

(12) **United States Patent**  
Iwamiya et al.

(10) **Patent No.:** US 8,670,819 B2  
(45) **Date of Patent:** Mar. 11, 2014

(54) **OPTICAL BIOLOGICAL INFORMATION DETECTING APPARATUS AND OPTICAL BIOLOGICAL INFORMATION DETECTING METHOD**

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(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 567 days.

(21) Appl. No.: **12/825,601**

(22) Filed: **Jun. 29, 2010**

(65) **Prior Publication Data**  
US 2011/0004106 A1 Jan. 6, 2011

(30) **Foreign Application Priority Data**  
Jul. 1, 2009 (JP) ..... 2009-156985  
Aug. 18, 2009 (JP) ..... 2009-188987  
Dec. 22, 2009 (JP) ..... 2009-291174  
Feb. 17, 2010 (JP) ..... 2010-032088

(51) **Int. Cl.**  
*A61B 6/00* (2006.01)

(52) **U.S. Cl.**  
USPC ..... 600/476; 606/9; 604/20

(58) **Field of Classification Search**  
CPC ..... A61B 1/227; A61B 5/1076  
USPC ..... 600/476; 606/9; 604/20  
See application file for complete search history.

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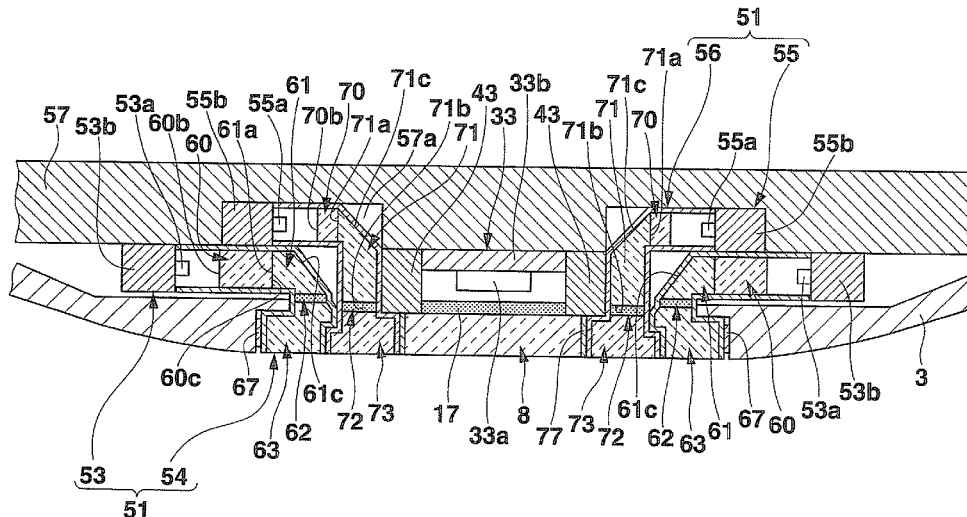
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(57) **ABSTRACT**

An optical biological information detecting apparatus includes a light emitting unit which emits observation light of a specific wavelength band to optically observe a desired portion of a tissue of a skin of a human body, and an annular light guide unit which guides the observation light to a desired area of a surface of the skin corresponding to the desired portion of the tissue of the skin, and which annularly irradiates the observation light onto the desired area of the surface of the skin. The apparatus further includes a light receiving unit which is disposed at a position surrounded by the annular light guide unit, and which receives scattered light scattered by the desired portion of the tissue of the skin after the observation light is annularly irradiated onto the desired area of the surface of the skin by the annular light guide unit.

