United States Patent [19]

Murljacic

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[54] **TOOTH SHADE ANALYZER SYSTEM AND METHODS**

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[52] U.S. Cl. **433/26**; 356/408

[58] Field of Search 433/26, 29, 203.1, 433/215; 364/413.28; 356/402, 405, 406, 408

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[57] **ABSTRACT**

An intraoral camera connects to a shade analyzer subsystem, e.g., a digital video processor, and a color display monitor. The camera captures a digital color image of the patient's tooth and the subsystem compares that image to a stored plurality of tooth shades. Each tooth shade is represented in a block of data, including color image data, a tooth shade digital word, and a manufacturer type. The patient's tooth image includes an RGB chromaticity representation that is scanned and compared with the several tooth shades stored in memory, and a match is determined and communicated to a user of the system. The methodology includes the specification of fractional tooth shades, if needed, corresponding to a plurality of porcelain films for manufacturing a reconstructed tooth.
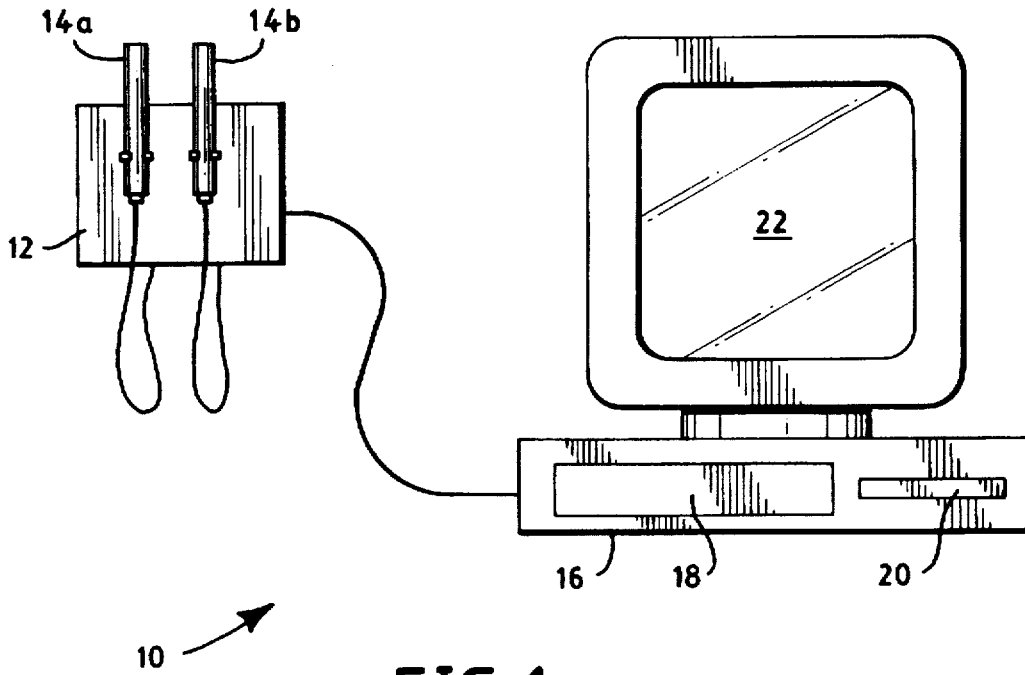
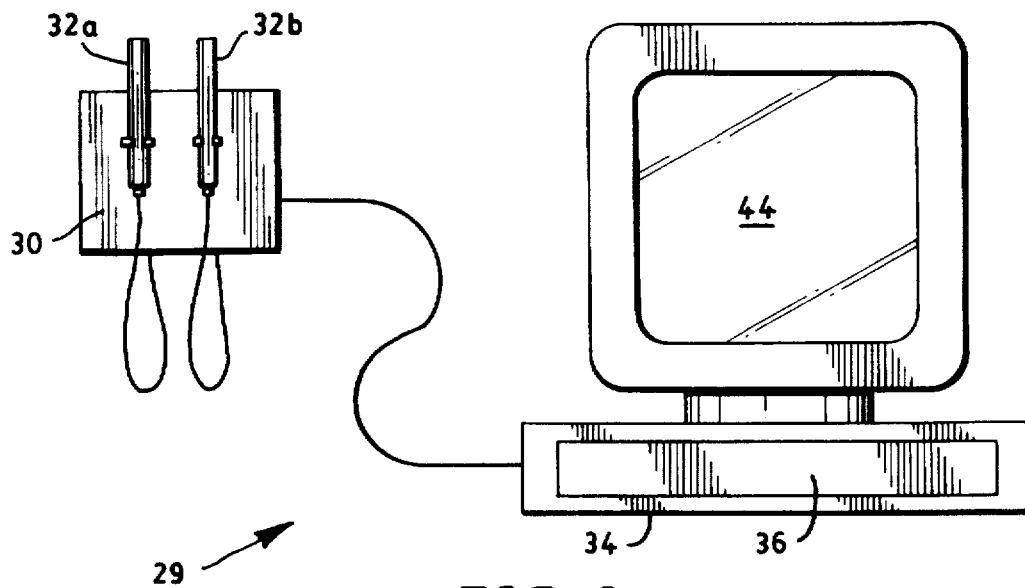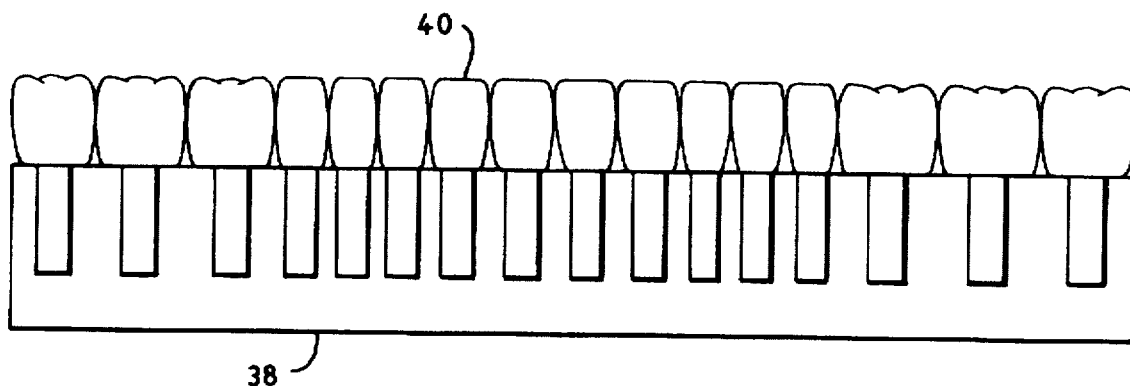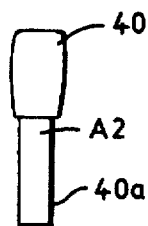**4 Claims, 8 Drawing Sheets**
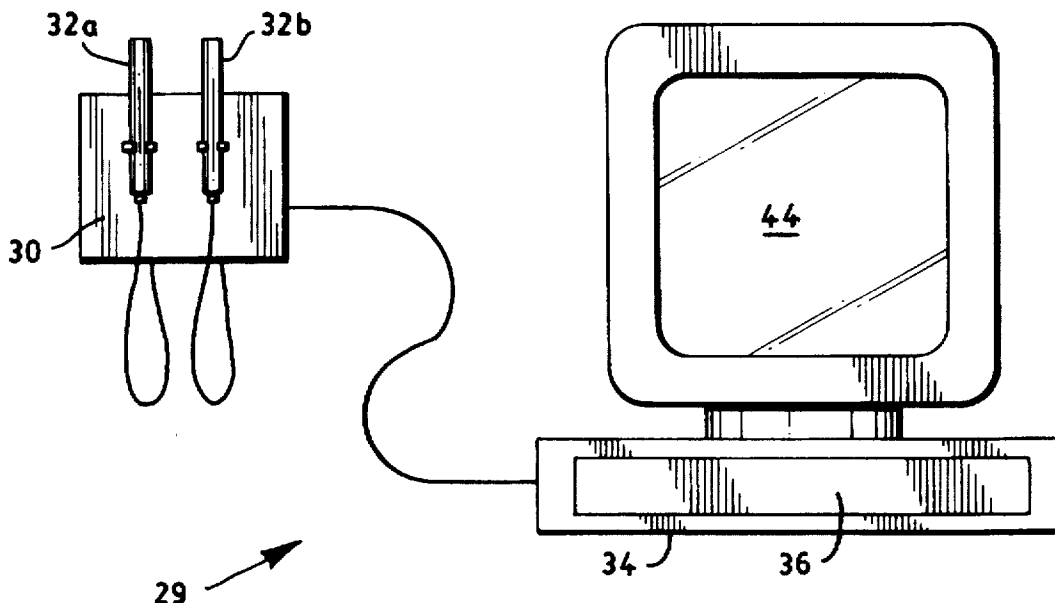
FIG. 1 (PRIOR ART)

