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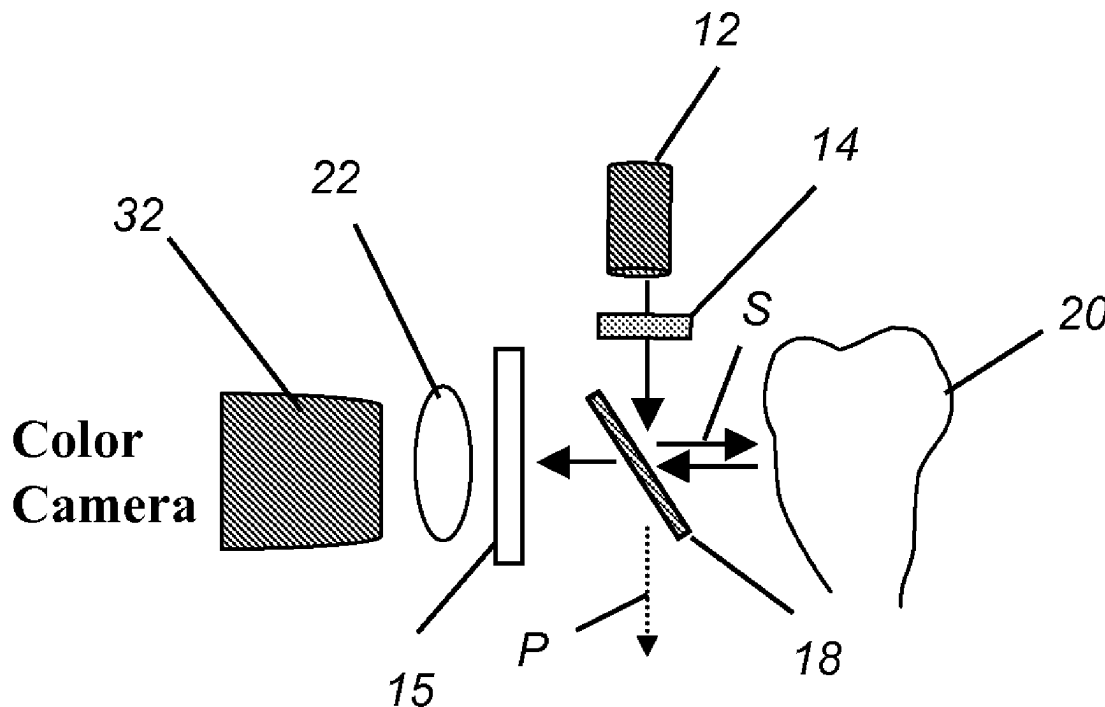
(57) **ABSTRACT**

An apparatus for obtaining an image of a tooth having at least one light source providing incident light having a first spectral range for obtaining a reflectance image (122) from the tooth and a second spectral range for exciting a fluorescence image (120) from the tooth. A polarizing beamsplitter (18) in the path of the incident light from both sources directs light having a first polarization state toward the tooth and directs light from the tooth having a second polarization state along a return path toward a sensor (68), wherein the second polarization state is orthogonal to the first polarization state. A first lens (22) in the return path directs image-bearing light from the tooth toward the sensor (68), and obtains image data from the portion of the light having the second polarization state. A long-pass filter (15) in the return path attenuates light in the second spectral range.