**9 Claims, 25 Drawing Sheets**



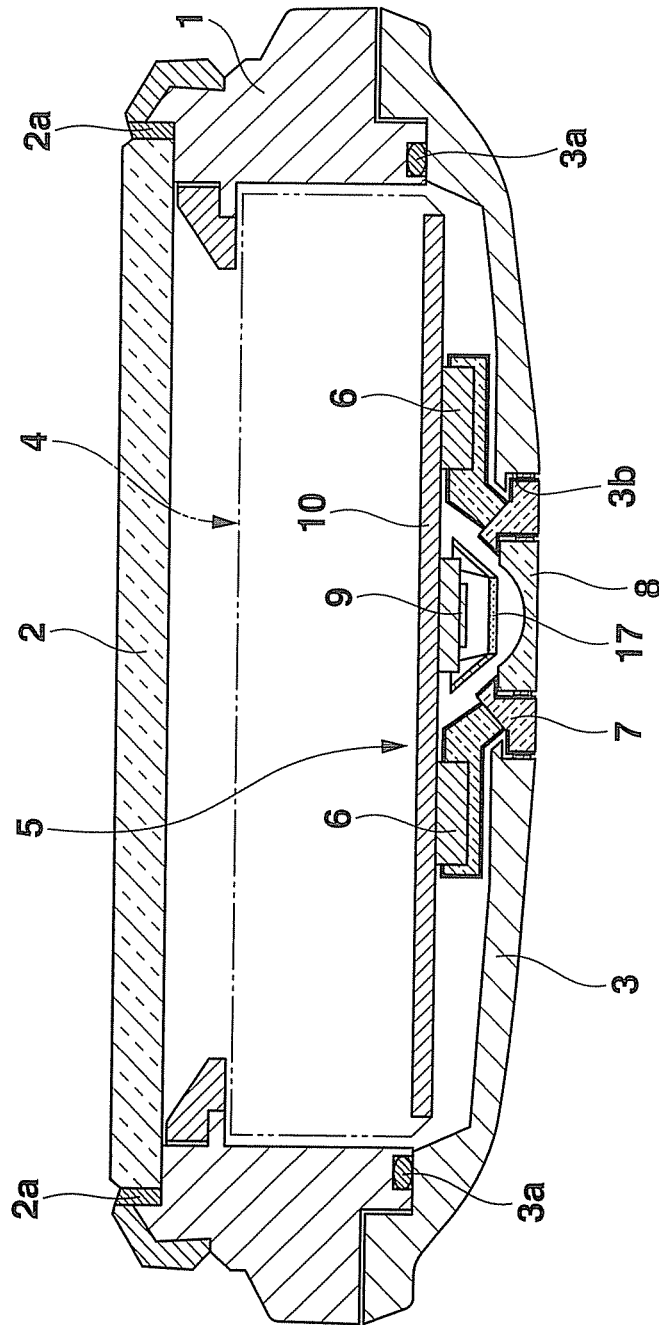


FIG.1

