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**Almen**

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(54) **APPARATUS AND METHOD FOR MONITORING HEART RATE VARIABILITY**

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(57) **ABSTRACT**

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A wrist-worn or arm band worn heart rate variability monitor is provided. Heart rate variability (“HRV”) refers to the variability of the time interval between heartbeats and is a reflection of an individual’s current health status. Over time, an individual may use the results of HRV tests to monitor either improvement or deterioration of specific health issues. Thus, one use of the HRV test is as a medical motivator. When an individual has a poor HRV result, it is an indicator that they should consult their physician and make appropriate changes where applicable to improve their health. If an individual’s HRV results deviate significantly from their normal HRV, they may be motivated to consult their physician. In addition, the inventive monitor is capable of monitoring the stages of sleep by changes in the heart rate variability and can record the sleep (or rest) sessions with the resulting data accessible by the user or other interested parties. Alternate embodiments of the invention allow assistance in the diagnosis and monitoring of various cardiovascular and sleep breathing disorders and/or conditions. Other embodiments allow communication with internal devices such as defibrillators or drug delivery mechanisms. Still other embodiments analyze HRV data to assist the user in avoiding sleep.

(73) **Assignee: Quiescent, Inc.**

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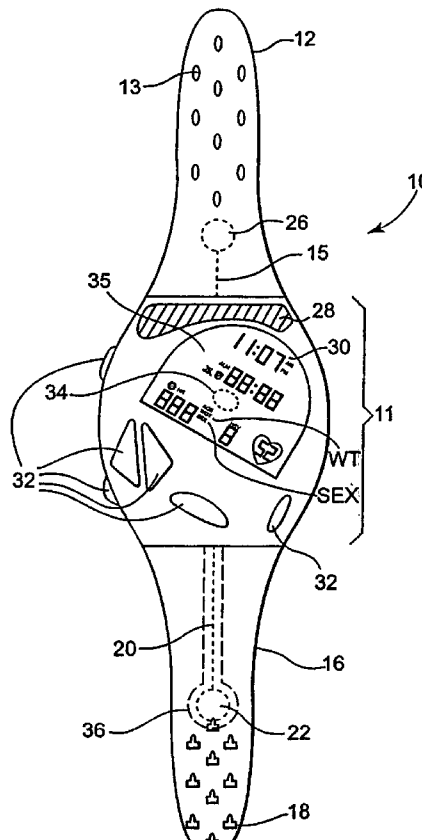
**Related U.S. Application Data**

(63) **Continuation-in-part of application No. 10/829,544, filed on Apr. 22, 2004.**

