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(54) **PHYSIOLOGICAL MEASUREMENT COMMUNICATIONS ADAPTER**

(52) **U.S. Cl. .... 600/324**

(76) **Inventor: Ammar Al-Ali, Tustin, CA (US)**

(57) **ABSTRACT**

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A sensor interface is configured to receive a sensor signal. A transmitter modulates a first baseband signal responsive to the sensor signal so as to generate a transmit signal. A receiver demodulates a receive signal corresponding to the transmit signal so as to generate a second baseband signal corresponding to the first baseband signal. Further, a monitor interface is configured to communicate a waveform responsive to the second baseband signal to a sensor port of a monitor. The waveform is adapted to the monitor so that measurements derived by the monitor from the waveform are generally equivalent to measurements derivable from the sensor signal. The communications adapter may further comprise a signal processor having an input in communications with the sensor interface, where the signal processor is operable to derive a parameter responsive to the sensor signal and where the first baseband signal is responsive to the parameter. The parameter may correspond to at least one of a measured oxygen saturation and a pulse rate.

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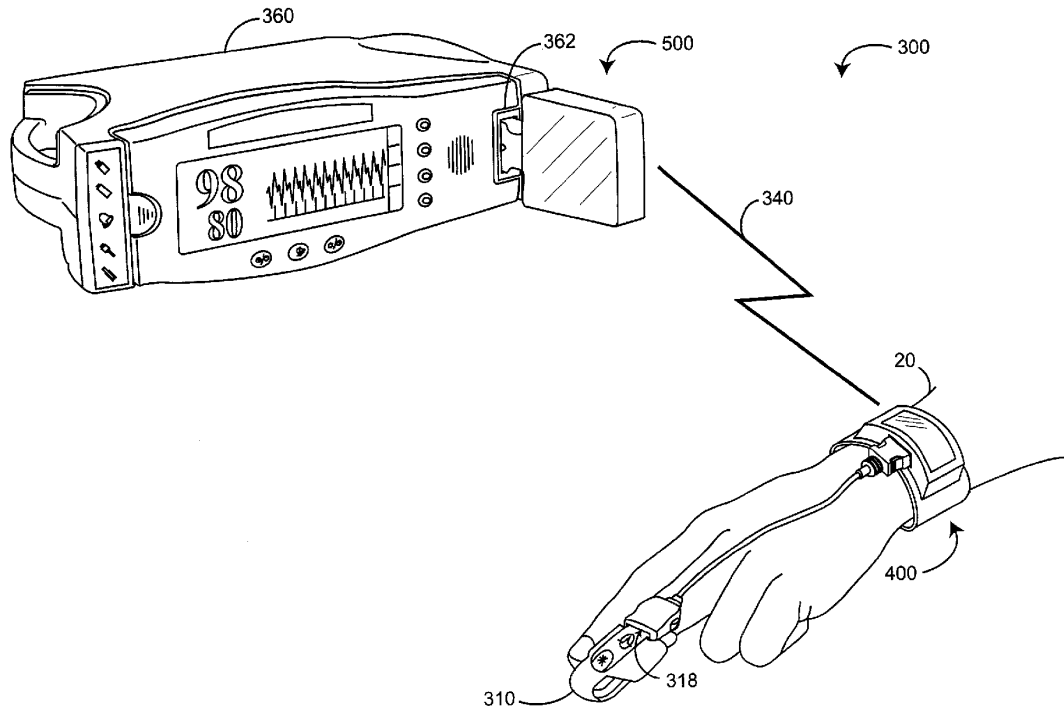
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**Related U.S. Application Data**