FIG. 2

FIG. 3 (PRIOR ART)

FIG. 3A (PRIOR ART)

DIGITAL COLOR IMAGE
DATA   42a

TOOTH SHADE DATA
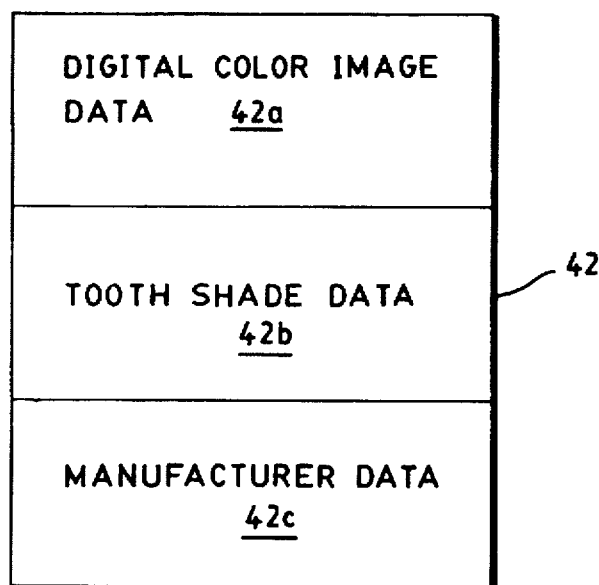42b

MANUFACTURER DATA
42c

42

FIG. 4

FIG. 5

DOCKET ALARM
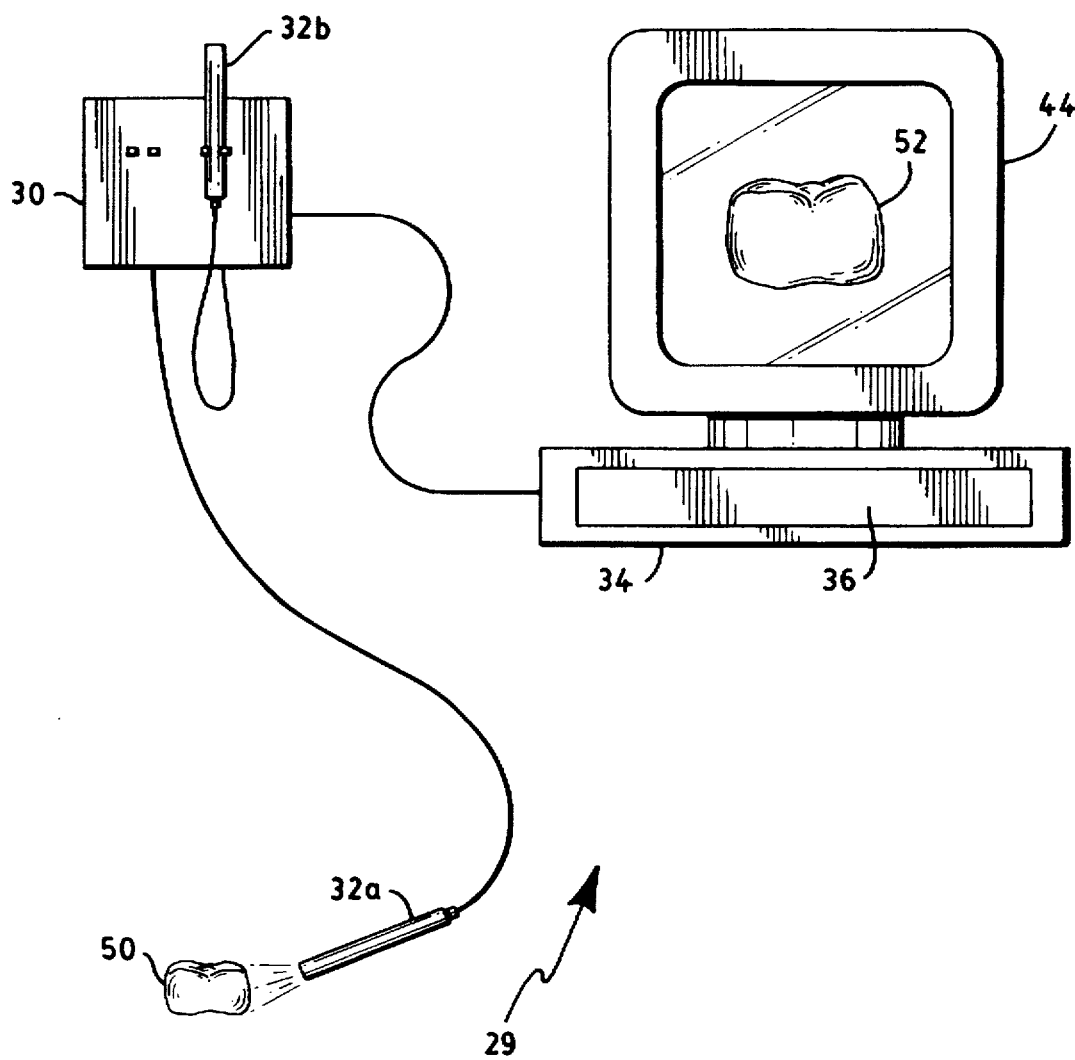
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