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(12) **United States Patent**  
**Mendelson**

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(54) **PULSE OXIMETER AND METHOD OF OPERATION**

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(30) **Foreign Application Priority Data**

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

(52) **U.S. Cl.** ..... **600/330; 600/322; 600/336**

(58) **Field of Search** ..... 600/310, 322, 600/323, 330, 336

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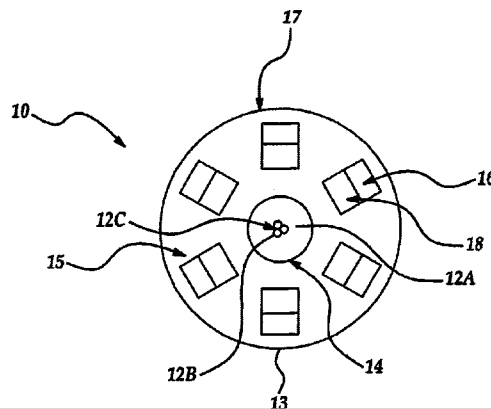
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(57) **ABSTRACT**

A sensor for use in an optical measurement device and a method for non-invasive measurement of a blood parameter. The sensor includes sensor housing, a source of radiation coupled to the housing, and a detector assembly coupled to the housing. The source of radiation is adapted to emit radiation at predetermined frequencies. The detector assembly is adapted to detect reflected radiation at least one predetermined frequency and to generate respective signals. The signals are used to determine the parameter of the blood.

**5 Claims, 6 Drawing Sheets**



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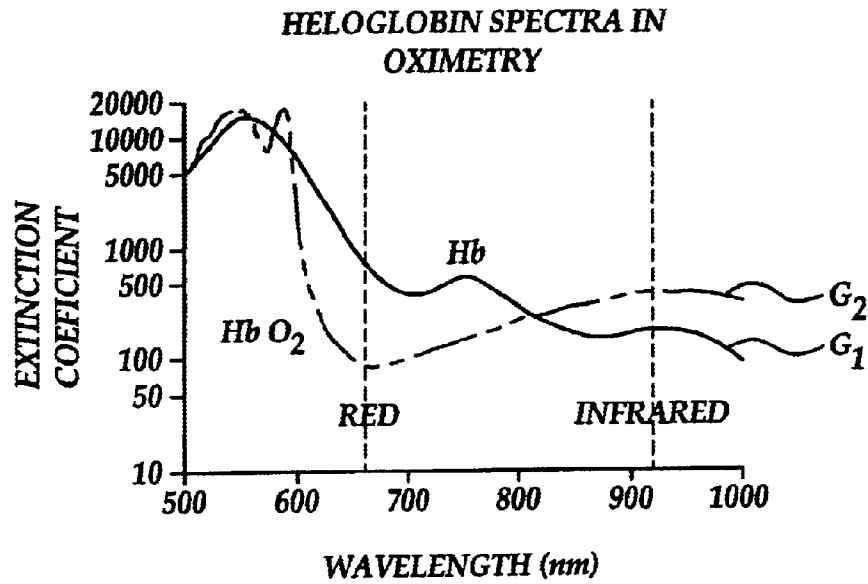