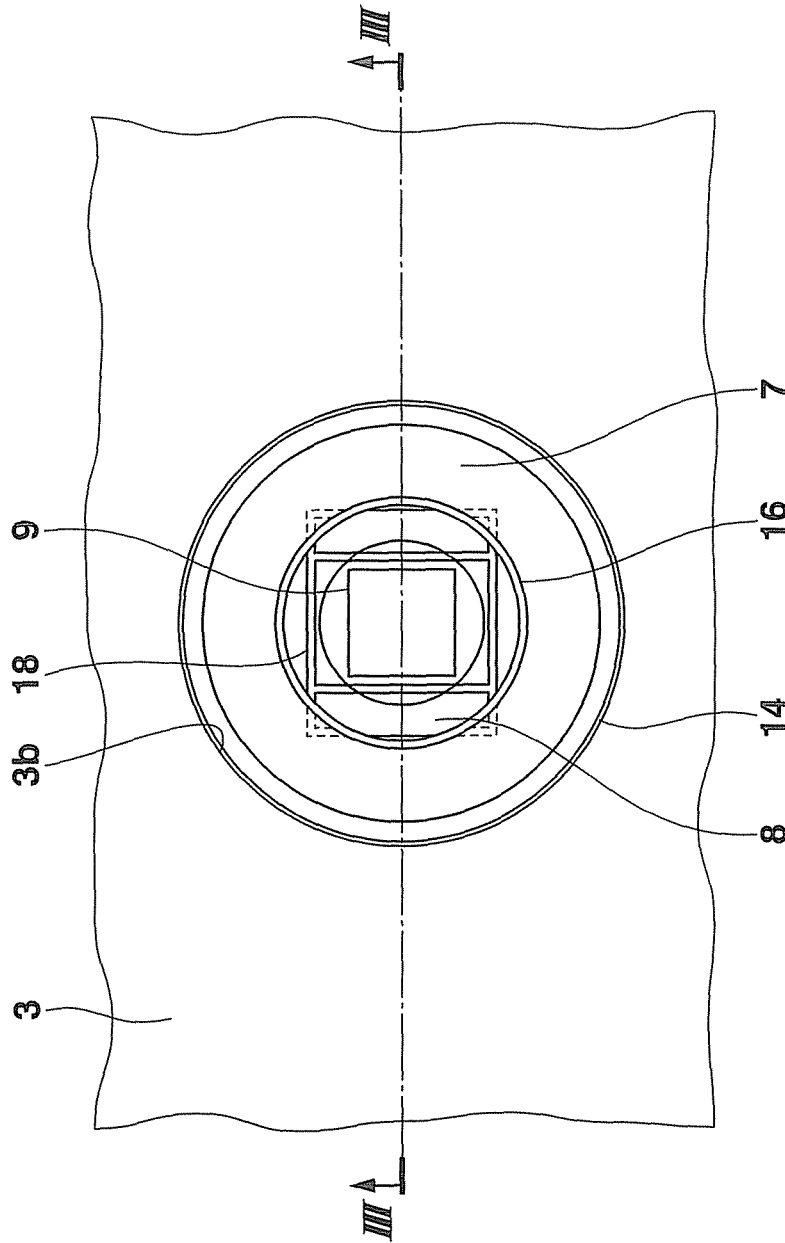


FIG. 2

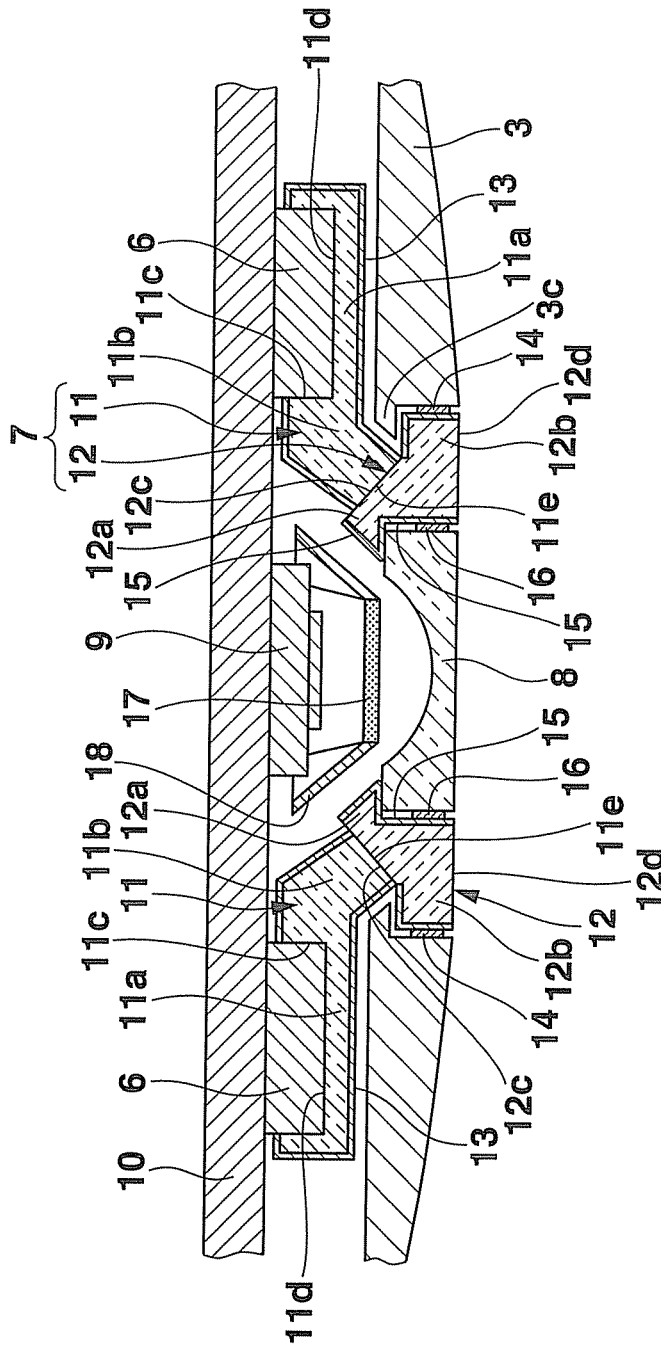


FIG.3

