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(54) **DEVICE AND METHOD FOR OPTICAL 3D MEASUREMENT AND FOR COLOR MEASUREMENT**

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(73) Assignee: **SIRONA DENTAL SYSTEMS GMBH**

(52) **U.S. Cl. .... 356/73**

(57) **ABSTRACT**

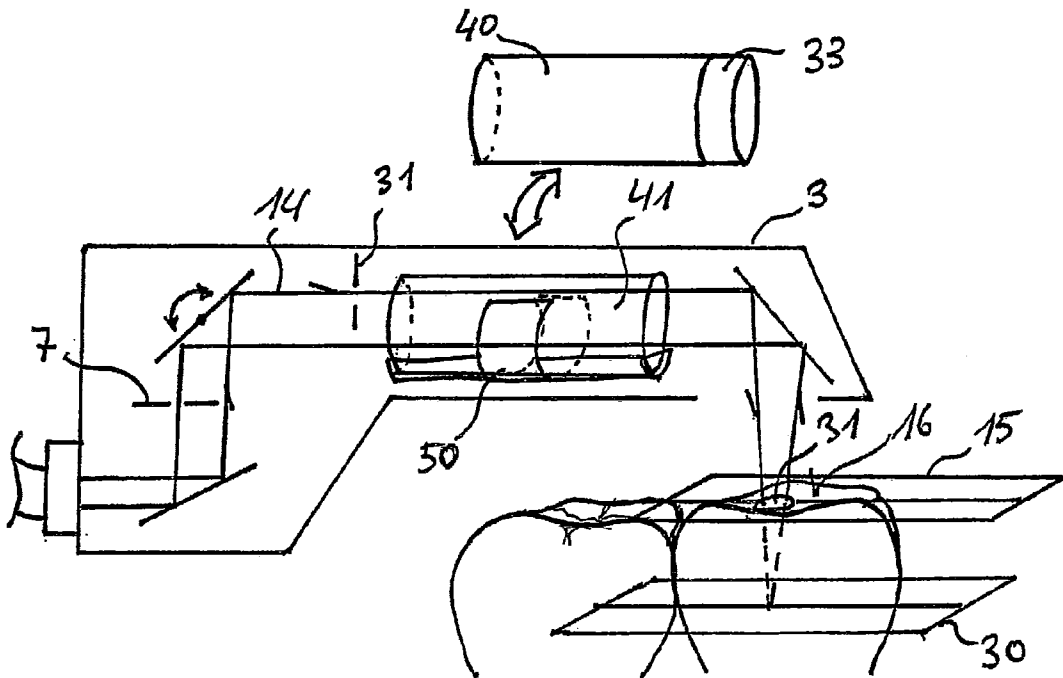
(21) Appl. No.: **12/896,435**

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The invention relates to a device and a method for optical 3D measurement, wherein said device can be switched between a first mode for optical 3D measurement using a chromatic confocal measurement method or the triangulation measurement method and a second mode for colorimetric measurement. In the first mode, a broad-band illuminating beam is focused onto a first plane and in the second mode the broad-band illuminating beam is focused onto a second plane other than the first plane at a distance d from the surface of the object to be measured.

**Related U.S. Application Data**

(63) Continuation of application No. PCT/EP2009/053912, filed on Apr. 2, 2009.