Figure 1

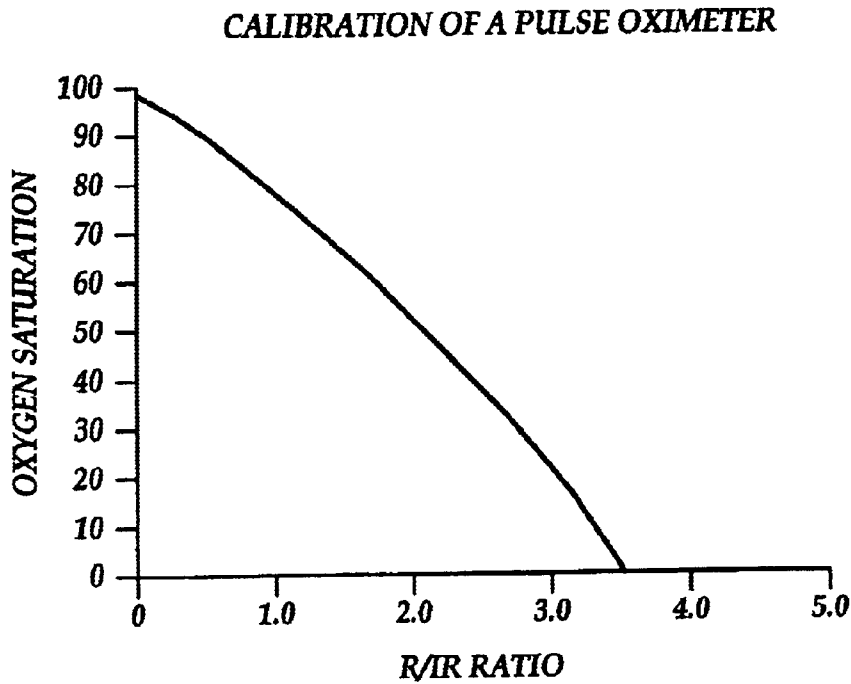


Figure 2

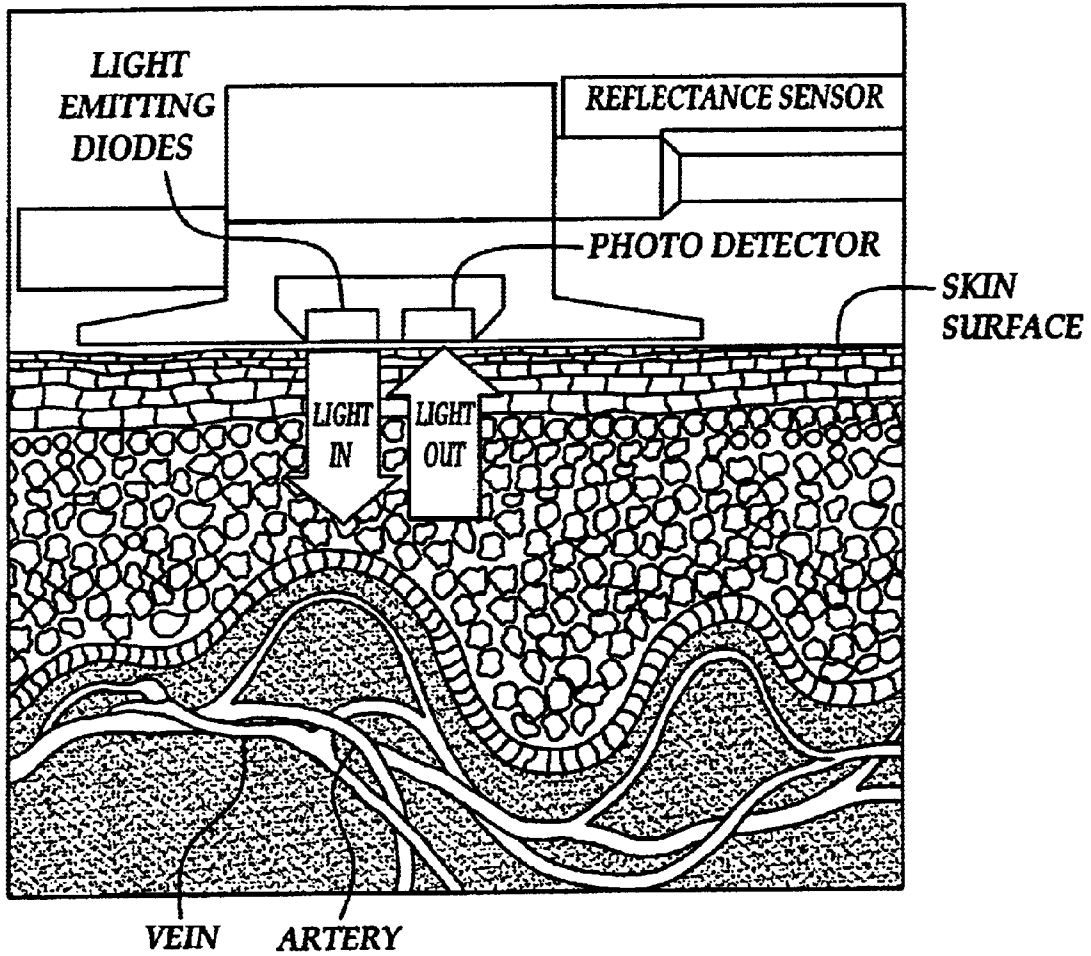


Figure 3

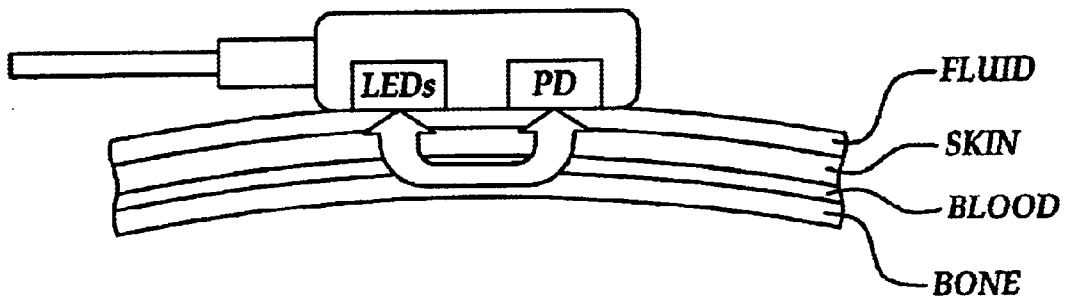


Figure 4

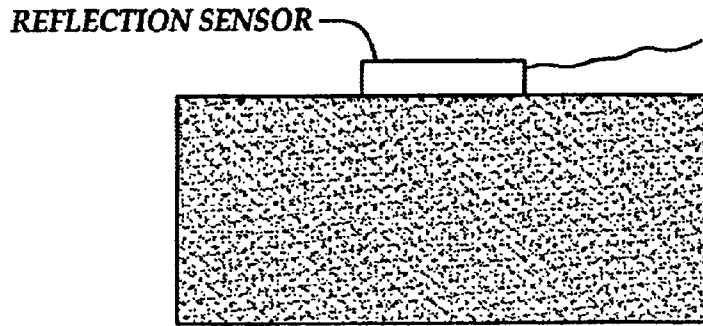


