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(54) **NON-CONTACT SURFACE CHARACTERIZATION USING MODULATED ILLUMINATION**

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(57) **ABSTRACT**

Methods for forming a three-dimensional image of a test object include directing light to a surface of best-focus of an imaging optic, where the light has an intensity modulation in at least one direction in the surface of best-focus, scanning a test object relative to the imaging optic so that a surface of the measurement object passes through the surface of best-focus of the imaging optic as the test object is scanned, acquiring, for each of a series of positions of the test object during the scan, a single image of the measurement object using the imaging optic, in which the intensity modulation of the light in the surface of best-focus is different for successive images, and forming a three-dimensional image of the test object based on the acquired images.
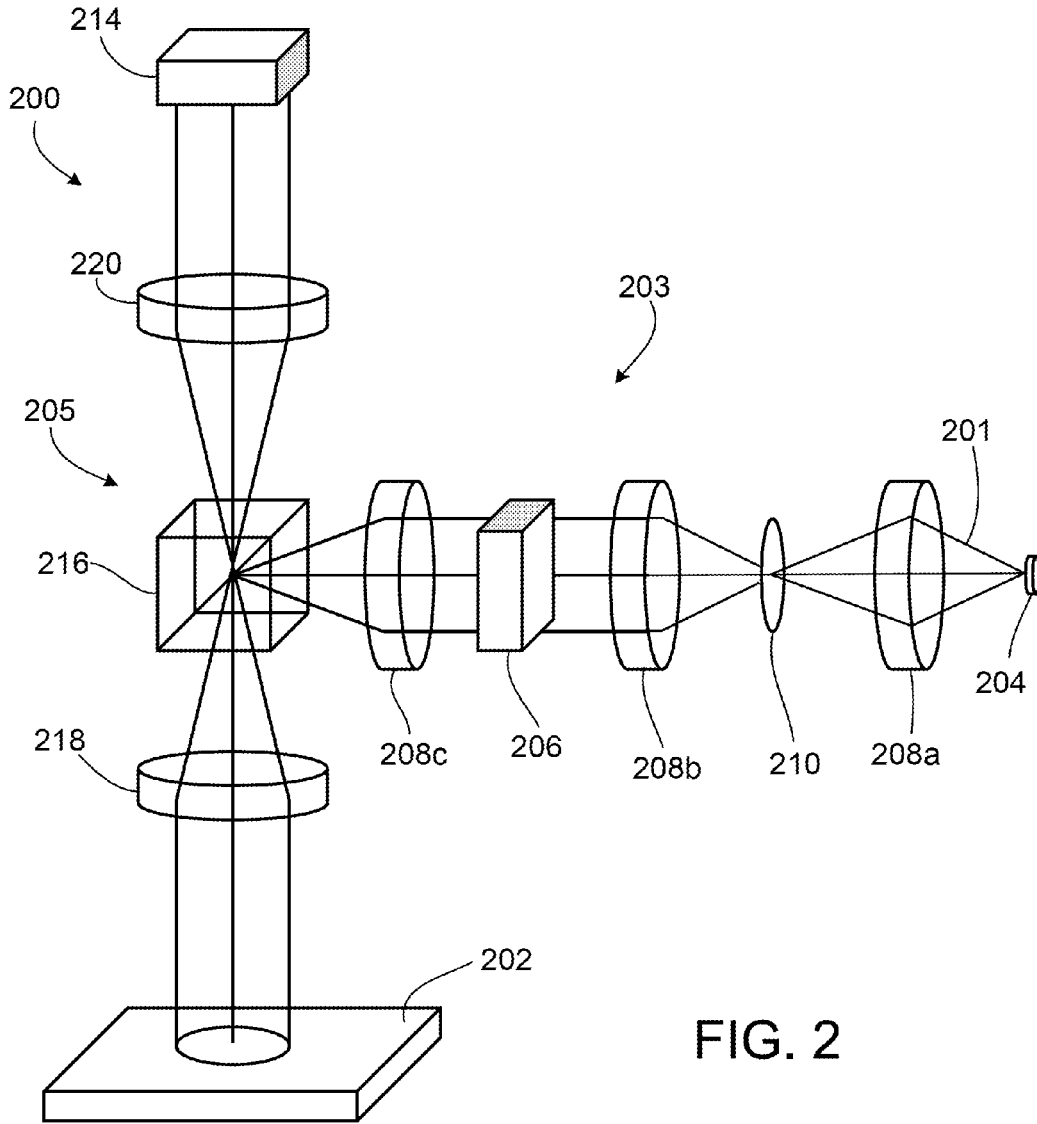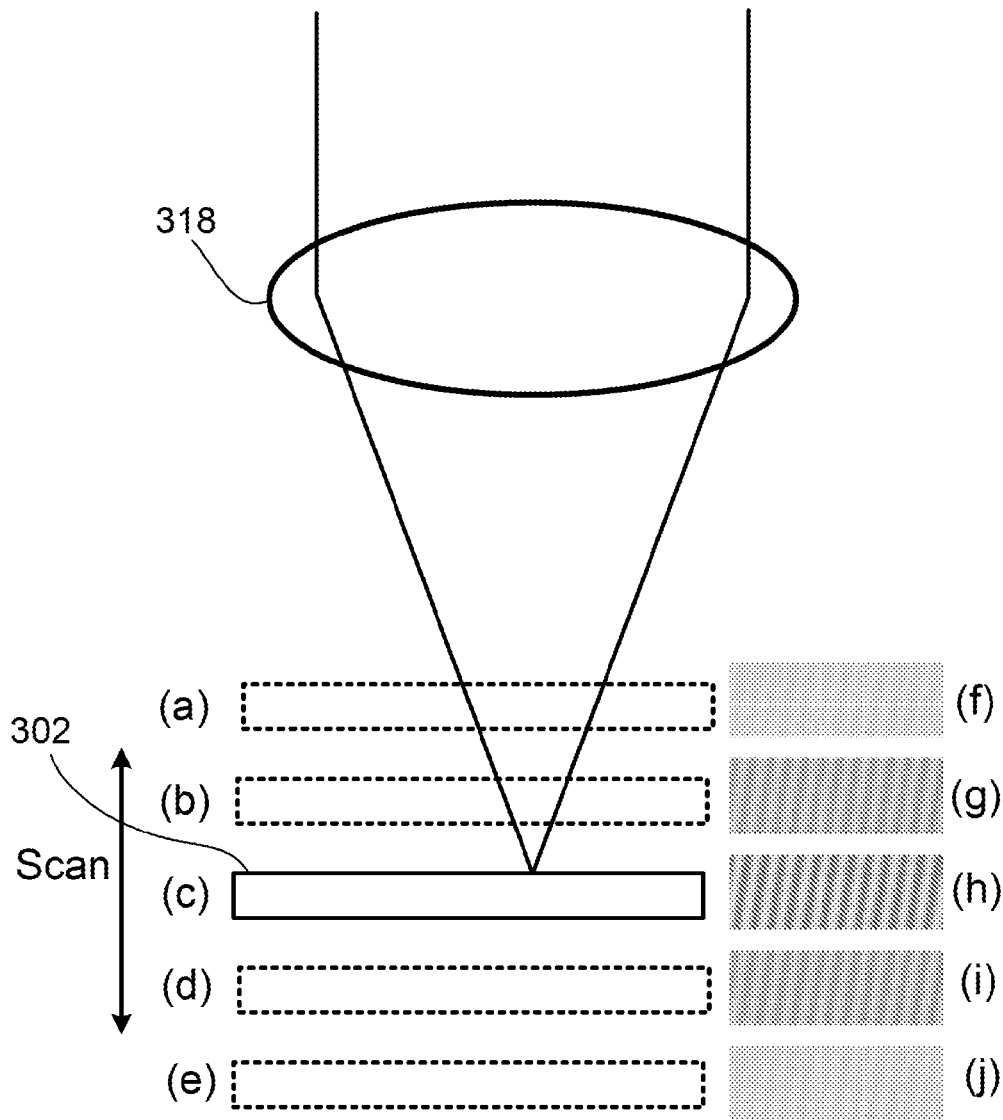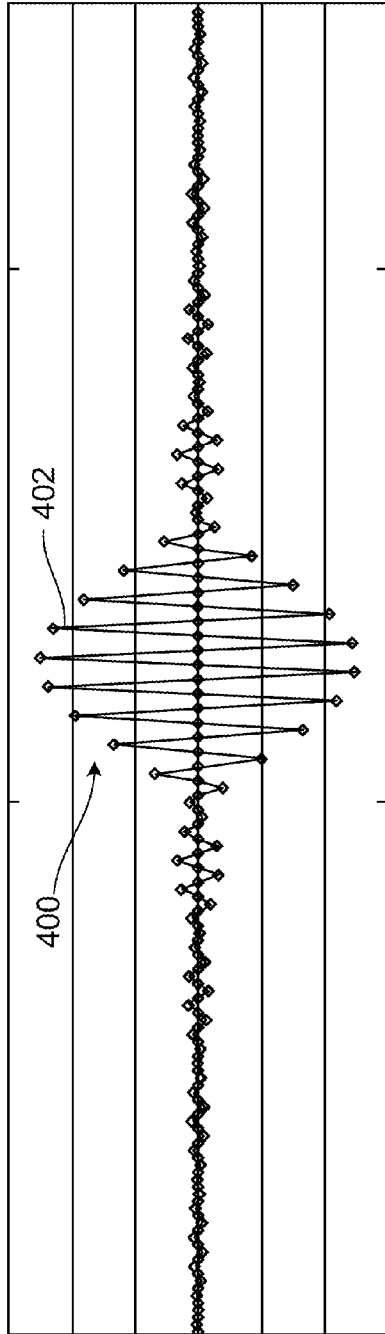
Align Ex. 1017