(60) **Provisional application No. 60/367,428, filed on Mar. 25, 2002.**

**Publication Classification**

(51) **Int. Cl.<sup>7</sup> ..... A61B 5/00**



Apple Inc.  
 APL1058

U.S. Pat. No. 8,923,941

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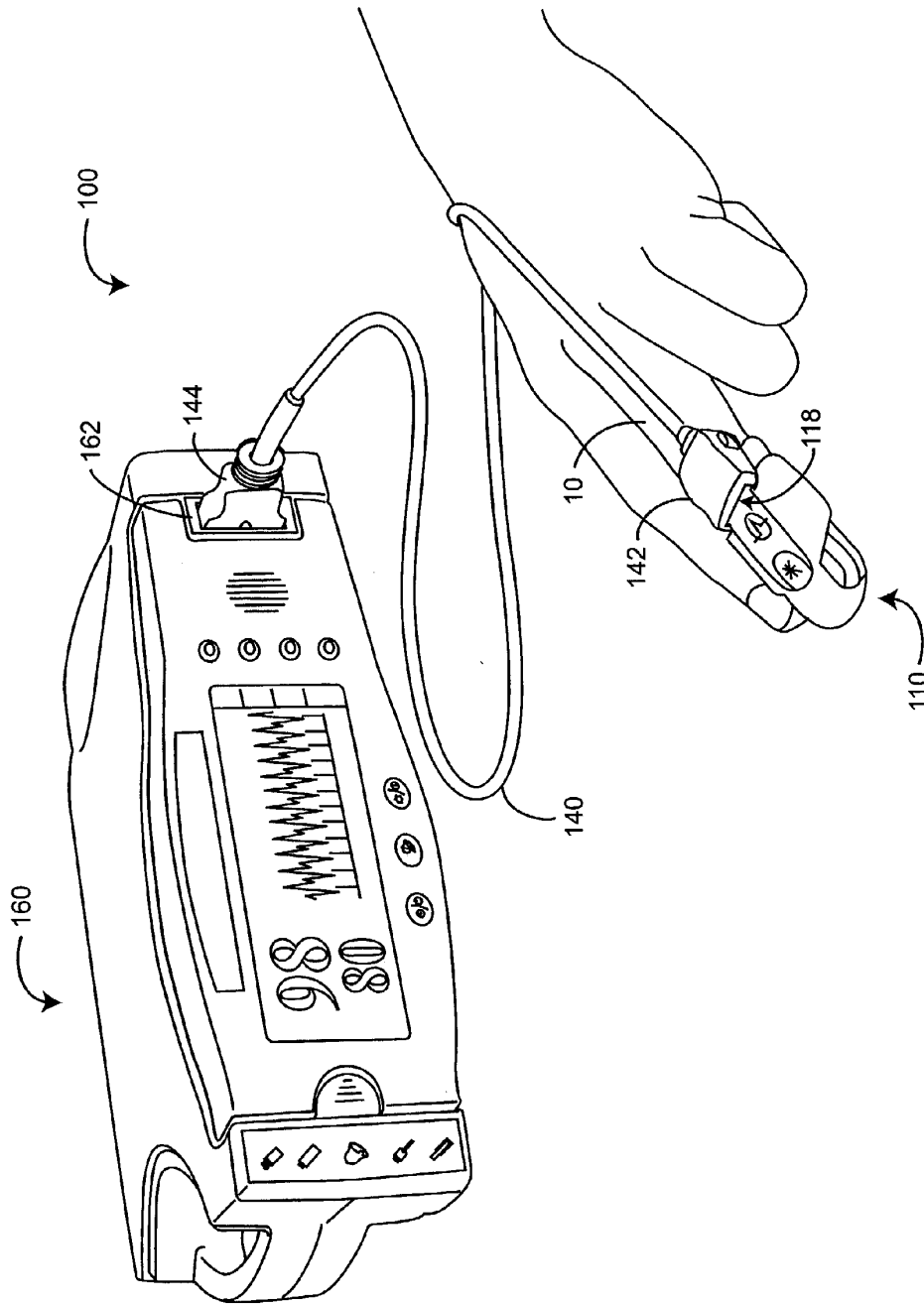


FIG. 1 (Prior Art)

