



US 20120140243A1

(19) **United States**

(12) **Patent Application Publication**

Colonna de Lega

(10) **Pub. No.: US 2012/0140243 A1**

(43) **Pub. Date: Jun. 7, 2012**

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

Publication Classification

(51) **Int. Cl. G01B 11/24** (2006.01)
(52) **U.S. Cl. 356/609**

(75) **Inventor: Xavier M. Colonna de Lega, Middlefield, CT (US)**

(57) **ABSTRACT**

(73) **Assignee: Zygo Corporation, Middfield, CT (US)**

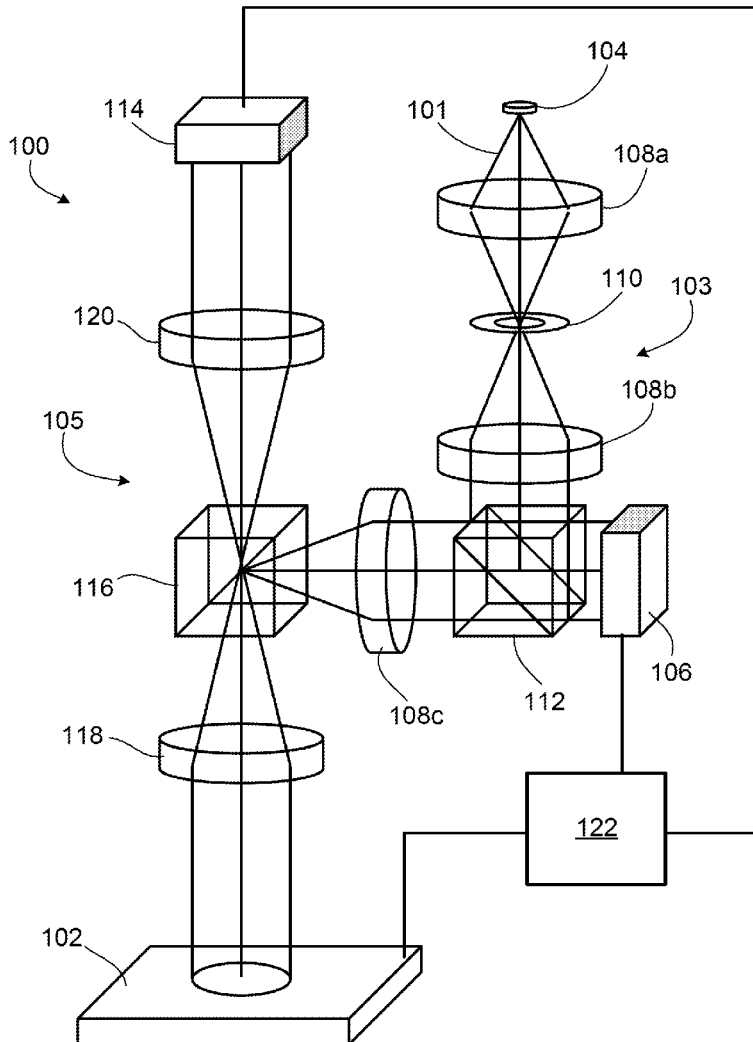
Methods for forming a three-dimensional image of a test object include directing light to a surface of best-focus of an imaging optic, where the light has an intensity modulation in at least one direction in the surface of best-focus, scanning a test object relative to the imaging optic so that a surface 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.

