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(54) **METHODS AND APPARATUS FOR ASSESSING PHYSIOLOGICAL CONDITIONS**

**Publication Classification**

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(52) **U.S. Cl.** ..... **600/301**  
(57) **ABSTRACT**

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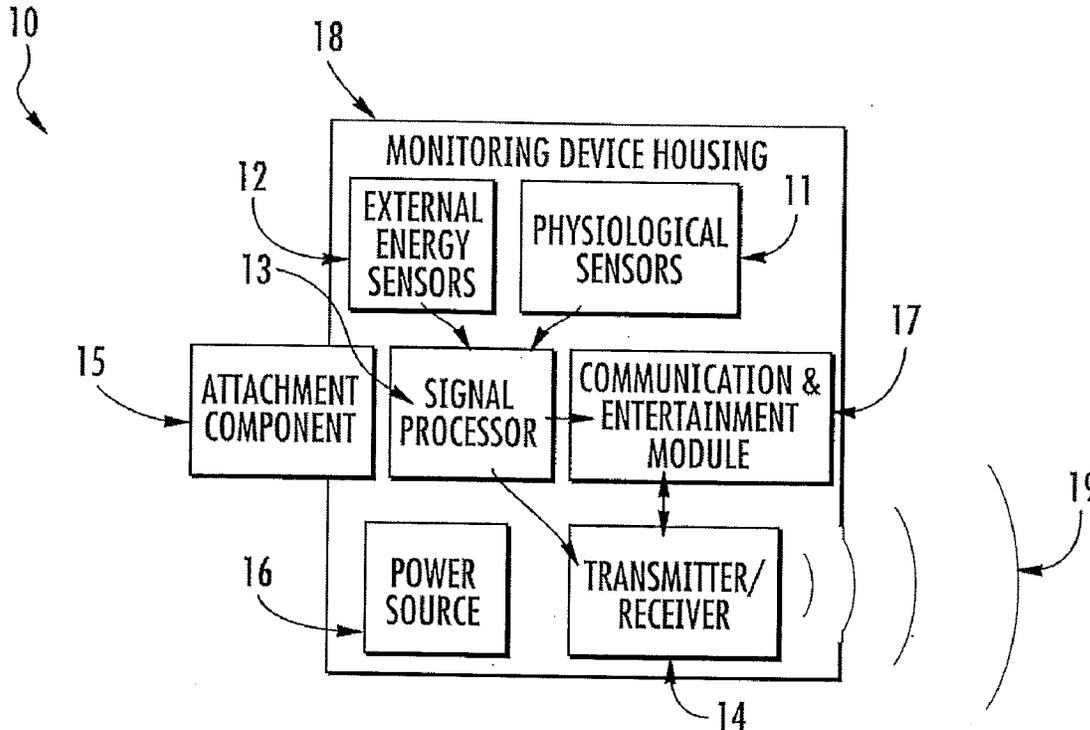
Monitoring apparatus and methods are provided for assessing a physiological condition of a subject. At least two types of physiological information are detected from a subject via a portable monitoring device associated with the subject, and an assessment of a physiological condition of the subject is made using the at least two types of physiological information, wherein each type of physiological information is individually insufficient to make the physiological condition assessment. Environmental information from a vicinity of a subject also may be detected, and an assessment of a physiological condition of the subject may be made using the environmental information in combination with the physiological information. Exemplary physiological information may include subject heart rate, subject activity level, subject tympanic membrane temperature, and subject breathing rate. Exemplary environmental information may include humidity level information in the vicinity of the subject. An exemplary physiological condition assessment may be subject hydration level.

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**Related U.S. Application Data**

(60) Provisional application No. 61/208,567, filed on Feb. 25, 2009, now abandoned, provisional application No. 61/208,574, filed on Feb. 25, 2009, provisional application No. 61/212,444, filed on Apr. 13, 2009, provisional application No. 61/274,191, filed on Aug. 14, 2009.



