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(54) **METHOD AND APPARATUS FOR  
MONITORING A SUBJECT FOR BLOOD  
OXYGEN SATURATION**

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*A61B 5/0022* (2013.01)

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(57) **ABSTRACT**

(73) Assignee: **XEROX CORPORATION**, Norwalk,  
CT (US)

(21) Appl. No.: **13/937,782**

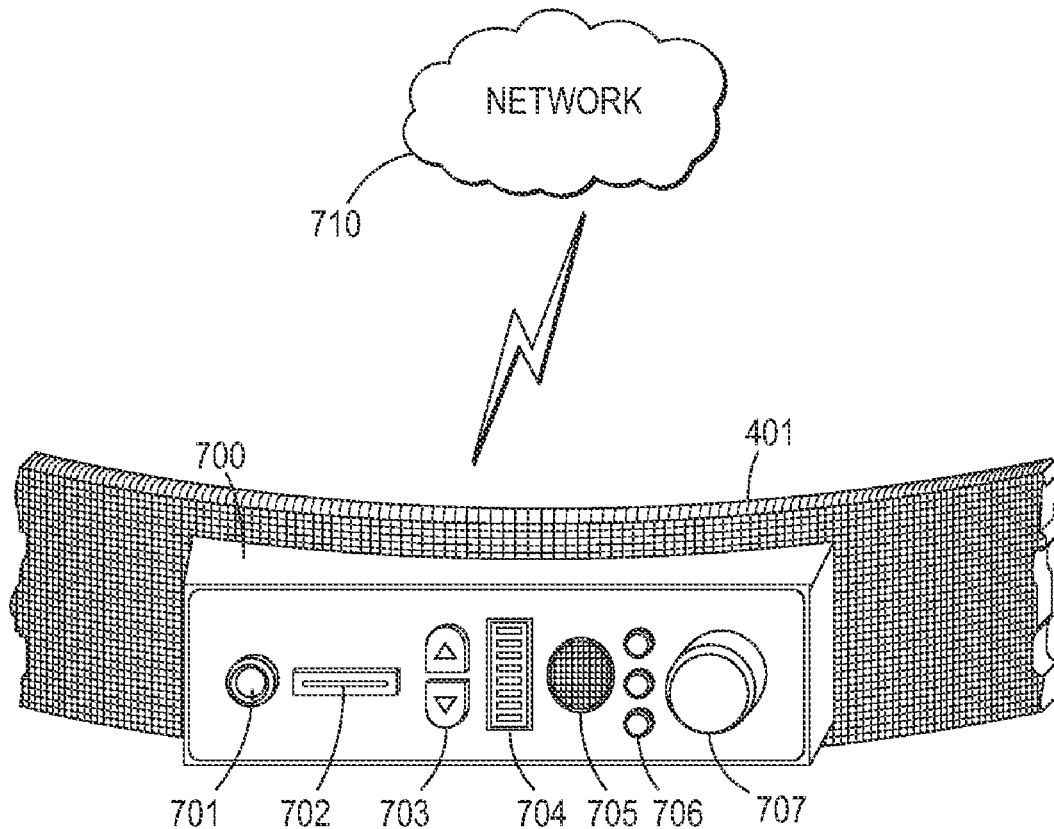
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What is disclosed is a system and method for monitoring a subject of interest for functional blood oxygen saturation using an apparatus that can be comfortably worn by the subject around an area of exposed skin where a photoplethysmographic (PPG) signal can be registered. In one embodiment, the apparatus is a reflective or transmissive wrist-worn device with emitter/detector pairs fixed to an inner side of a band with at least two illuminators, each emitting source light at a different wavelength band. Each photodetector comprises sensors that are sensitive to a wavelength band of its respective illuminator. Each photodetector measures an intensity of sensed light emitted by a respective illuminator. The signal obtained by the sensors comprises a continuous PPG signal. The continuous PPG signal analyzed for functional blood oxygen saturation levels and communicated to a remote device. Various embodiments are disclosed.