(21) **Appl. No.: 13/309,244**

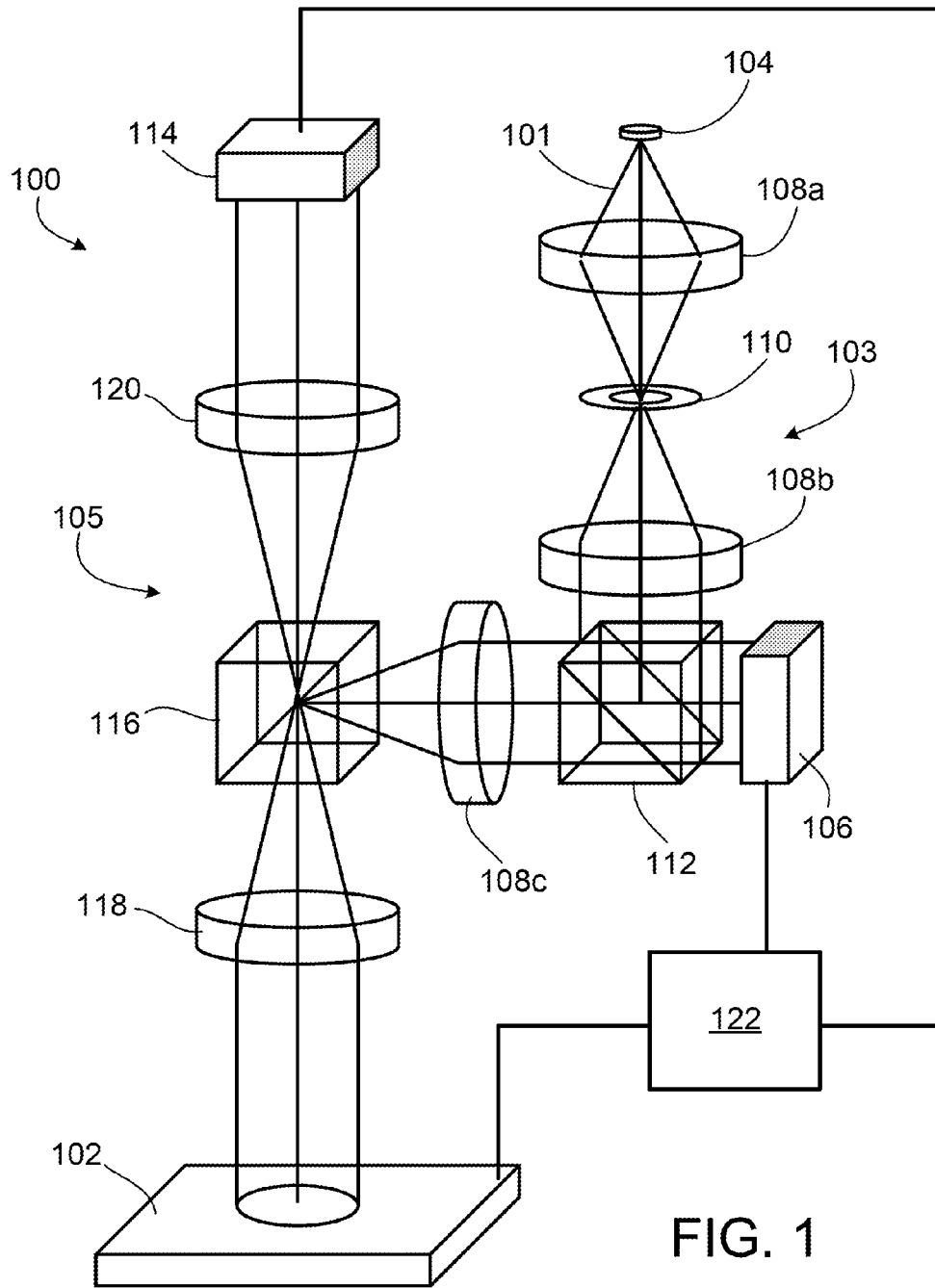
(22) **Filed: Dec. 1, 2011**

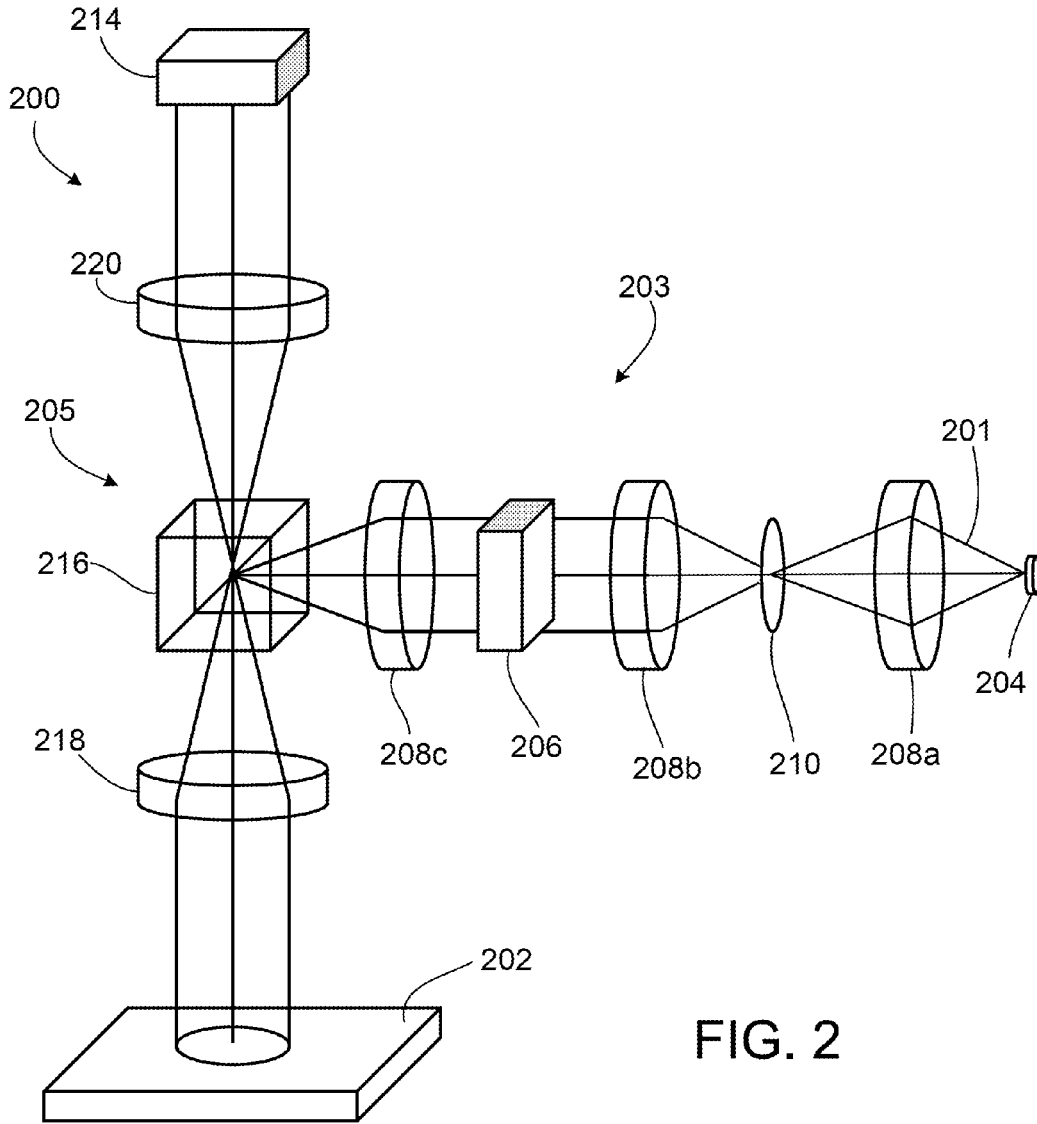
