



US 20150355604A1

(19) **United States**

(12) **Patent Application Publication**

**Fraser et al.**

(10) **Pub. No.: US 2015/0355604 A1**

(43) **Pub. Date: Dec. 10, 2015**

(54) **SMART DEVICE INCLUDING BIOMETRIC SENSOR**

*G01J 1/04* (2006.01)

*A61B 5/1455* (2006.01)

*H04B 5/00* (2006.01)

*H02J 7/02* (2006.01)

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(52) **U.S. Cl.**

CPC ..... *G04G 21/025* (2013.01); *H04B 5/0031*  
(2013.01); *H02J 7/025* (2013.01); *G01J 1/0407*  
(2013.01); *A61B 5/14551* (2013.01); *A61B*  
*5/02416* (2013.01); *A61B 5/02438* (2013.01)

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(57) **ABSTRACT**

An apparatus can include a wrist worn device configured to be worn on a wrist of a user. The apparatus can include a controller. The apparatus can include a power supply. The apparatus can include a light emitter that can emit light from a user side of the wrist worn device to a wrist of the user. The apparatus can include a light detector that can detect light reflected from the wrist of the user from the first light emitter and can send a detector signal to the controller. The detector signal can be based on the detected light. The apparatus can include a lens coupled to a user side of the wrist worn device external to the light emitter and light detector. The lens can include an opaque section. The lens can also include light transmissive section that transmits light from the light emitter to the user.

(21) Appl. No.: **14/462,759**

(22) Filed: **Aug. 19, 2014**

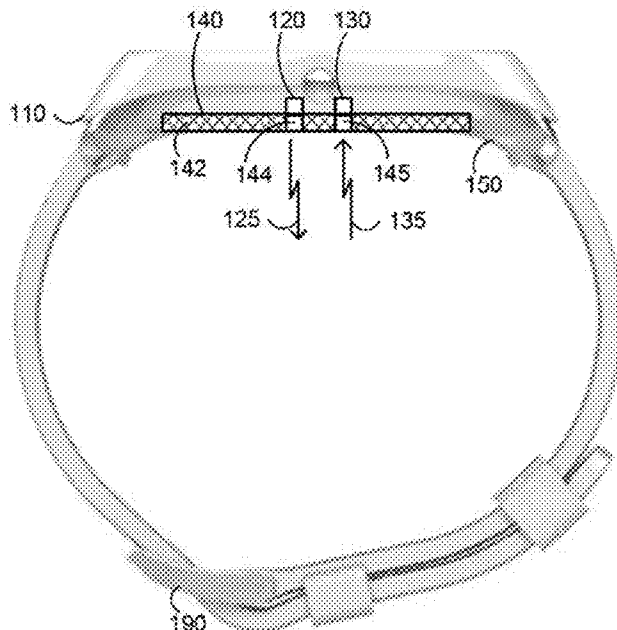
**Related U.S. Application Data**

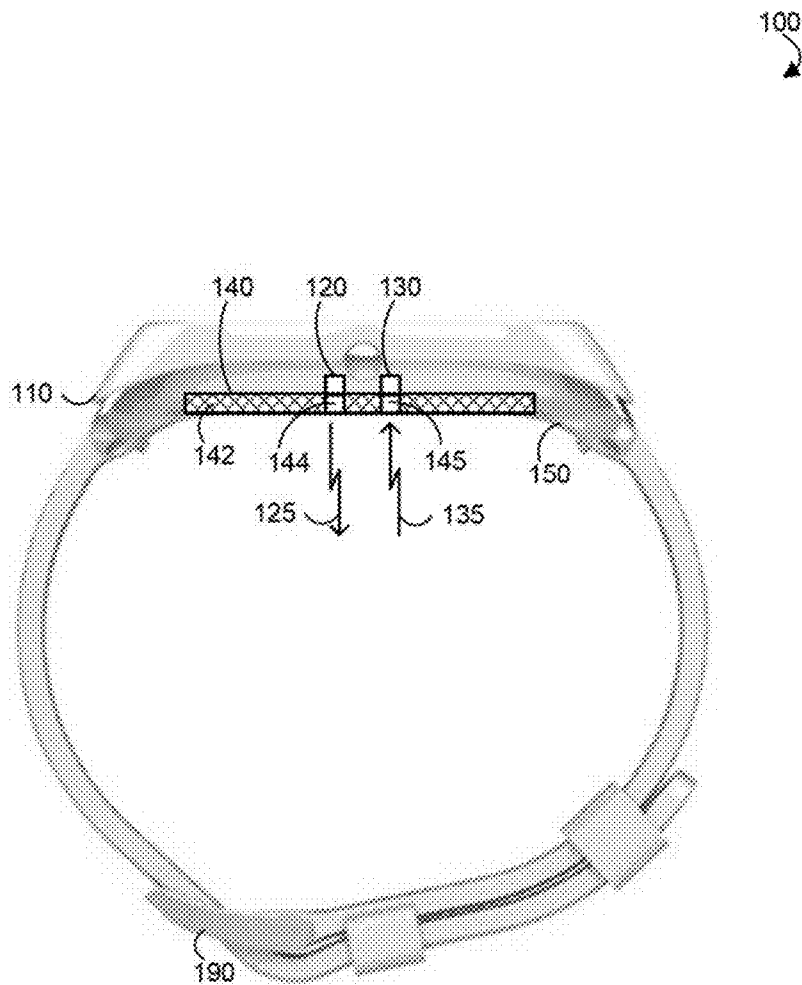
(60) Provisional application No. 62/007,967, filed on Jun. 5, 2014.