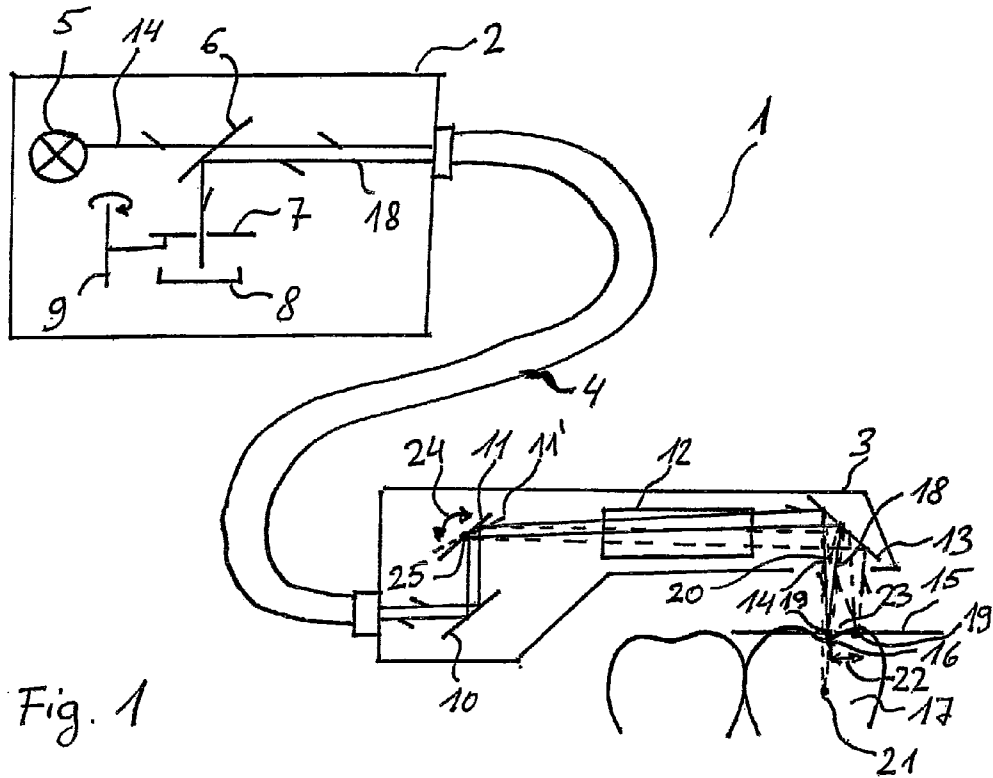


Fig. 1

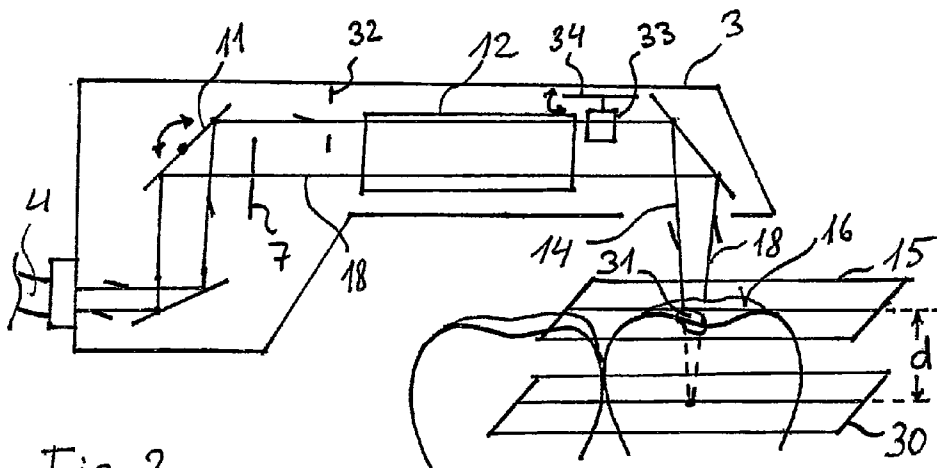
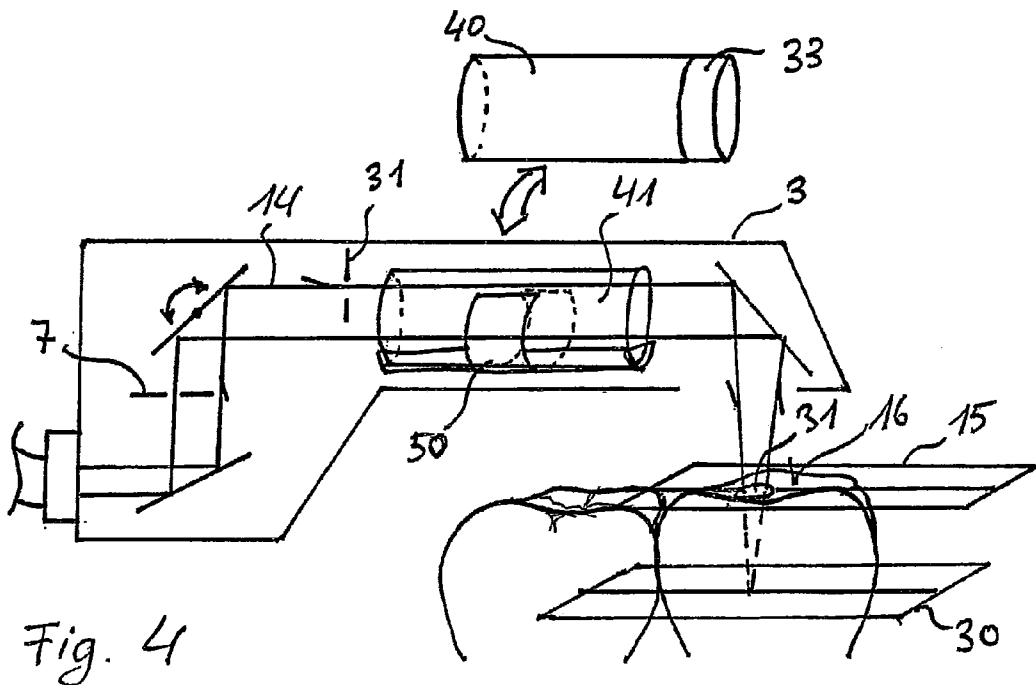