Related U.S. Application Data

(60) **Provisional application No. 61/419,386, filed on Dec. 3, 2010.**



Align Ex. 1017





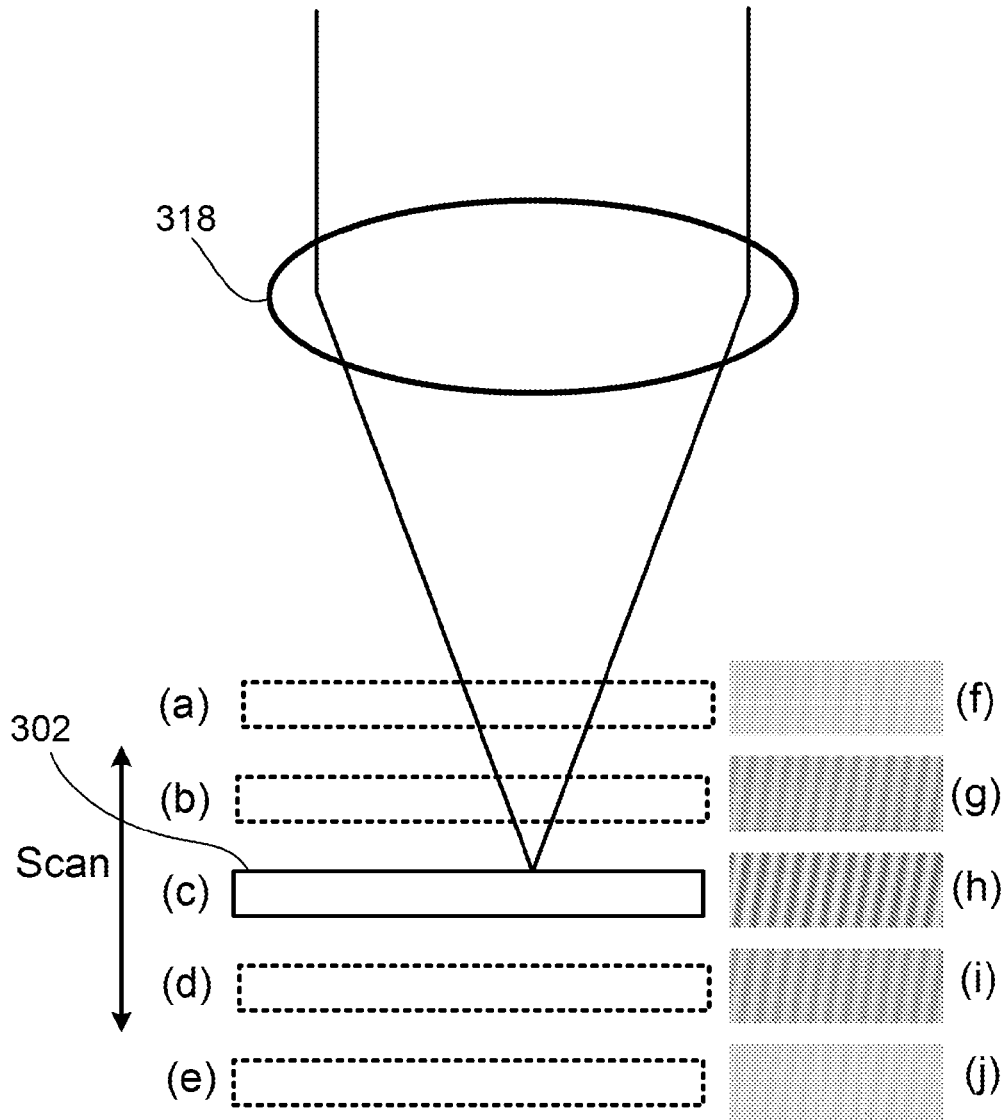