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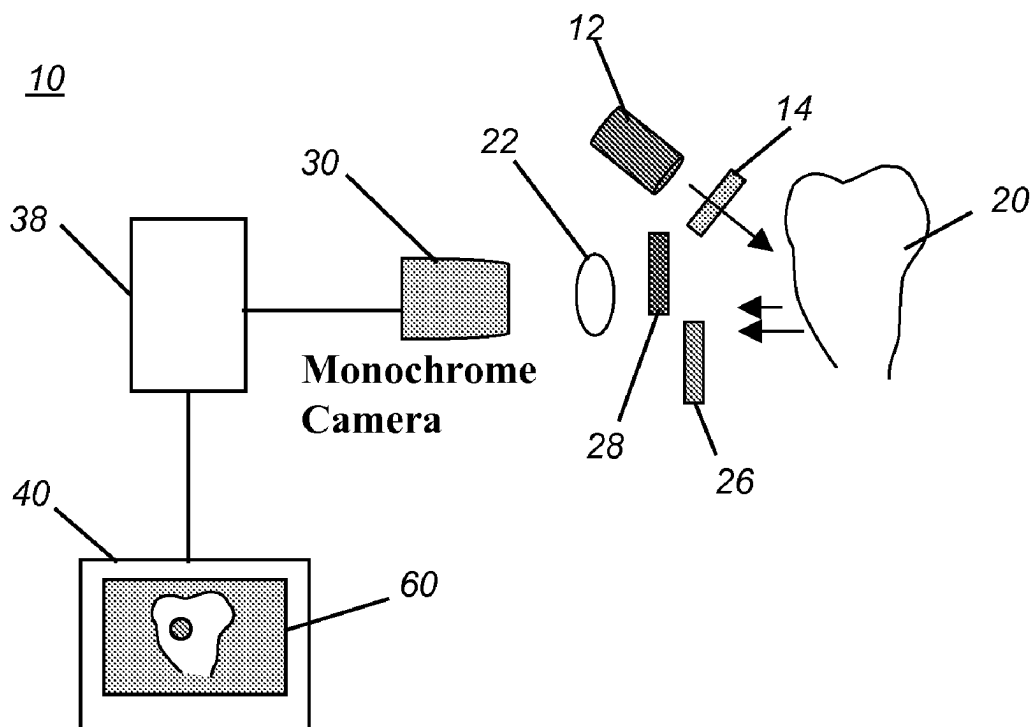


