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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)

USPC 600/323

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(57) **ABSTRACT**

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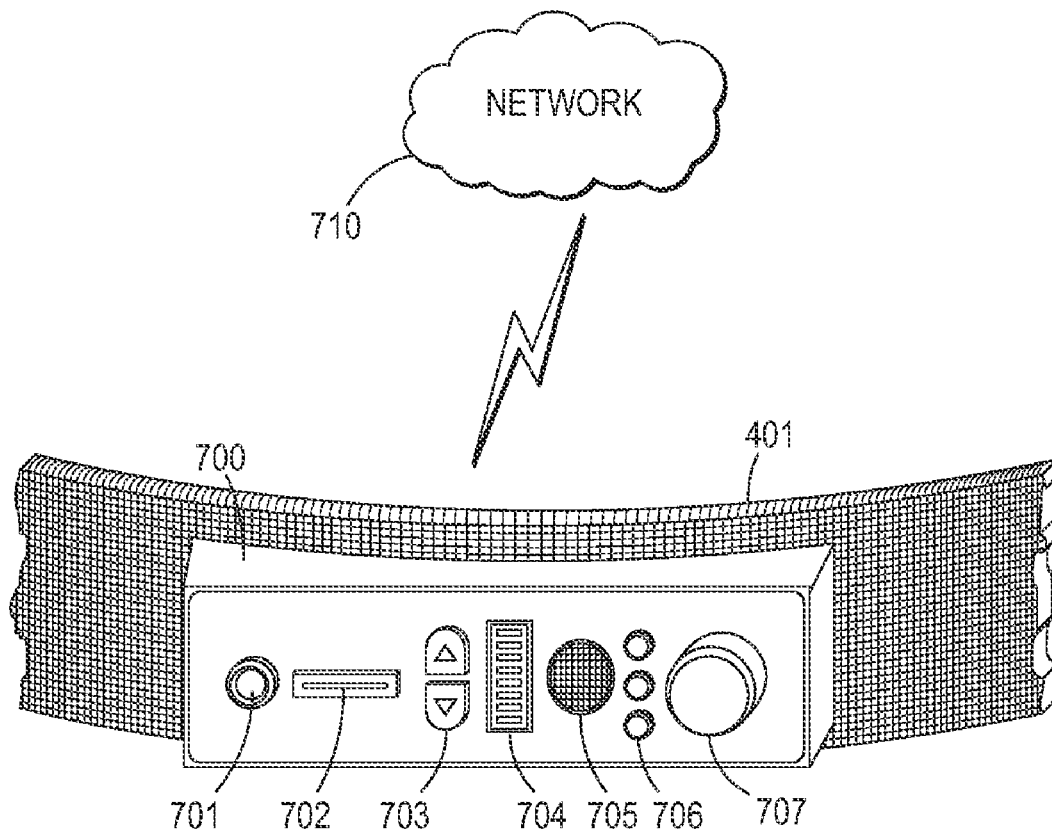
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What is disclosed is a system and method for monitoring a subject of interest for functional blood oxygen saturation using an apparatus that can be comfortably worn by the subject around an area of exposed skin where a photoplethysmographic (PPG) signal 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.

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A61B 5/00 (2006.01)

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CPC *A61B 5/1452* (2013.01); *A61B 5/681* (2013.01); *A61B 5/6829* (2013.01); *A61B*