**Publication Classification**

(51) **Int. Cl.**  
*G04G 21/02* (2006.01)  
*A61B 5/024* (2006.01)

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**FIG. 1**

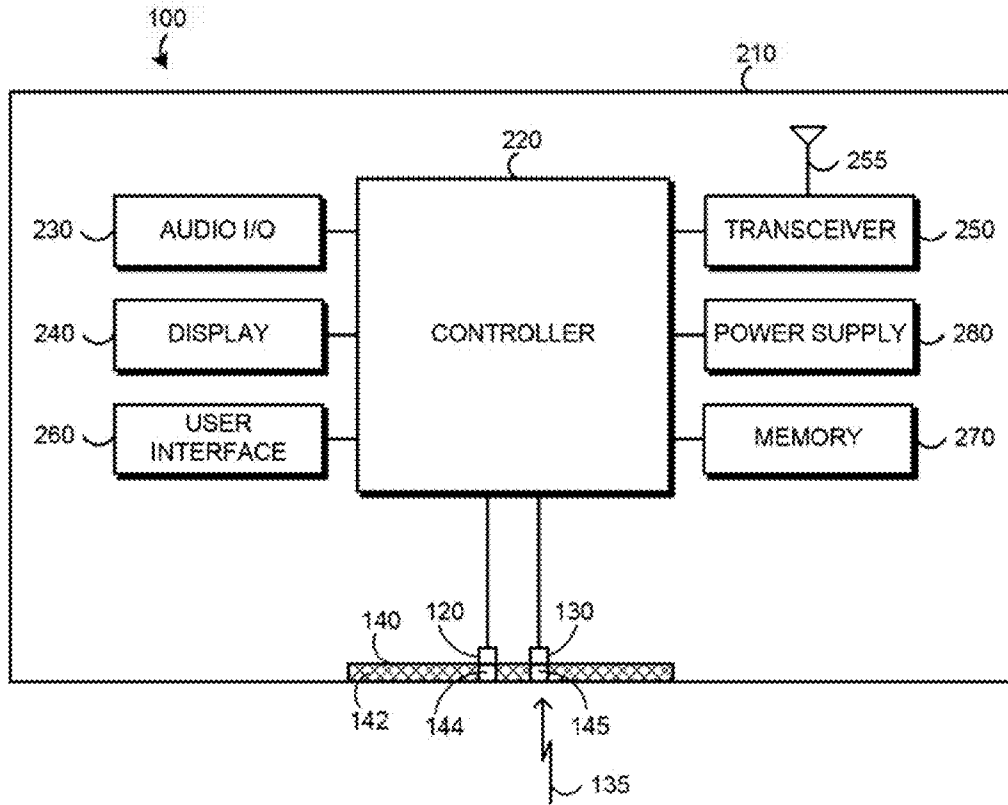
