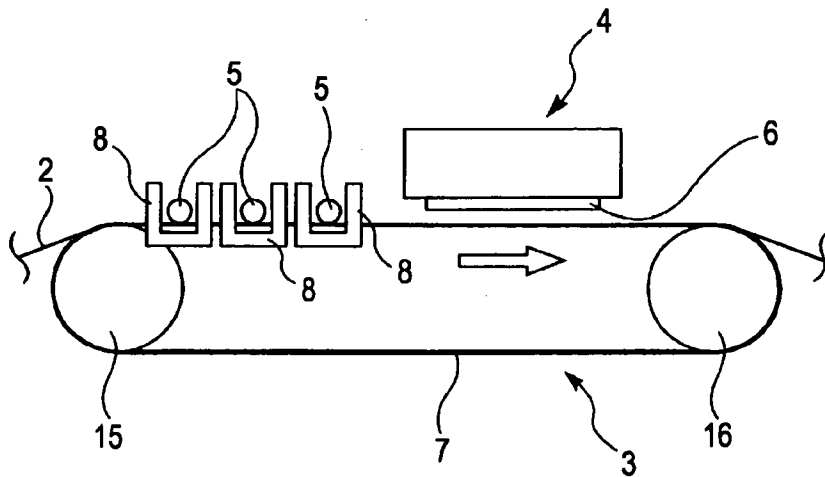


FIG. 5B



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