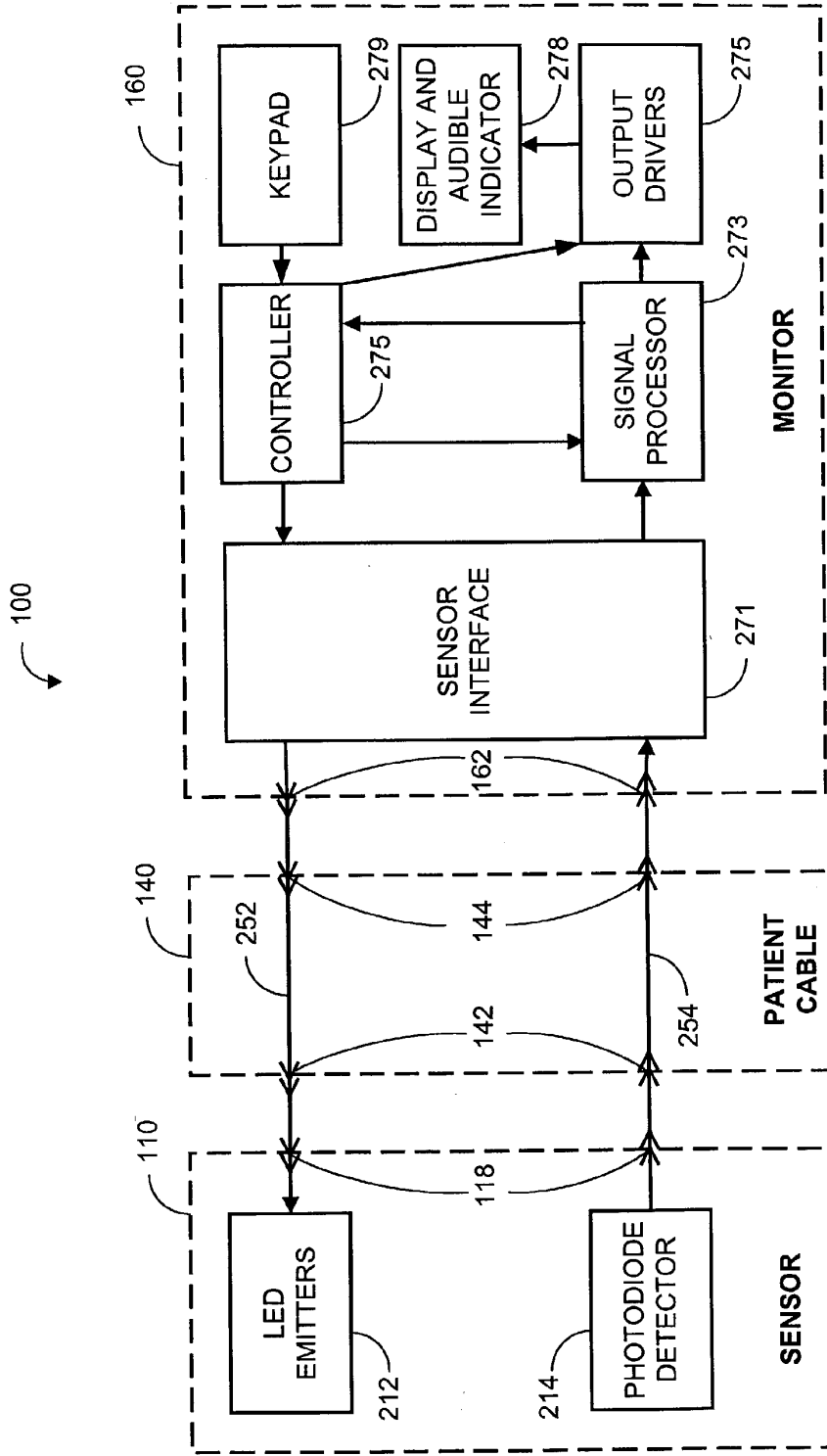
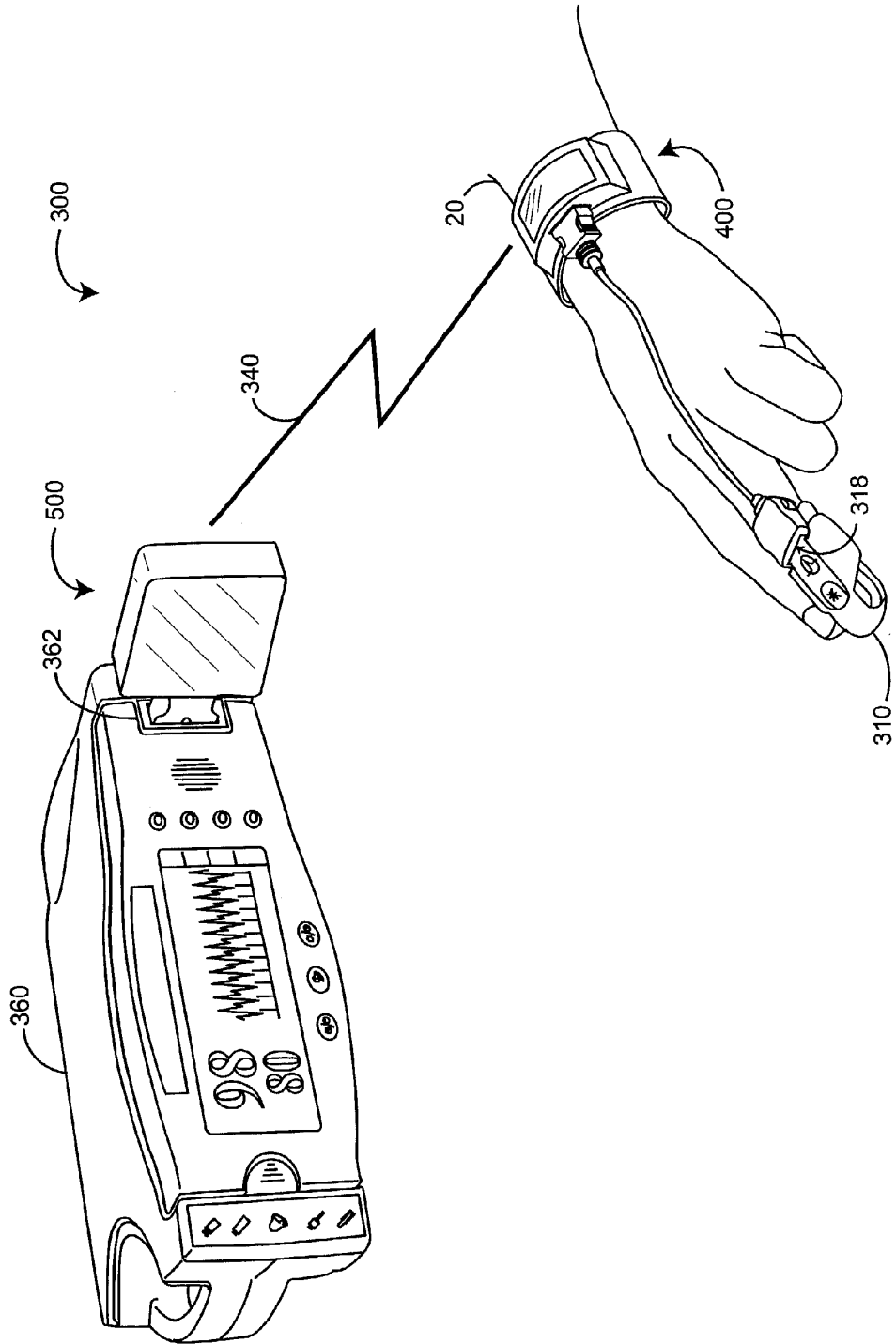