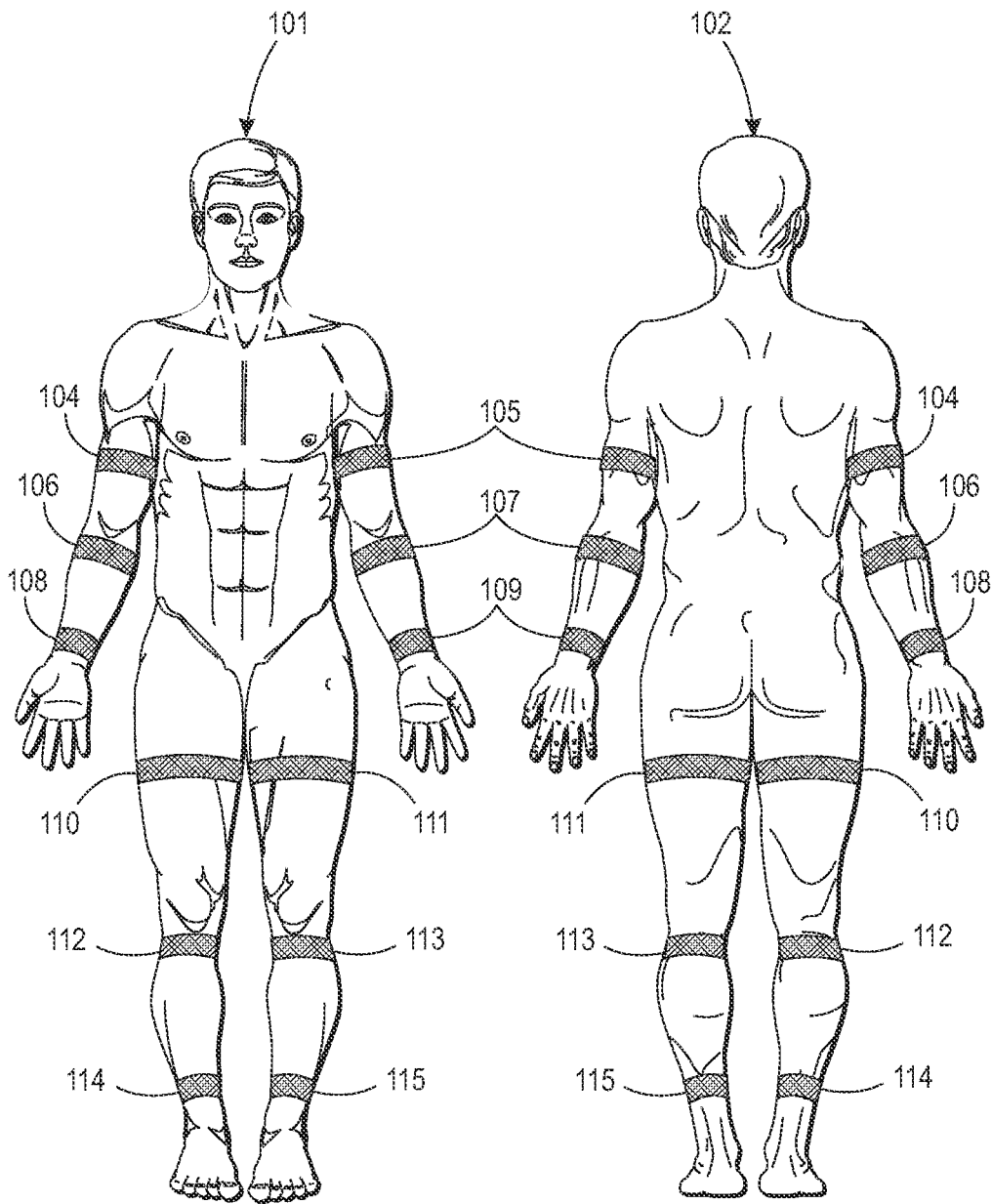


FIG. 1

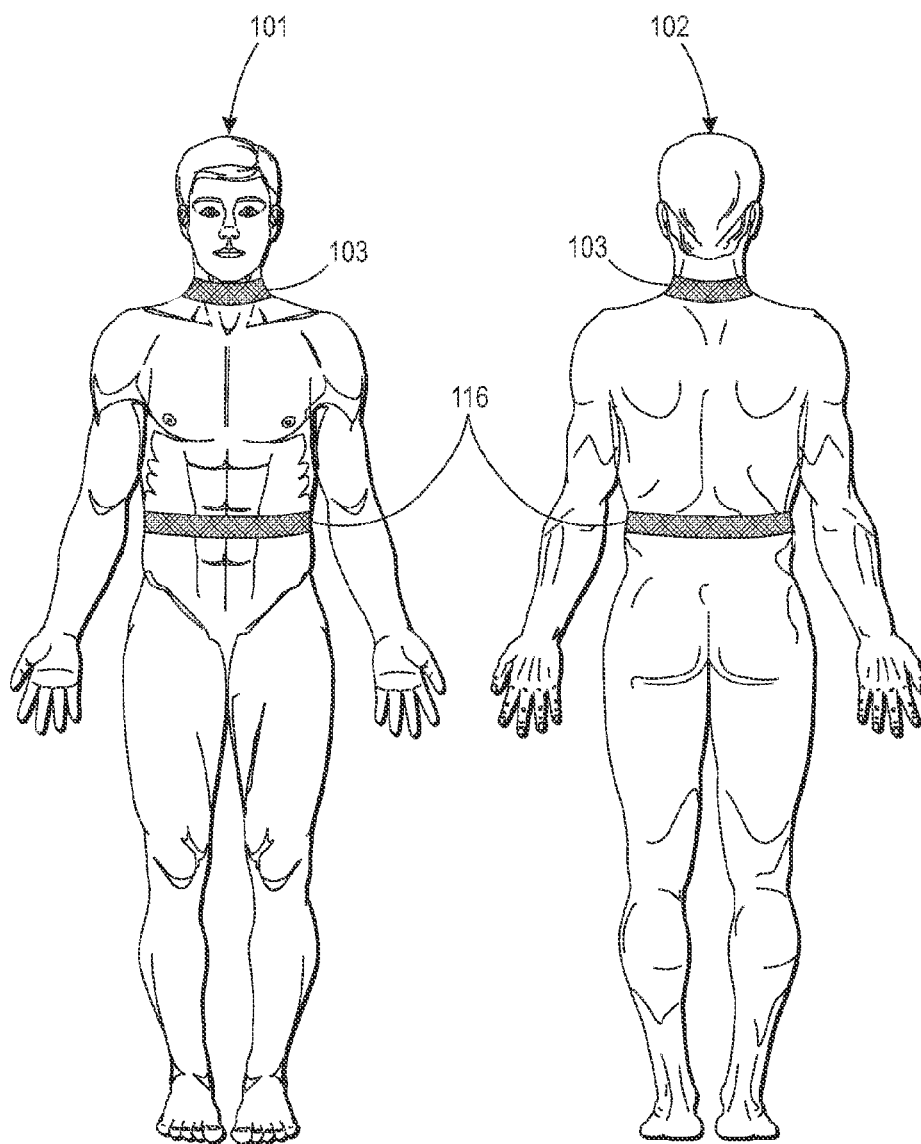