**Publication Classification**

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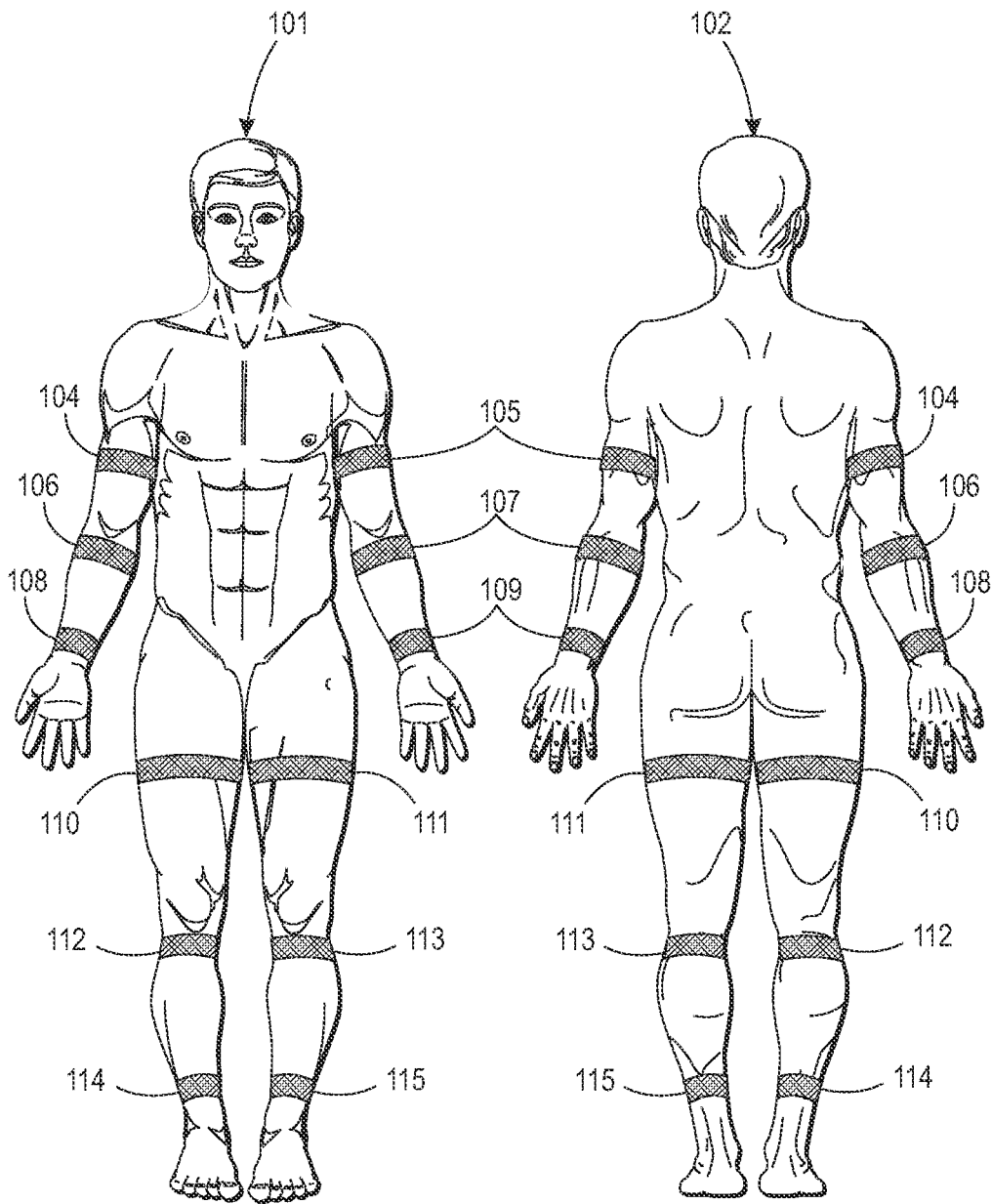