FIG. 2 (Prior Art)



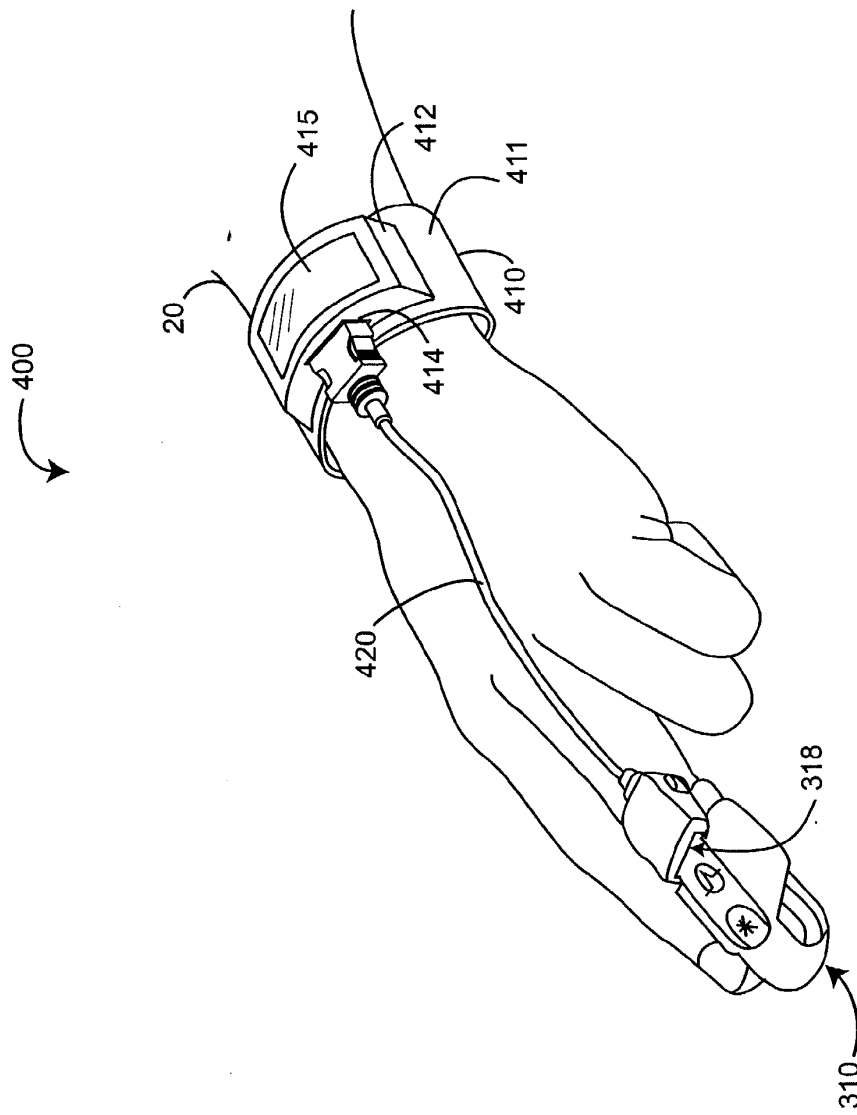


FIG. 4A

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