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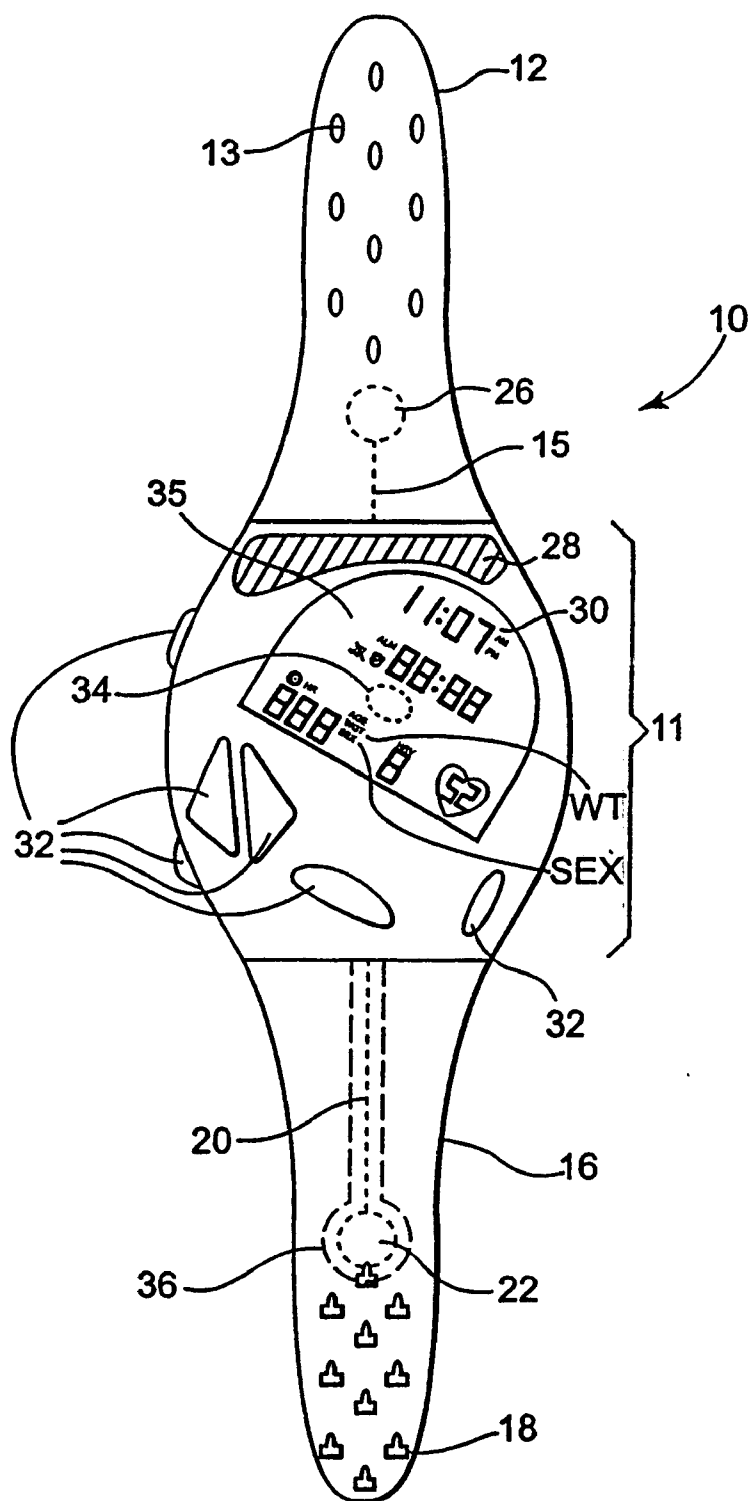
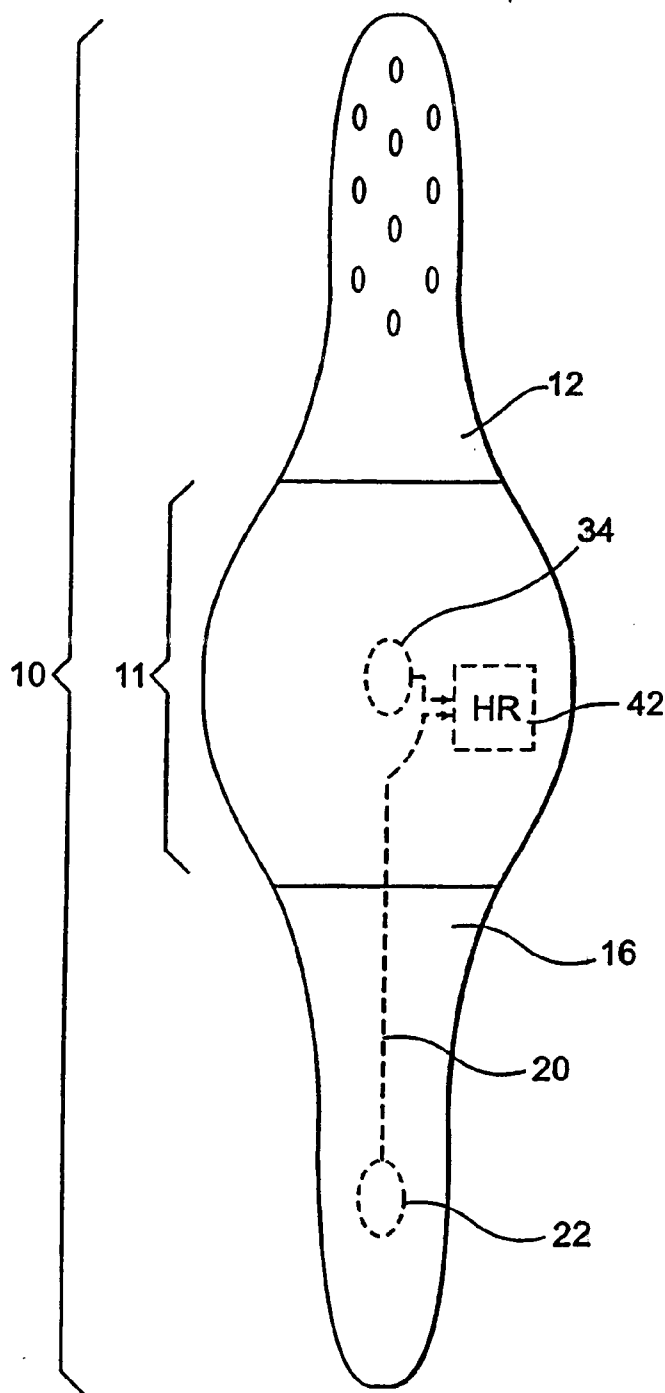