FIG. 2

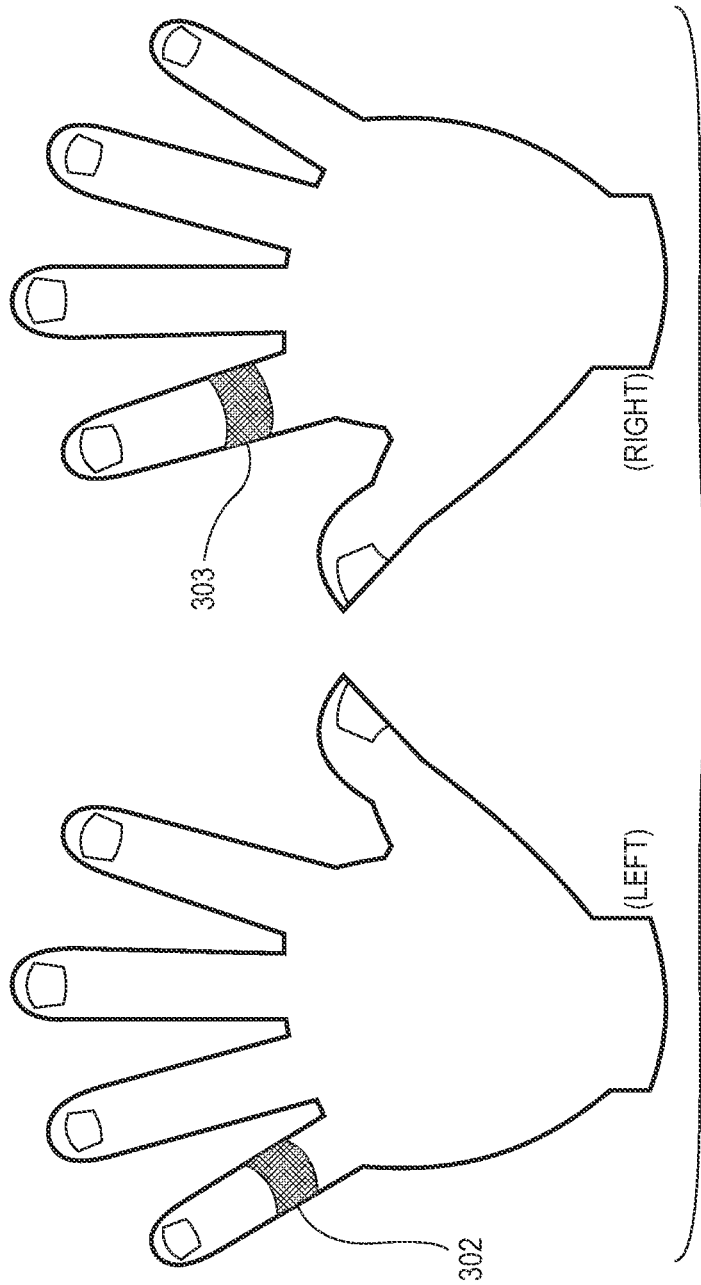


FIG. 3