FIG. 1

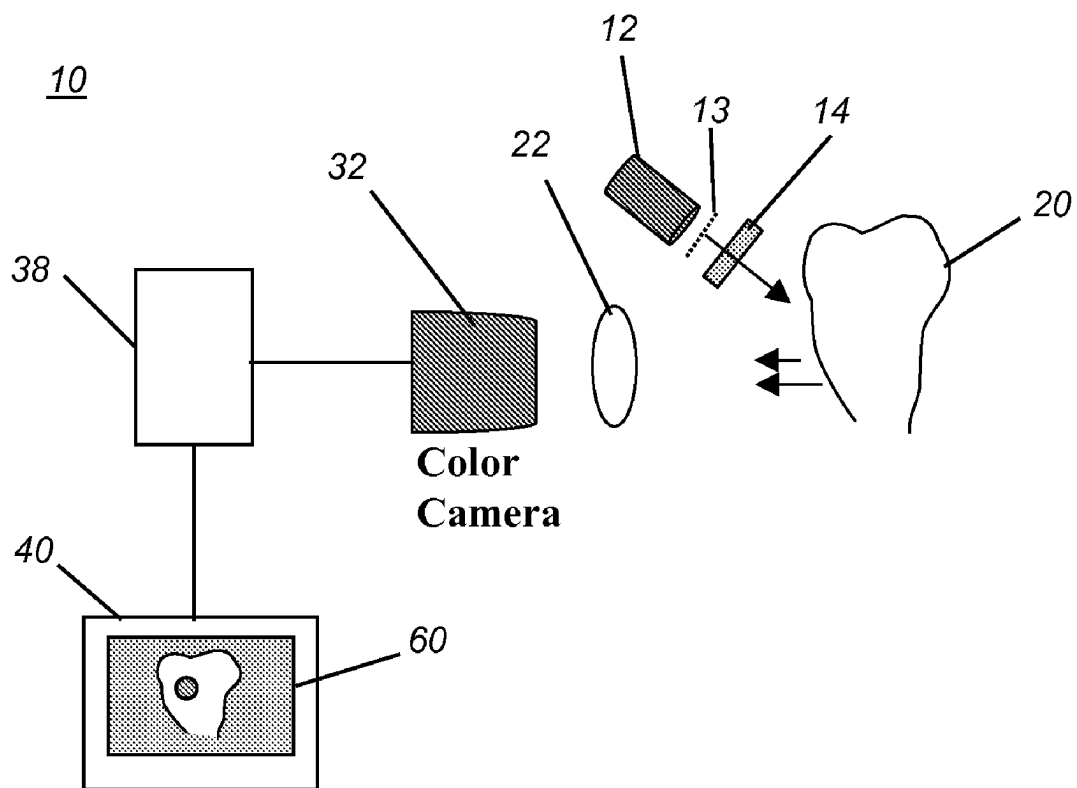


FIG. 2

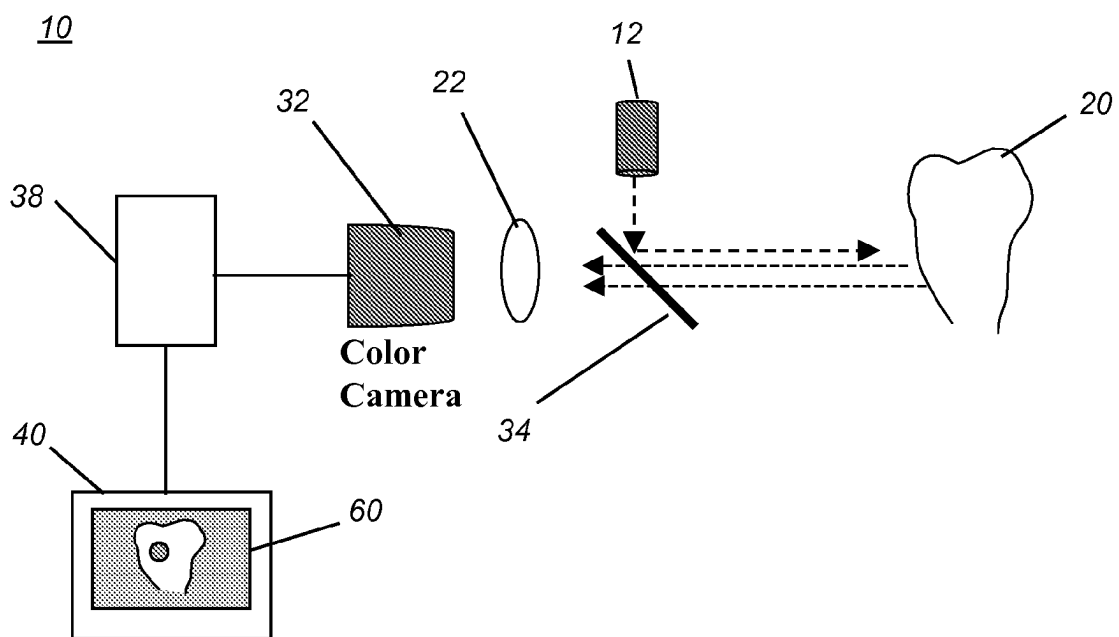


FIG. 3

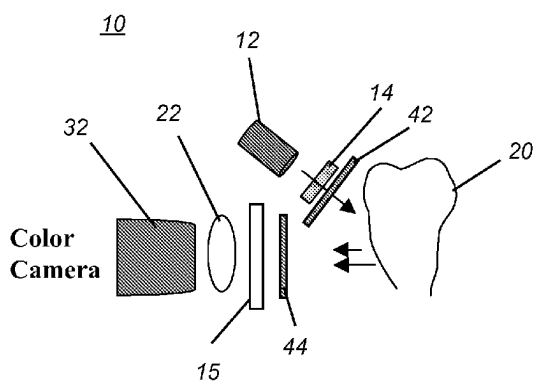


FIG. 4A

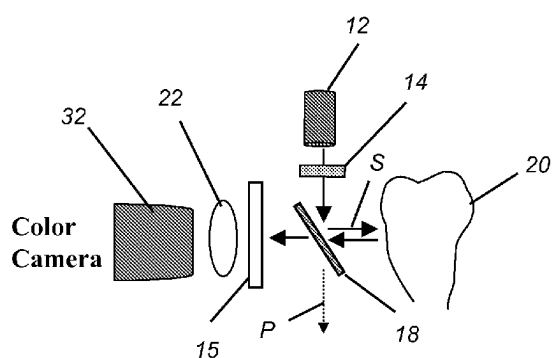


FIG. 4B

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