FIG. 1

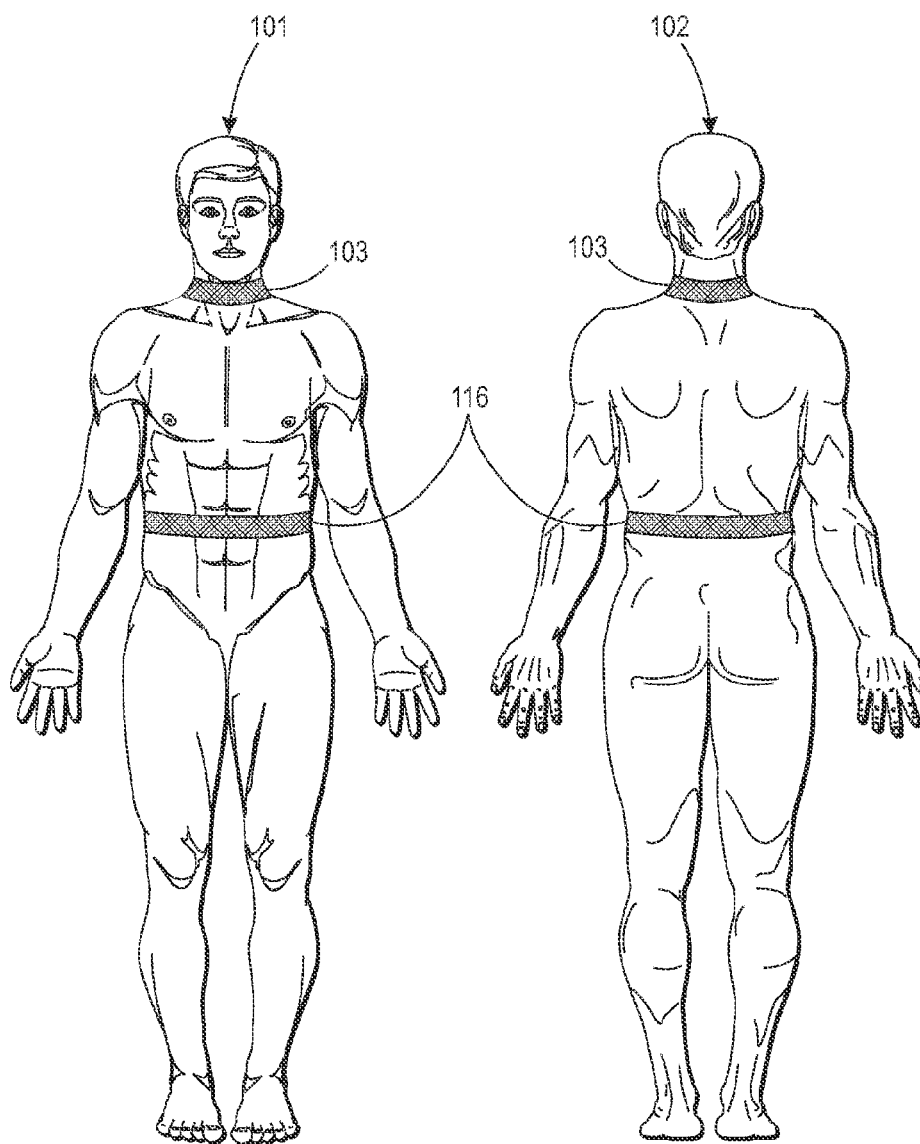


FIG. 2

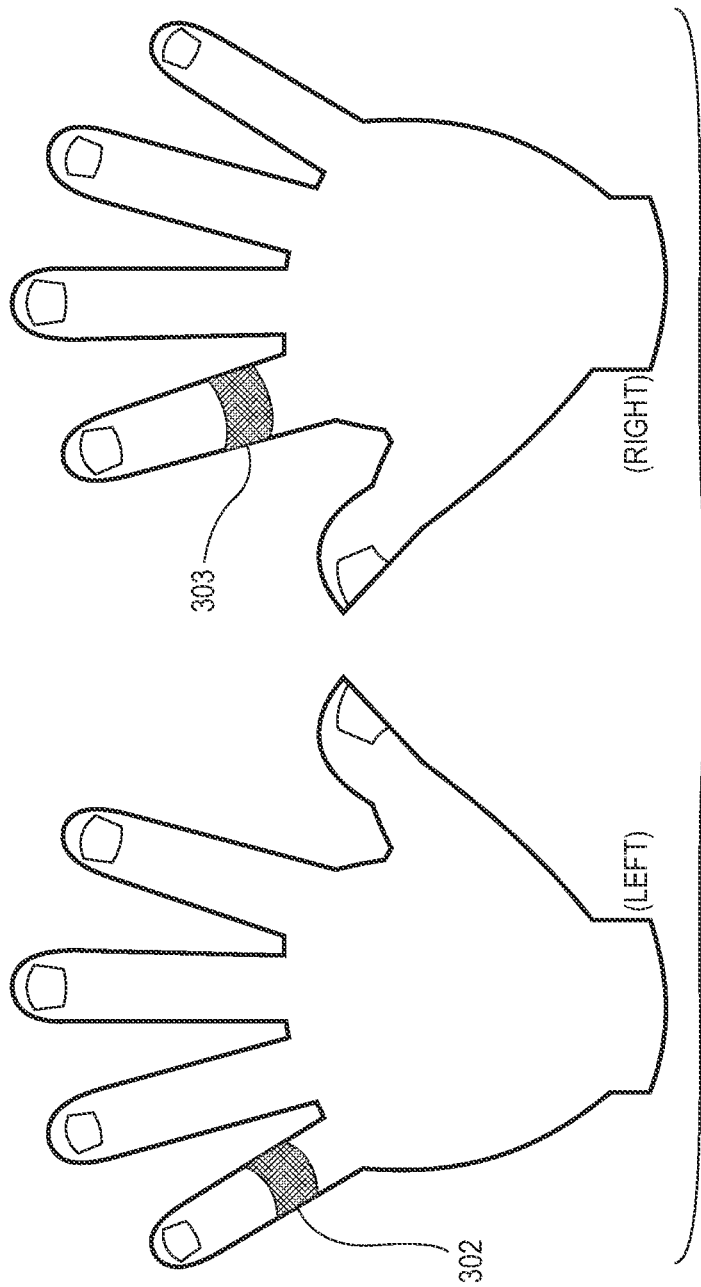


FIG. 3