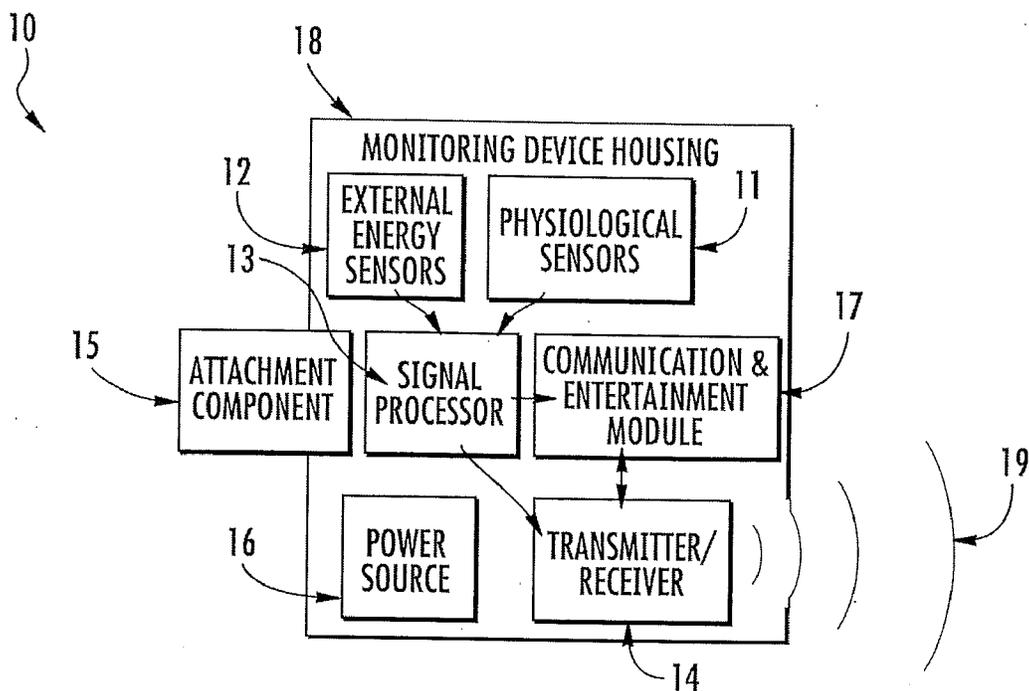


FIG. 1

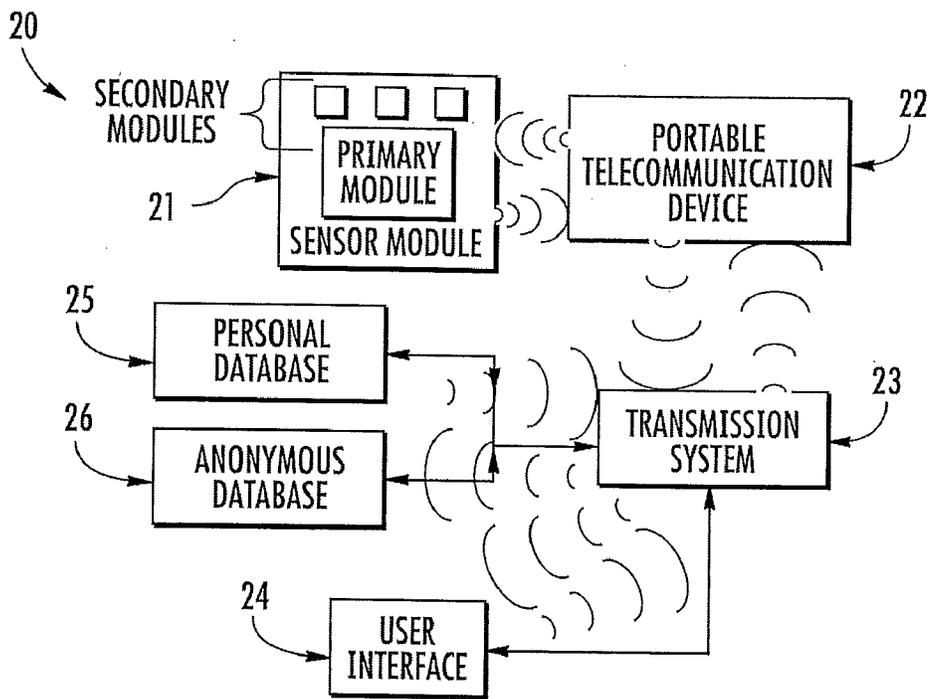


FIG. 2

