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Garcia

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(54) **IMAGE-BASED MEASUREMENT TOOLS**

(71) Applicant: **The Regents of the University of California**, Oakland, CA (US)

(72) Inventor: **Maurice Garcia**, San Francisco, CA (US)

(73) Assignee: **The Regents of the University of California**, Oakland, CA (US)

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G06F 3/0487 (2013.01)

G01B 11/02 (2006.01)

G06F 3/0482 (2013.01)

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(52) **U.S. Cl.**

CPC **G06F 3/0487** (2013.01); **G01B 11/02** (2013.01); **G01B 11/022** (2013.01); **G06F 3/0482** (2013.01); **G06T 7/62** (2017.01); **G06T 2207/10004** (2013.01)

(58) **Field of Classification Search**

CPC G06F 3/0487

USPC 348/77

See application file for complete search history.

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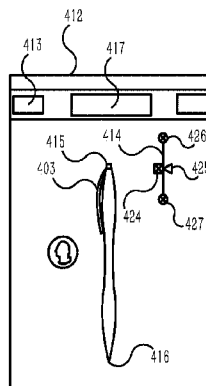
(Continued)

Primary Examiner — Richard Torrente

(57) **ABSTRACT**

Provided are methods, systems, devices, and computer programs enabling the measurement of various objects using imaging. The inventions are adaptable to mobile devices such as smartphones, allowing a range of unique measurements to be conveniently made, including length, area, distance, velocity, and height. The methods, systems, devices, and computer programs include the novel application of image-based measurement in medical, research, and other contexts.

15 Claims, 9 Drawing Sheets



(56)

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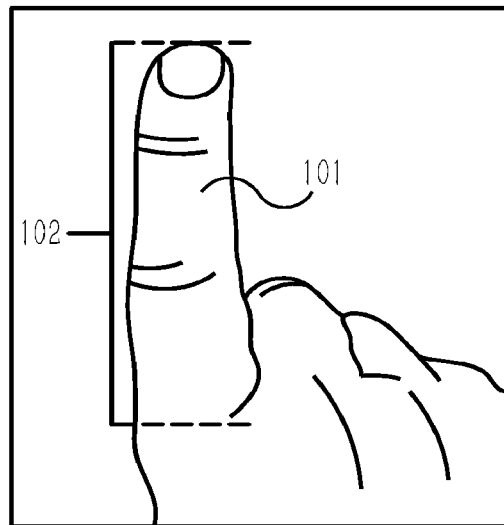


