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

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(51) **Int. Cl.**[7] **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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(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
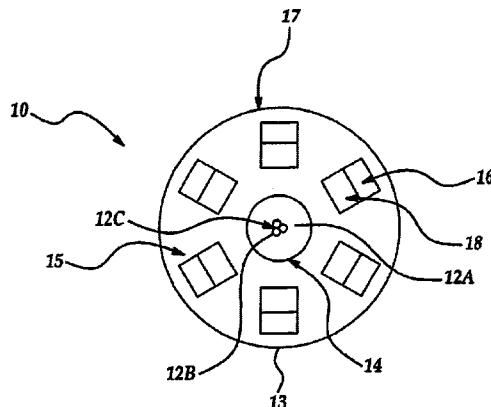
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HELOGLOBIN SPECTRA IN
OXIMETRY

Figure 1

CALIBRATION OF A PULSE OXIMETER

Figure 2

LIGHT EMITTING DIODES

REFLECTANCE SENSOR

PHOTO DETECTOR

SKIN SURFACE

LIGHT IN

LIGHT OUT

VEIN   ARTERY

Figure 3

LEDs   PD

FLUID

SKIN

BLOOD

BONE

Figure 4

REFLECTION SENSOR

Figure 5A

REFLECTION SENSOR

Figure 5B

S_pO_2

R/IR