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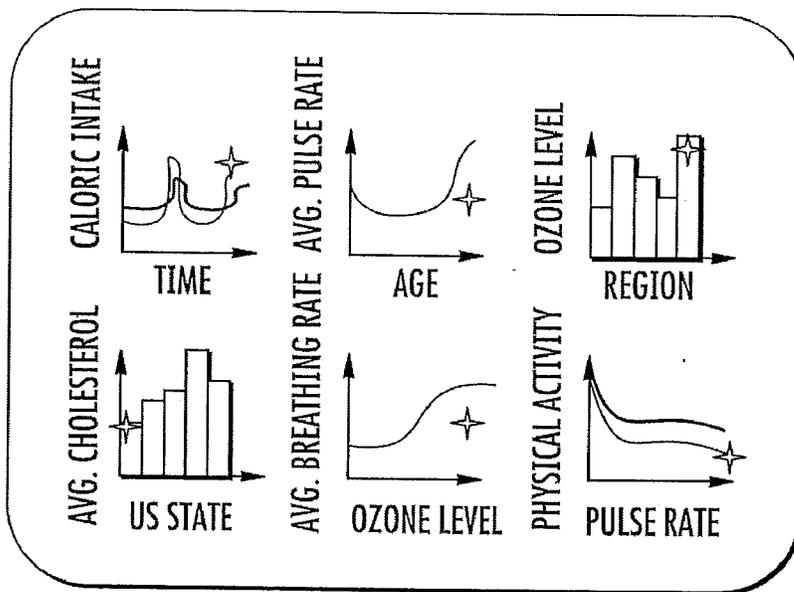