Fig. 1



**Fig. 2**

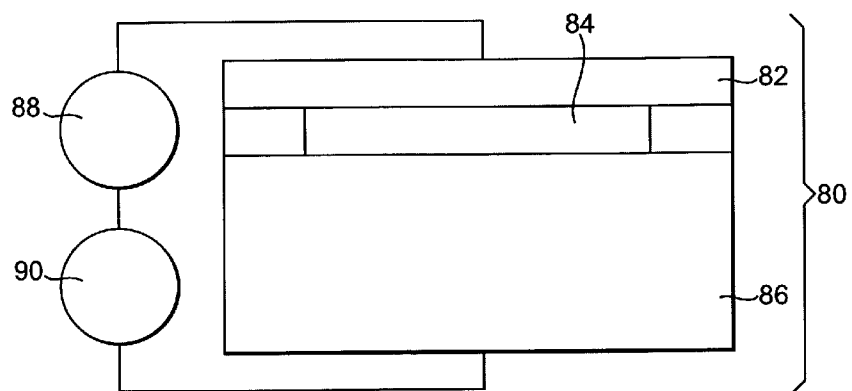


Fig. 3A

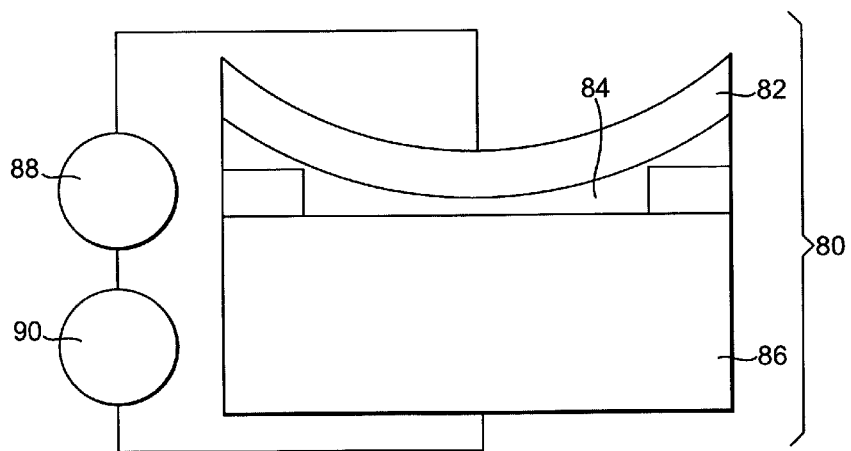
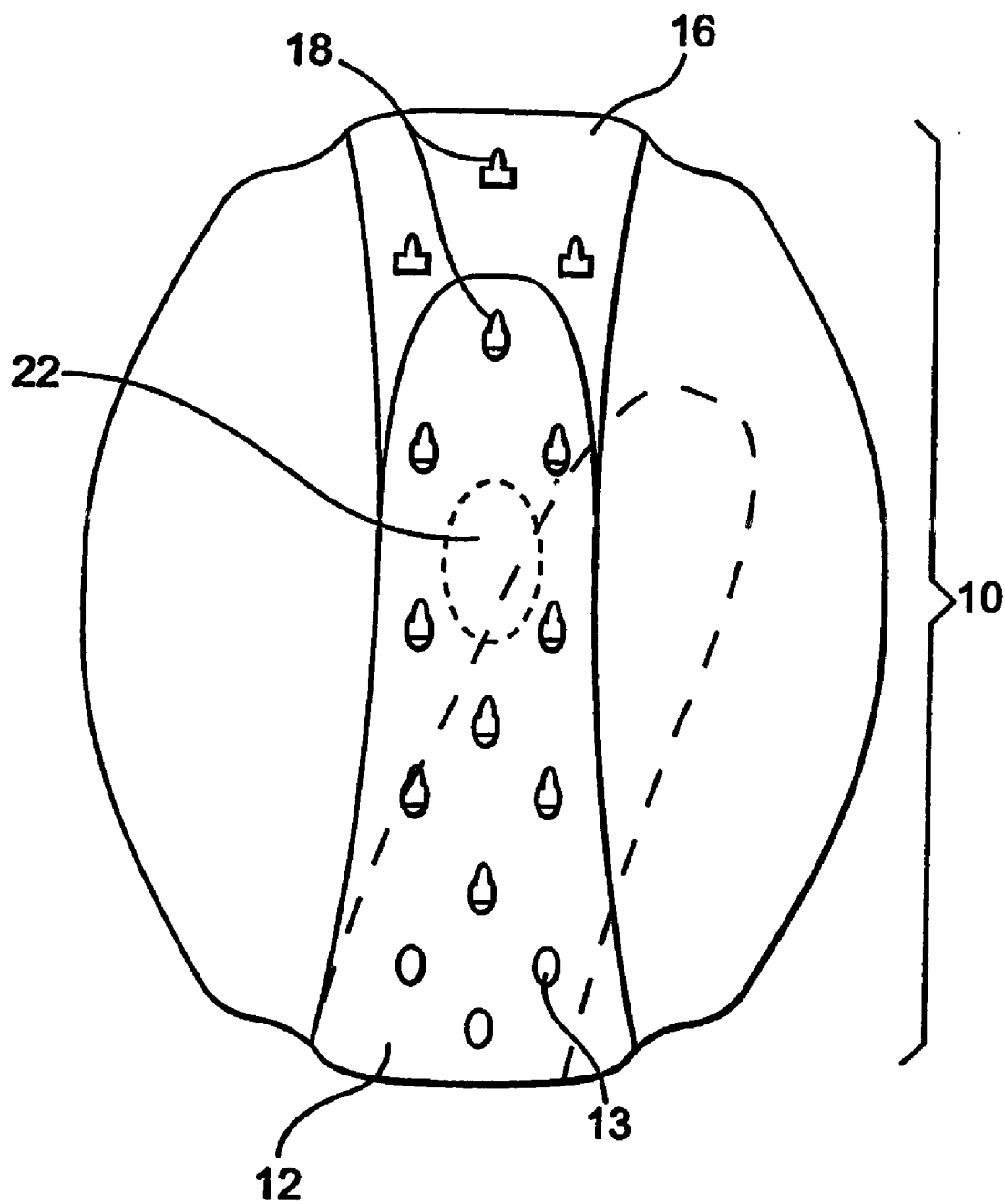


Fig. 3B



**Fig. 4**

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