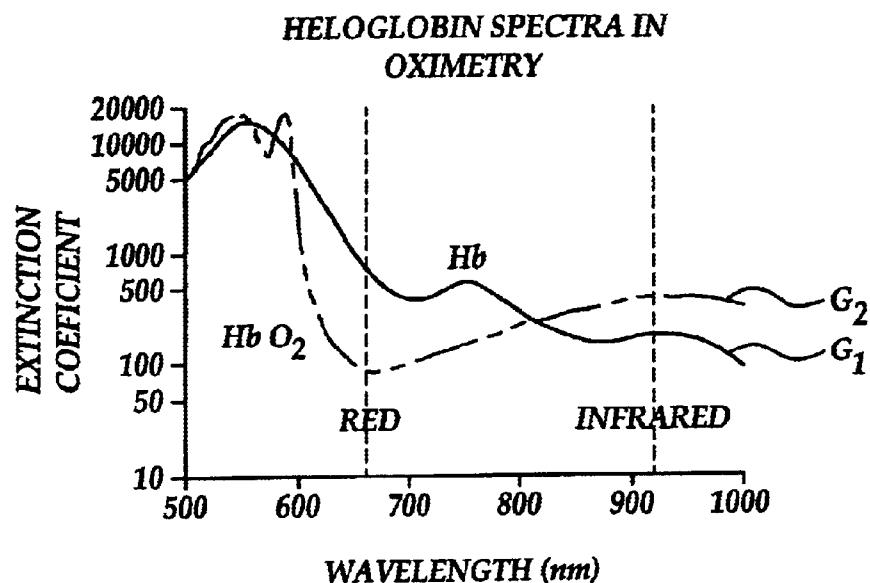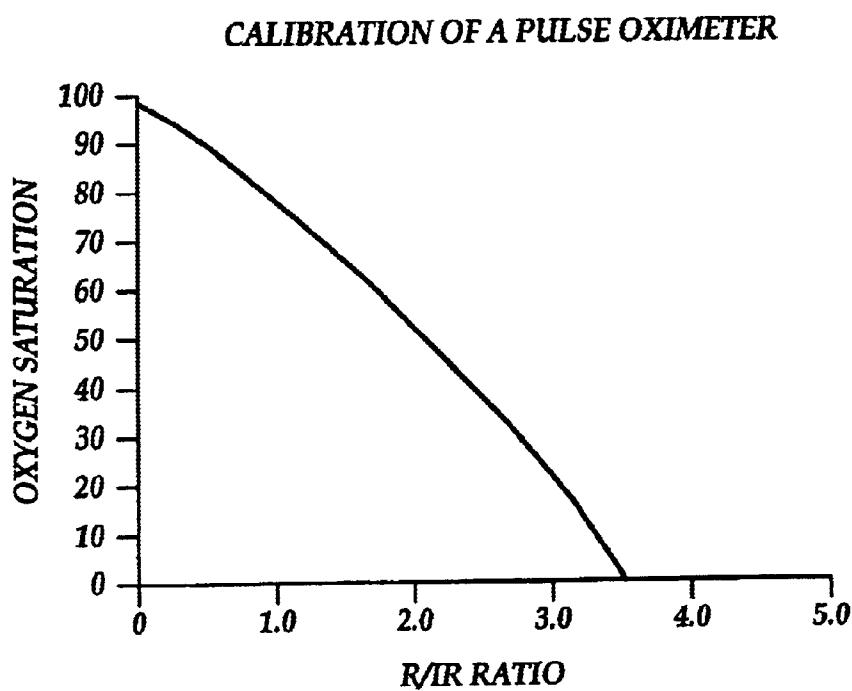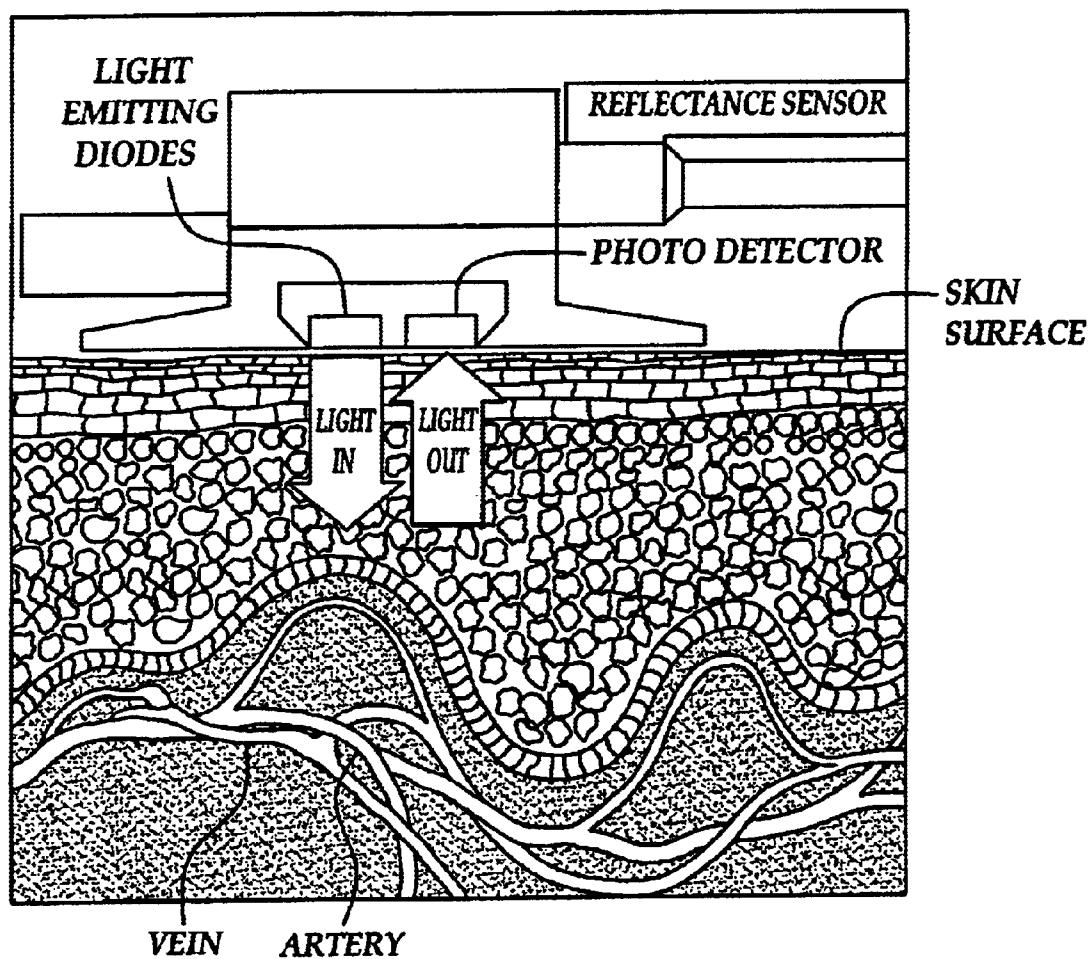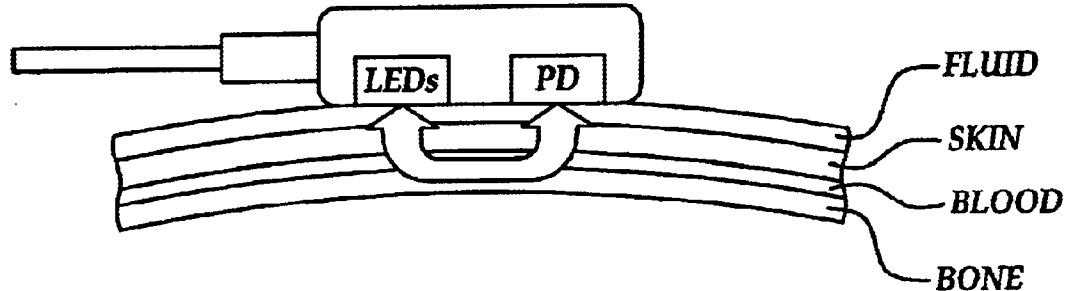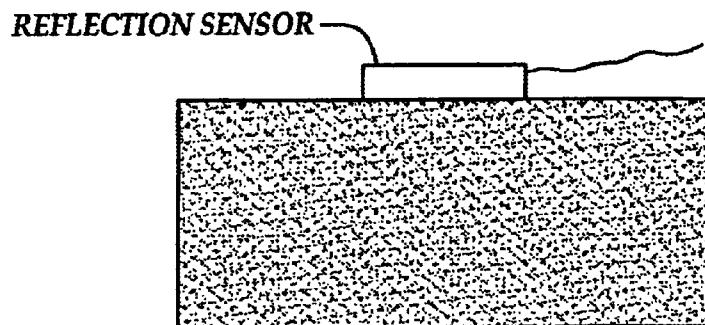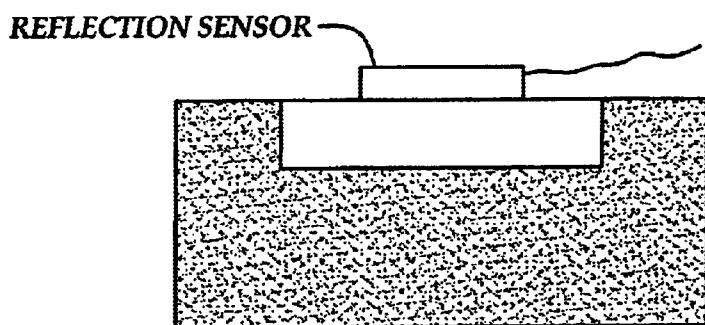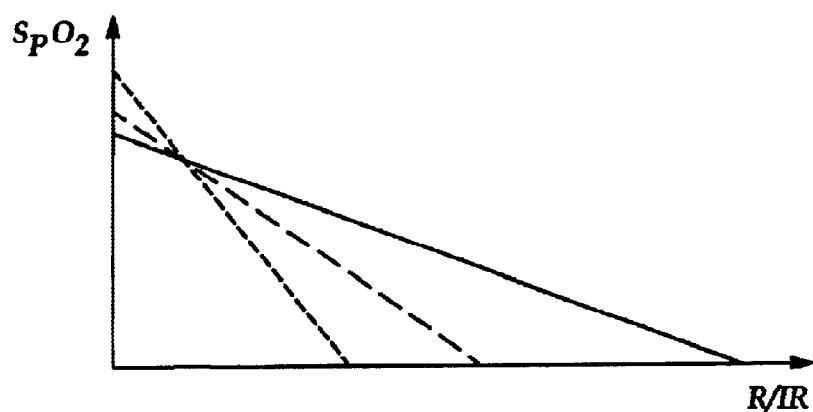
Figure 6

DOCKET ALARM

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