FIG. 3

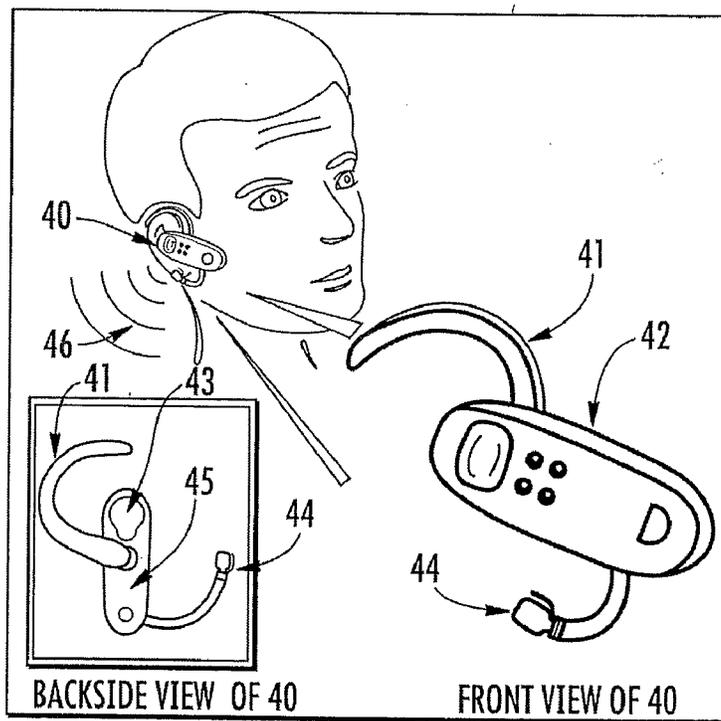


FIG. 4

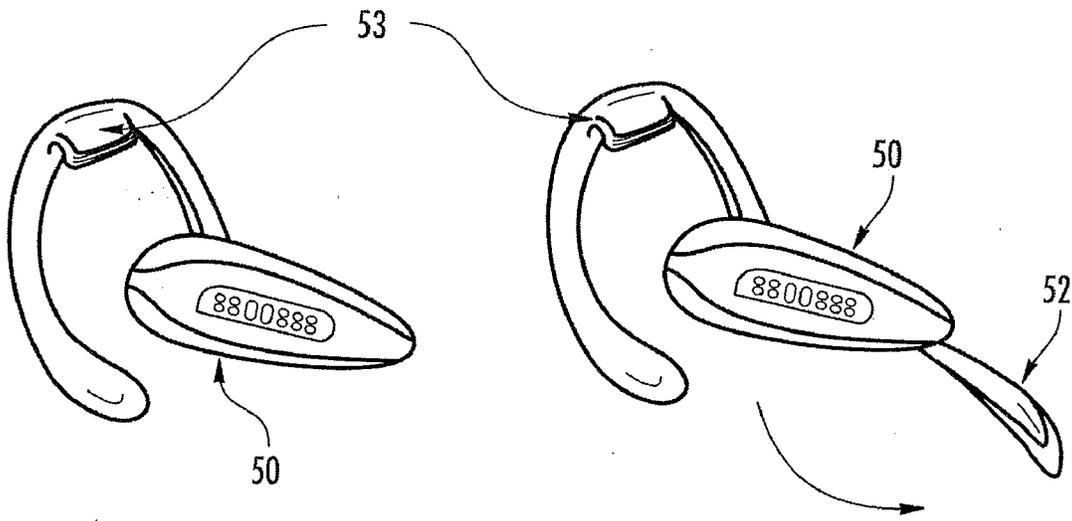


FIG. 5A

FIG. 5B

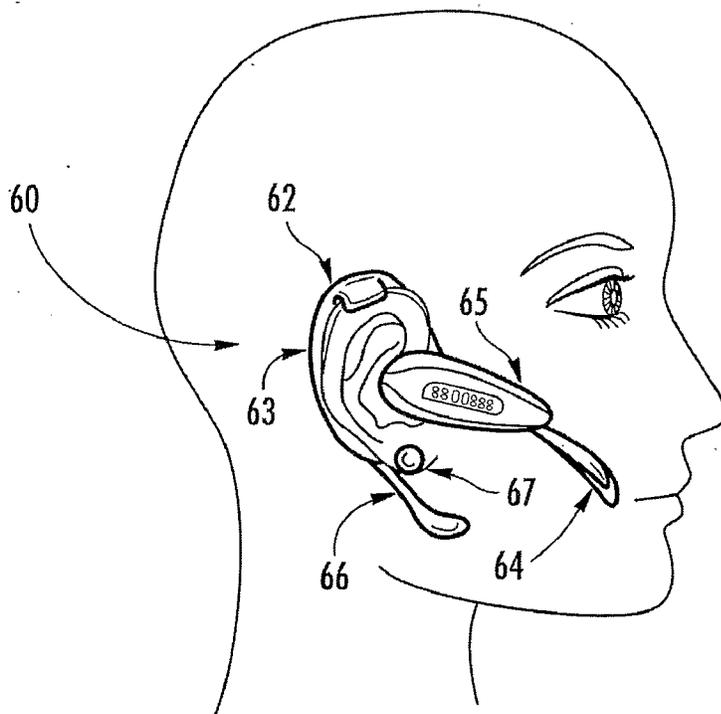