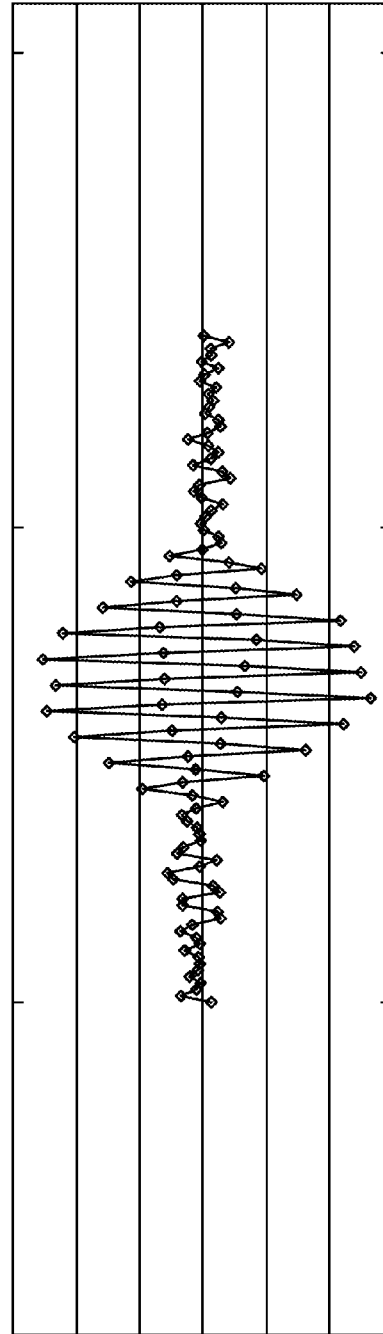
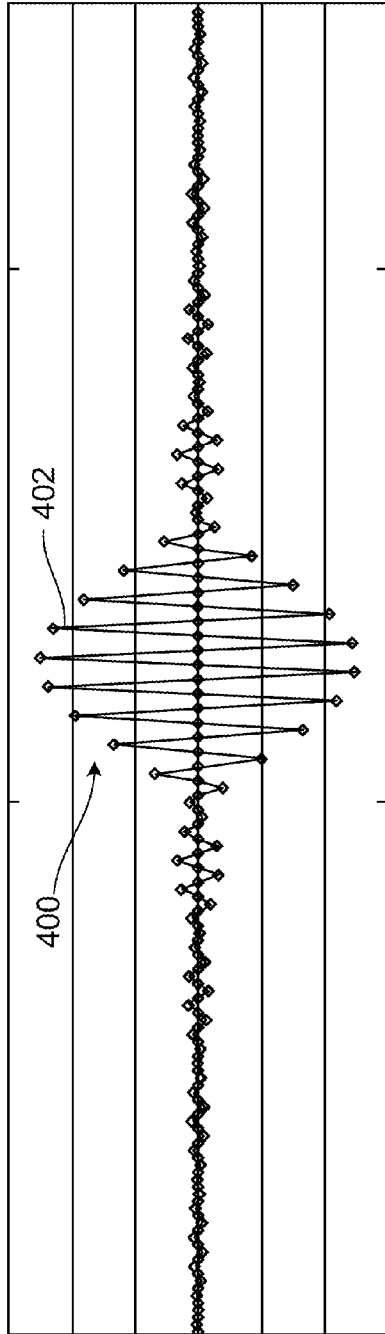


FIG. 3



Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.