FIG. 1

FIG. 2

318

302

Scan

(a)

(b)

(c)

(d)

(e)

(f)

(g)

(h)

(i)

(j)
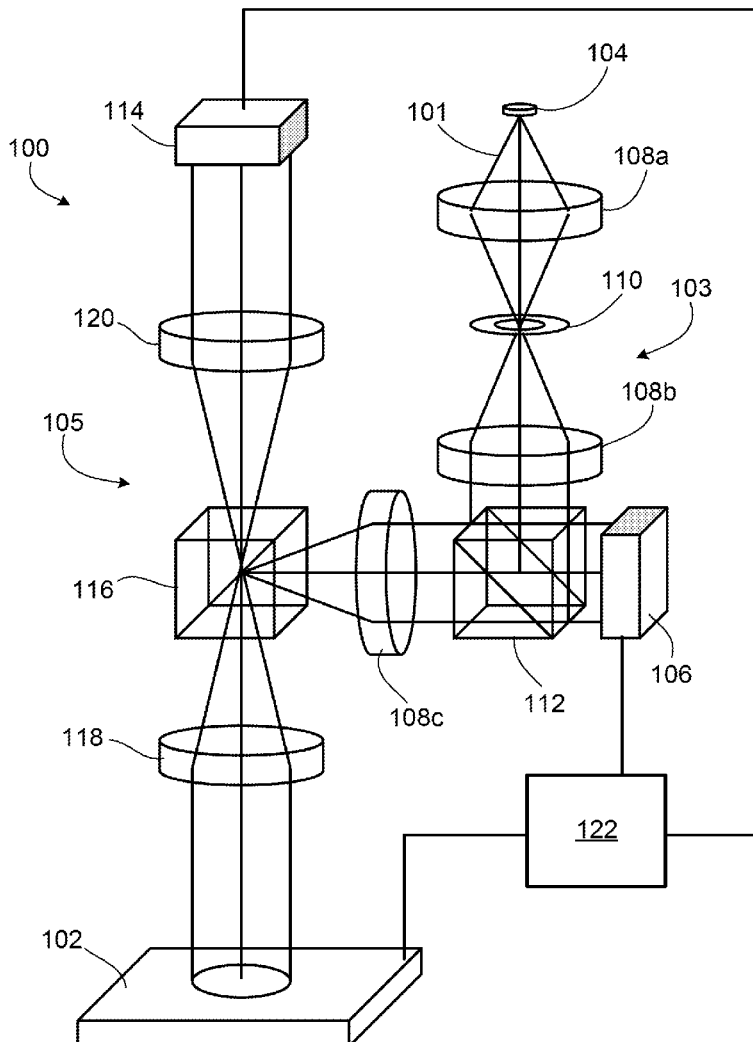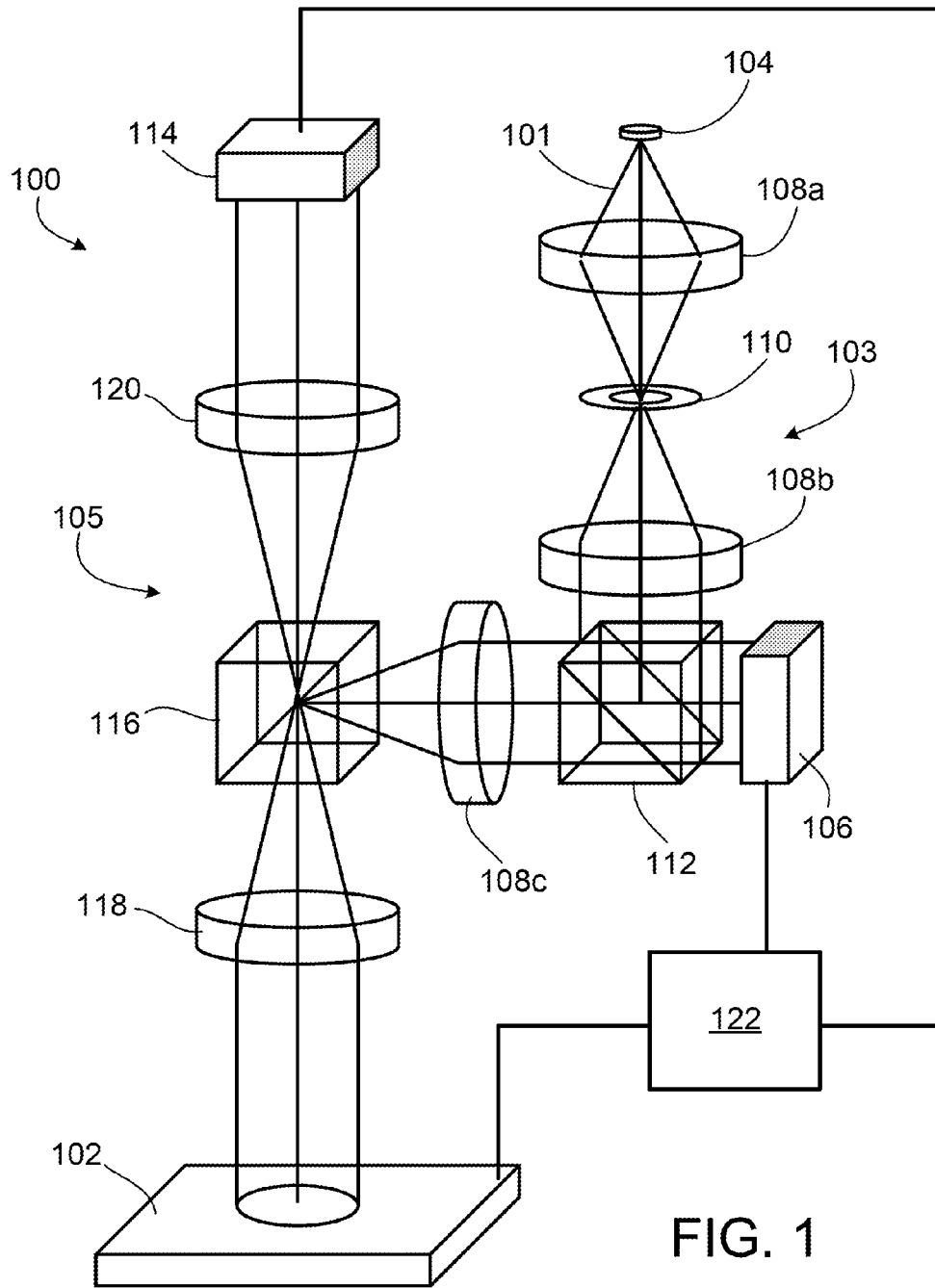
FIG. 3