FIG. 1A

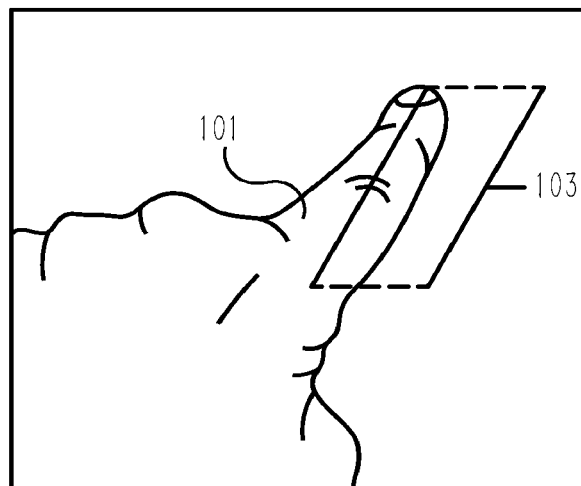


FIG. 1B

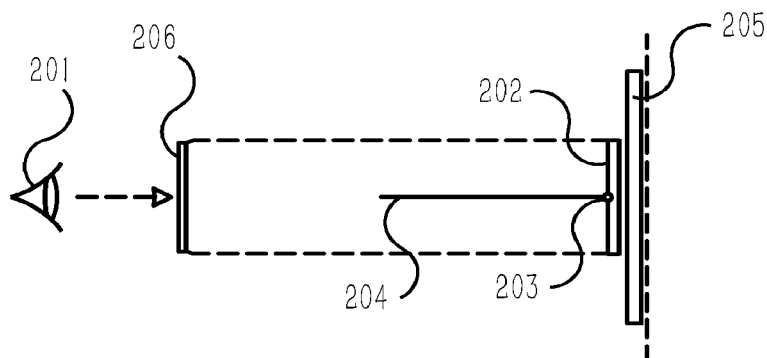


FIG. 2A

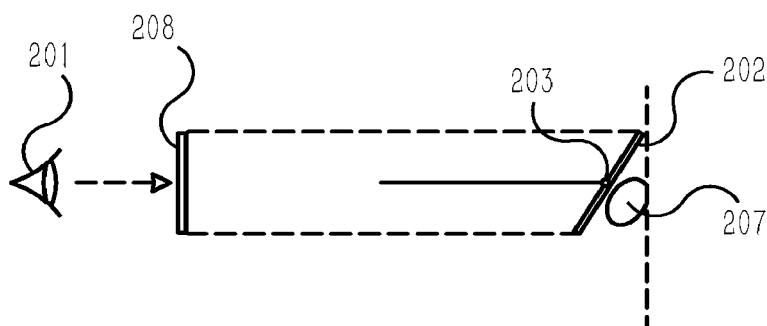


FIG. 2B

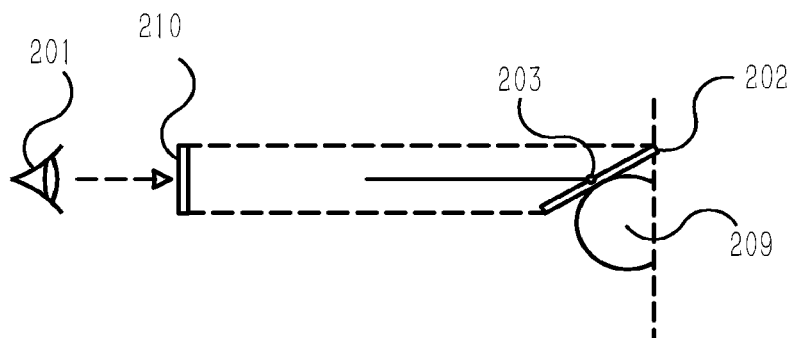


FIG. 2C

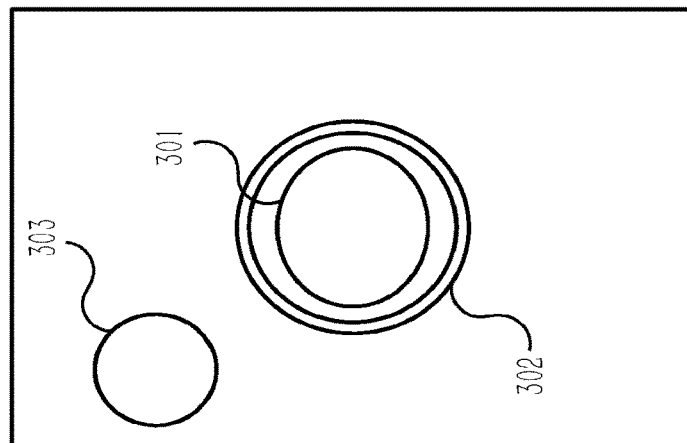


FIG. 3C

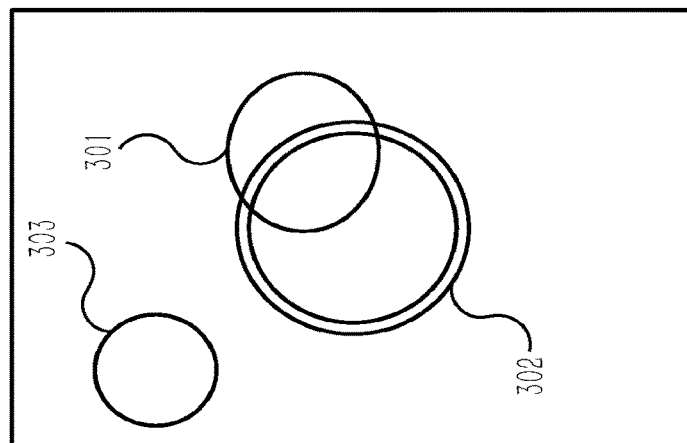


FIG. 3B

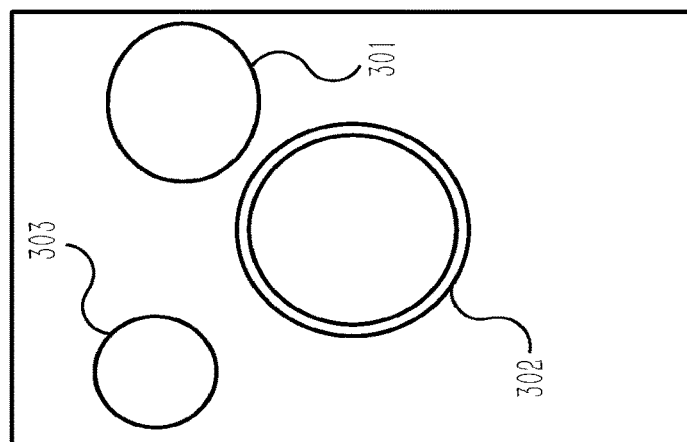


FIG. 3A

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