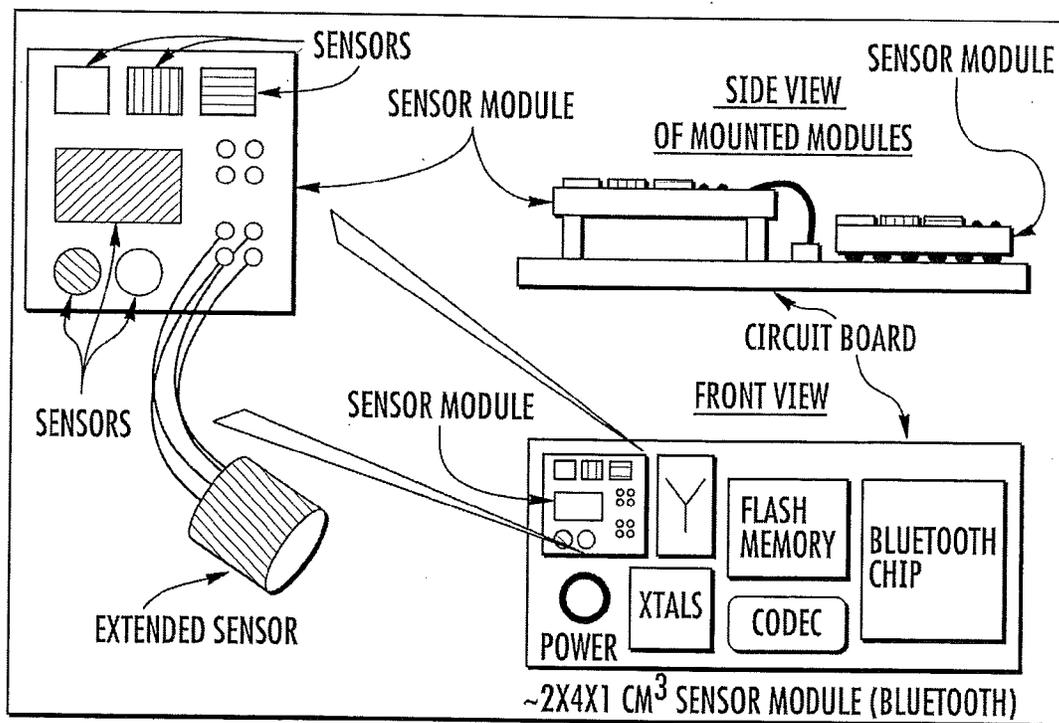
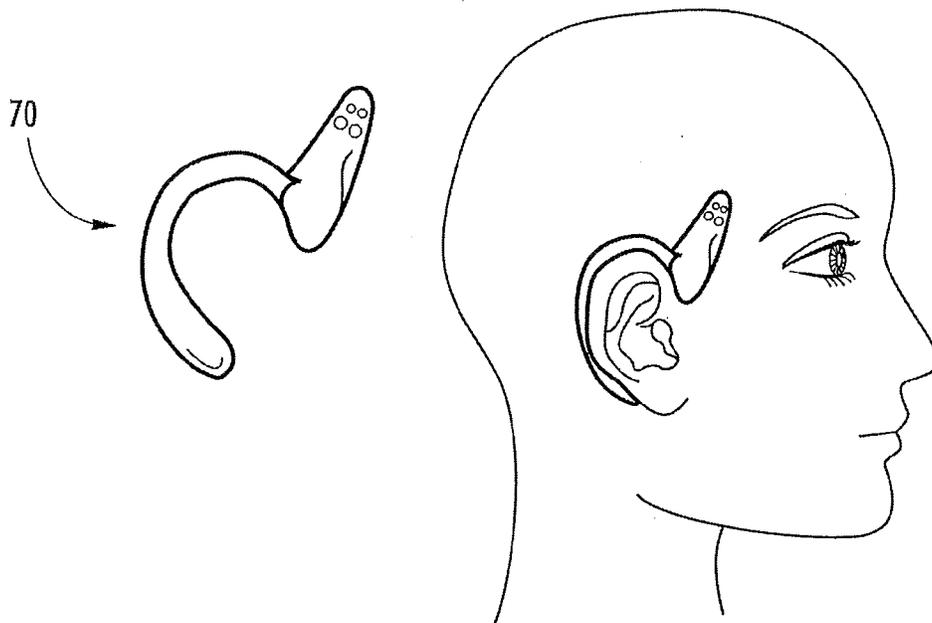


FIG. 6



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