FIG. 4

FIG. 5

DOCKET ALARM
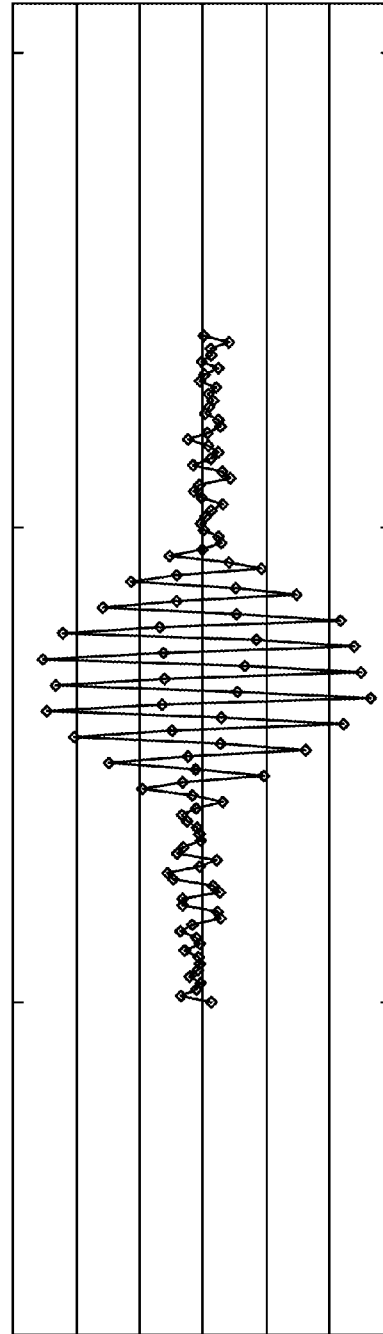
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