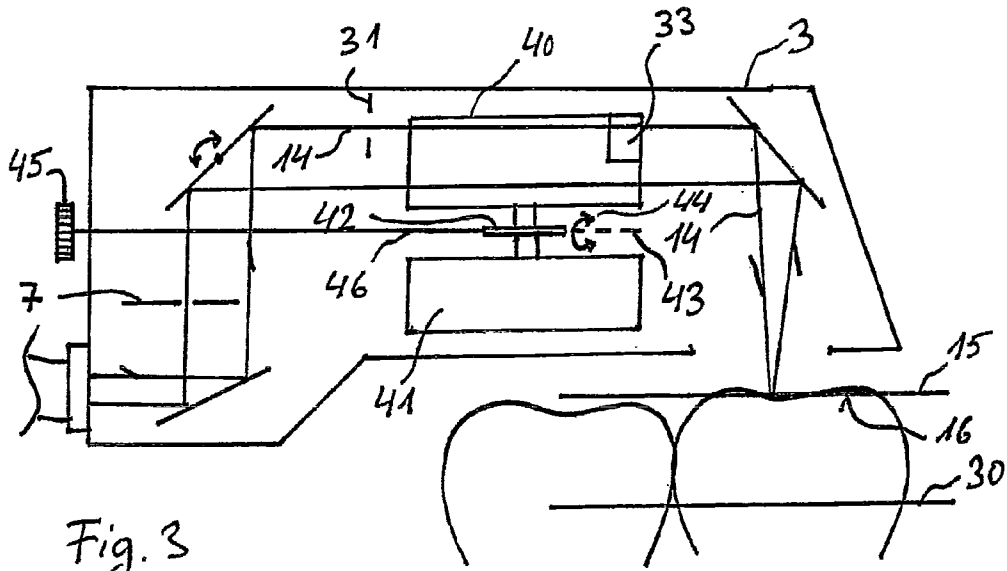
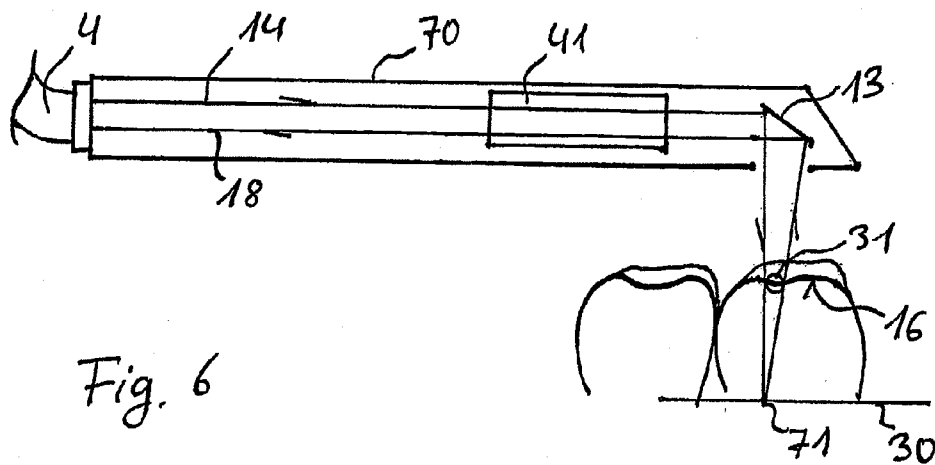
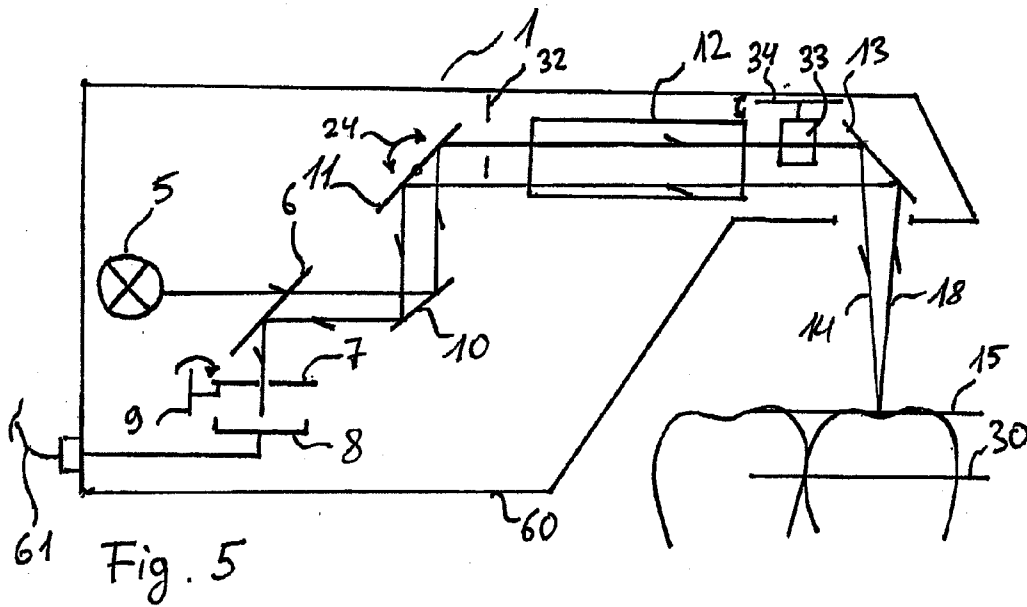