Figure 5A

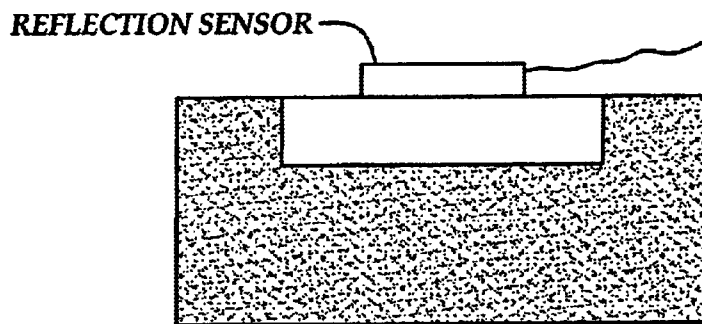


Figure 5B

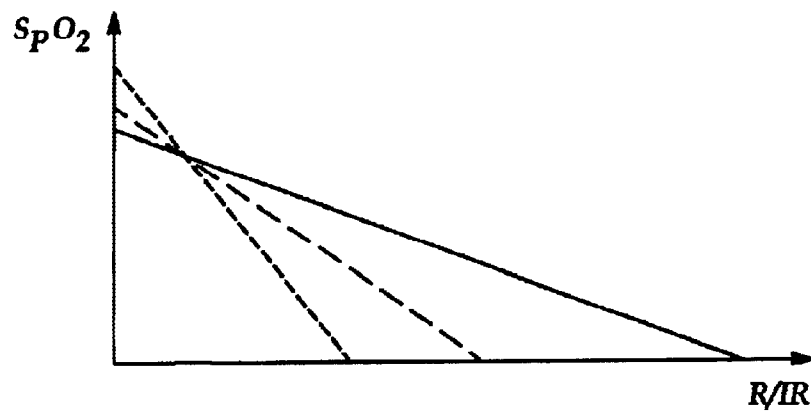


Figure 6

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