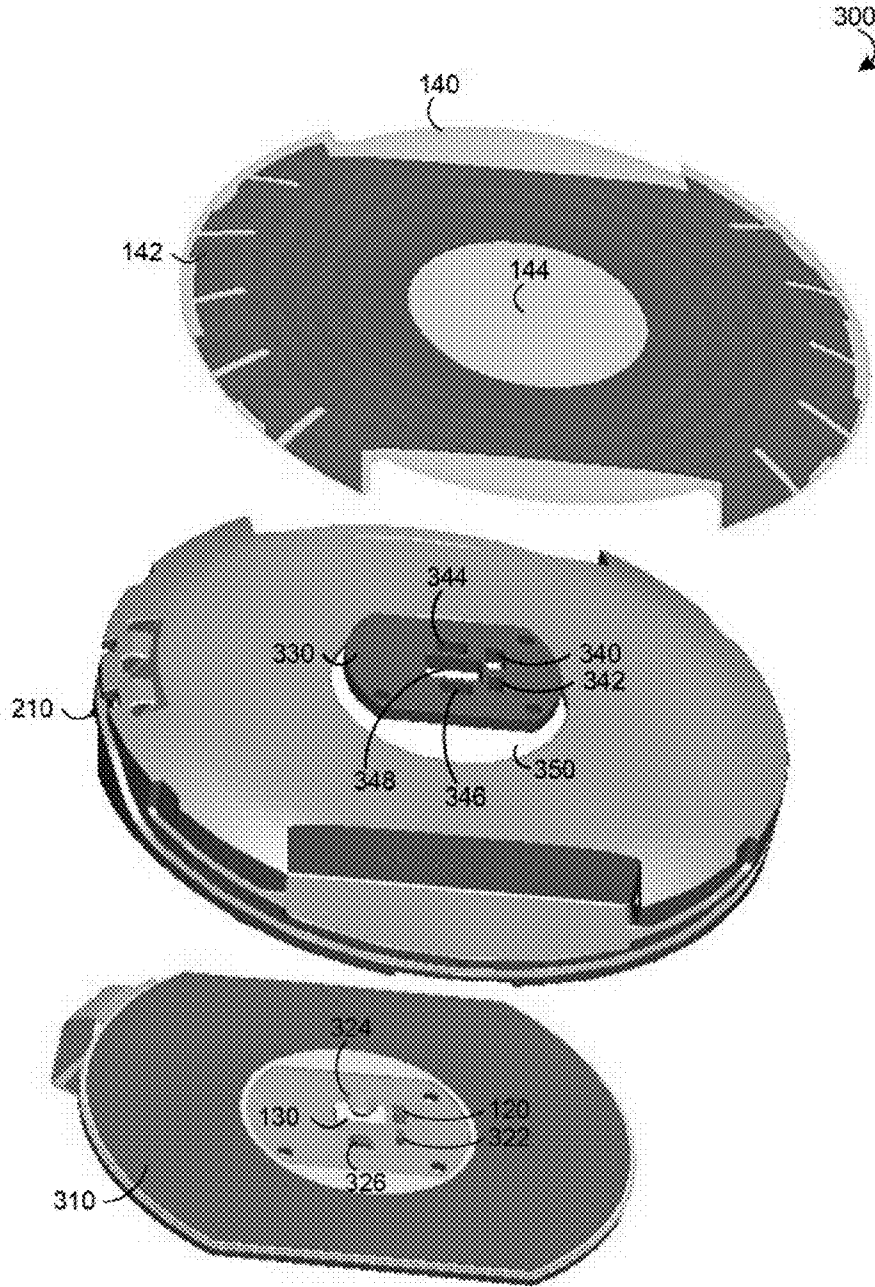
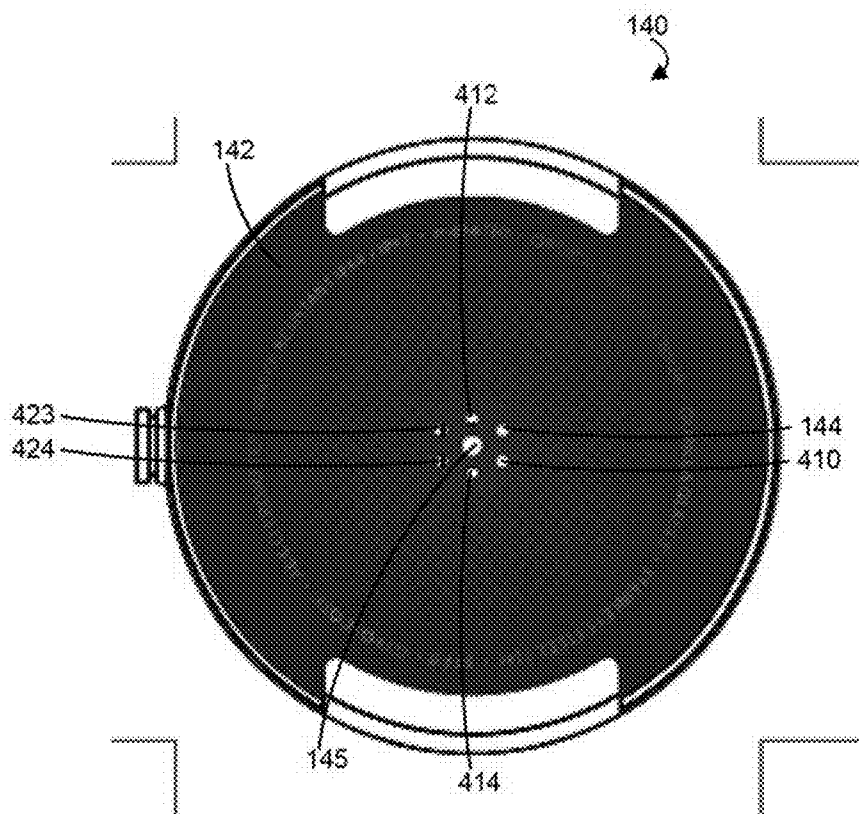


FIG. 2



**FIG. 3**



**FIG. 4**

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