Fig. 2





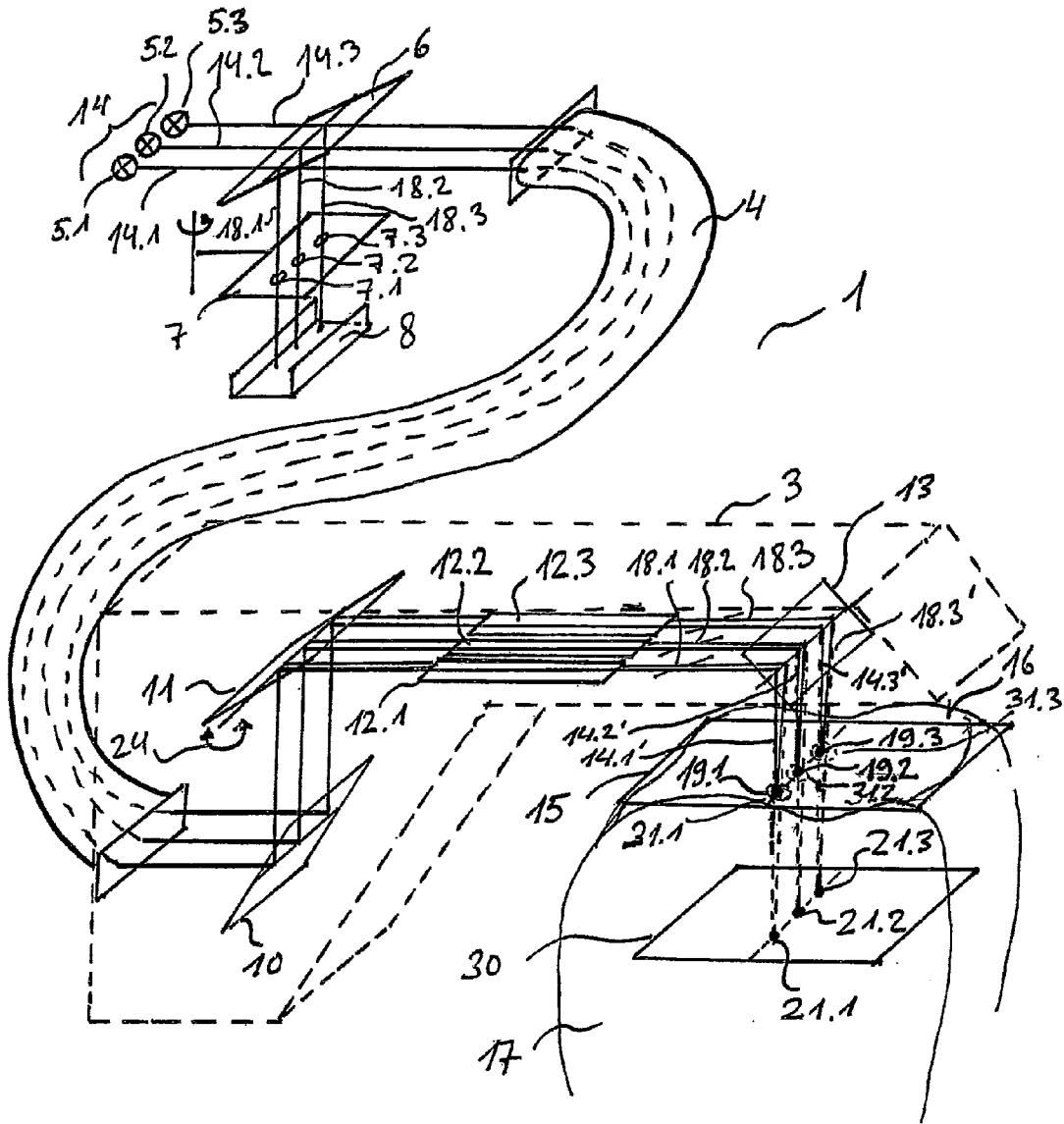


Fig. 7

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