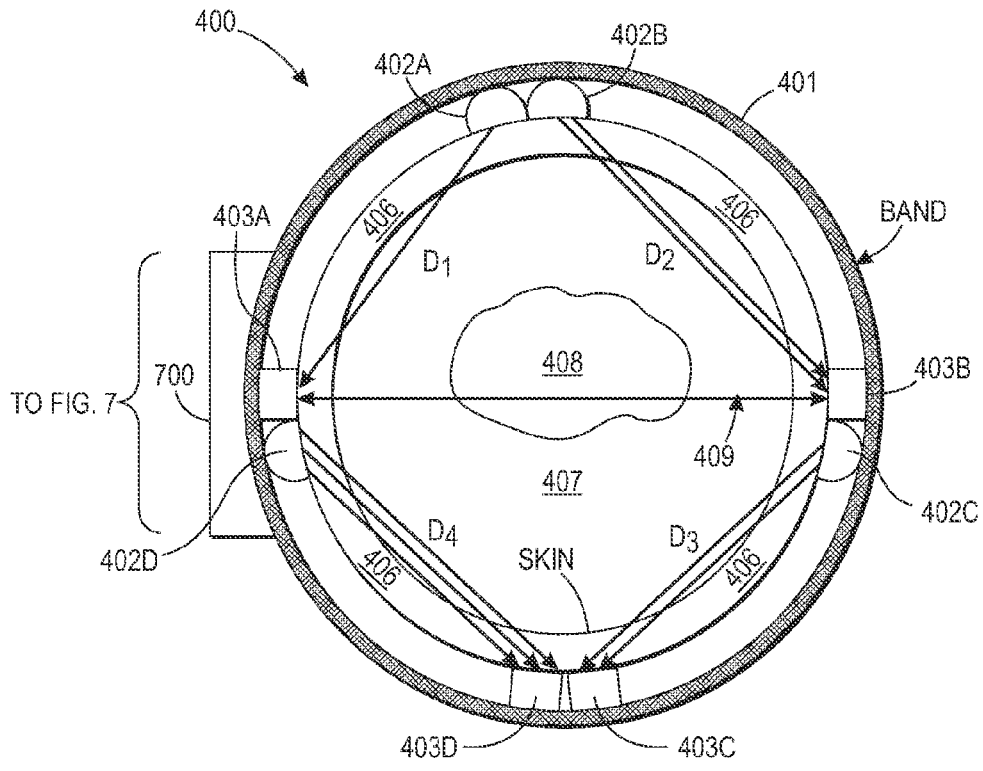


FIG. 4

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