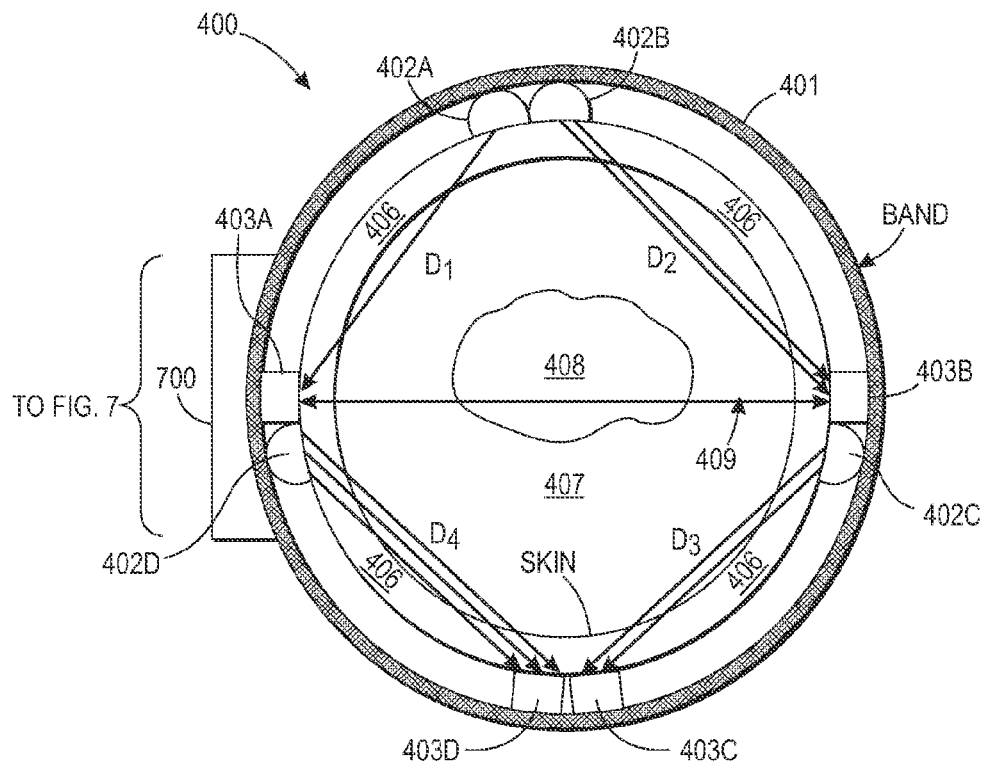


FIG. 4

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