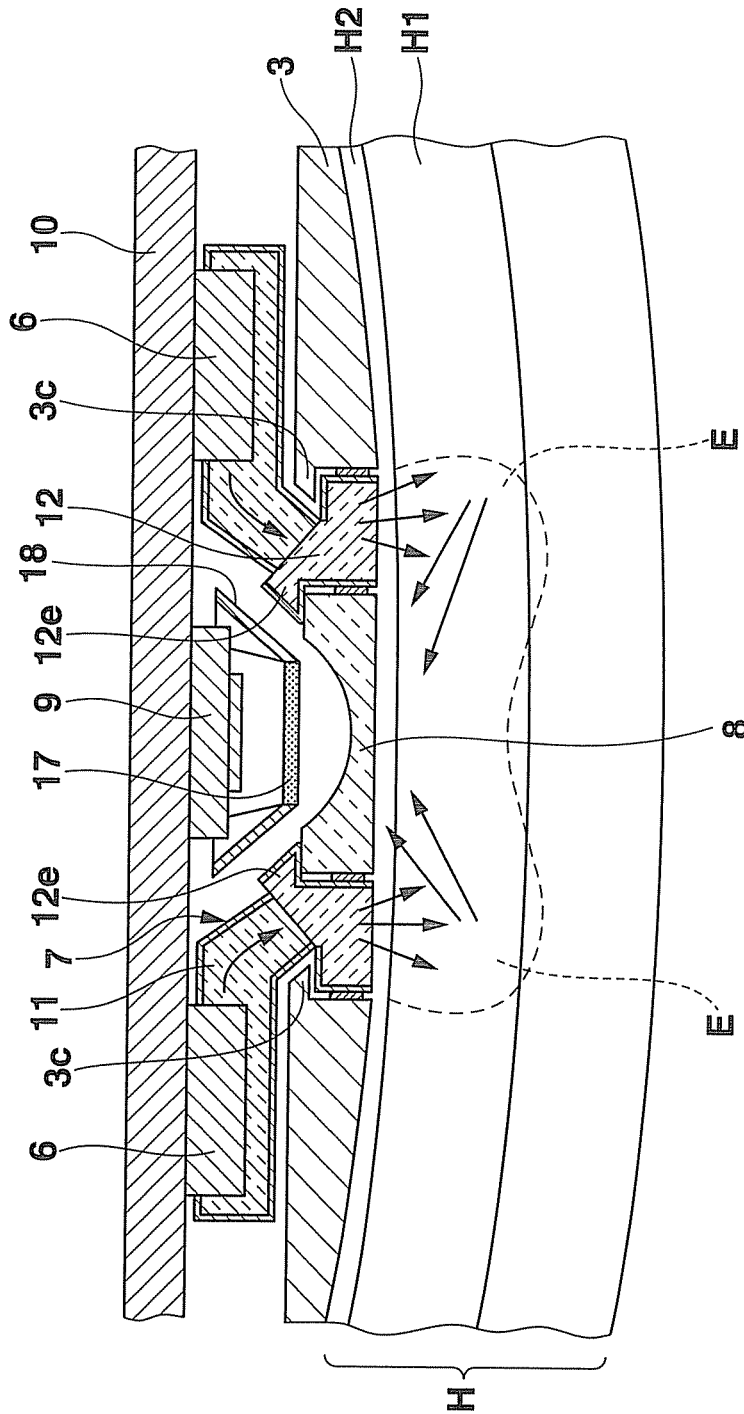


FIG.4

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