



US 20150330192A1

(19) **United States**

(12) **Patent Application Publication**
Rogman et al.

(10) **Pub. No.: US 2015/0330192 A1**

(43) **Pub. Date: Nov. 19, 2015**

(54) **PERFORATING GUN WITH INTEGRATED INITIATOR**

(86) PCT No.: **PCT/US13/73094**

§ 371 (c)(1),

(2) Date: **Jun. 4, 2015**

(71) Applicant: **Schlumberger Technology Corporation**, Sugar Land, TX (US)

Related U.S. Application Data

(72) Inventors: **Raphael Rogman**, Houston, TX (US); **Allan Goldberg**, Alvin, TX (US); **Vinod Chakka**, Pune (IN); **Pedro Alejandro Hernandez Lopez**, Sugar Land, TX (US); **Roman Munoz**, Pearland, TX (US); **Richard Lee Warns**, Sugar Land, TX (US); **Hao Liu**, Missouri City, TX (US); **Marcos Calderon**, Angleton, TX (US); **Edward Harrigan**, Richmond, TX (US)

(60) Provisional application No. 61/733,129, filed on Dec. 4, 2012.

Publication Classification

(51) **Int. Cl.**
E21B 43/116 (2006.01)

(52) **U.S. Cl.**
CPC **E21B 43/116** (2013.01)

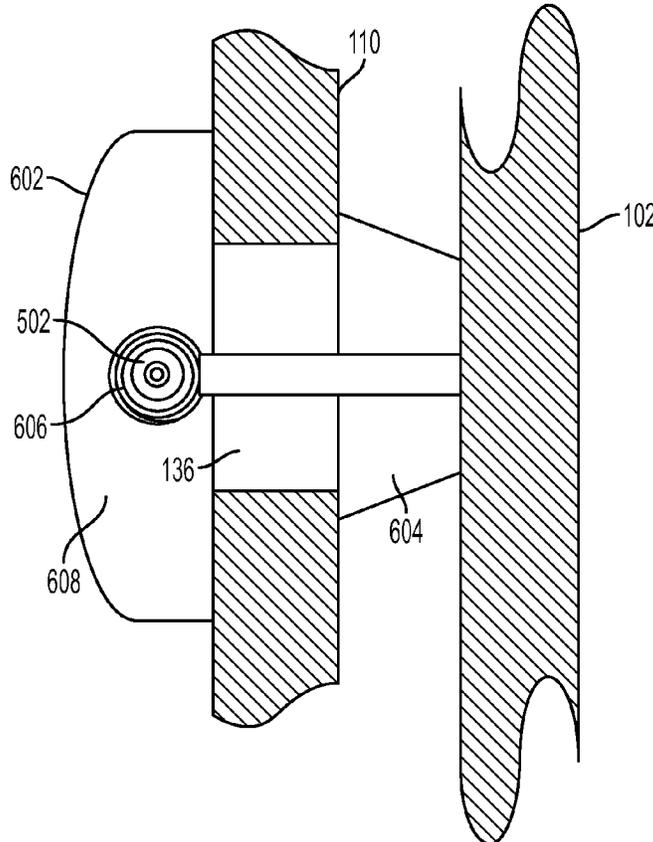
(73) Assignee: **Schlumberger Technology Corporation**, Sugar Land, TX (US)

(57) **ABSTRACT**

A wellbore perforating device includes at least one perforating charge and an initiator. The initiator can include a ballistic train adapted to fire the at least one perforating charge. The ballistic train can include a detonator and a detonator cord. A ballistic interrupt shutter can be disposed between the detonator and the detonator cord. The ballistic interrupt shutter can prevent firing of the detonator cord.

(21) Appl. No.: **14/649,577**

(22) PCT Filed: **Dec. 4, 2013**



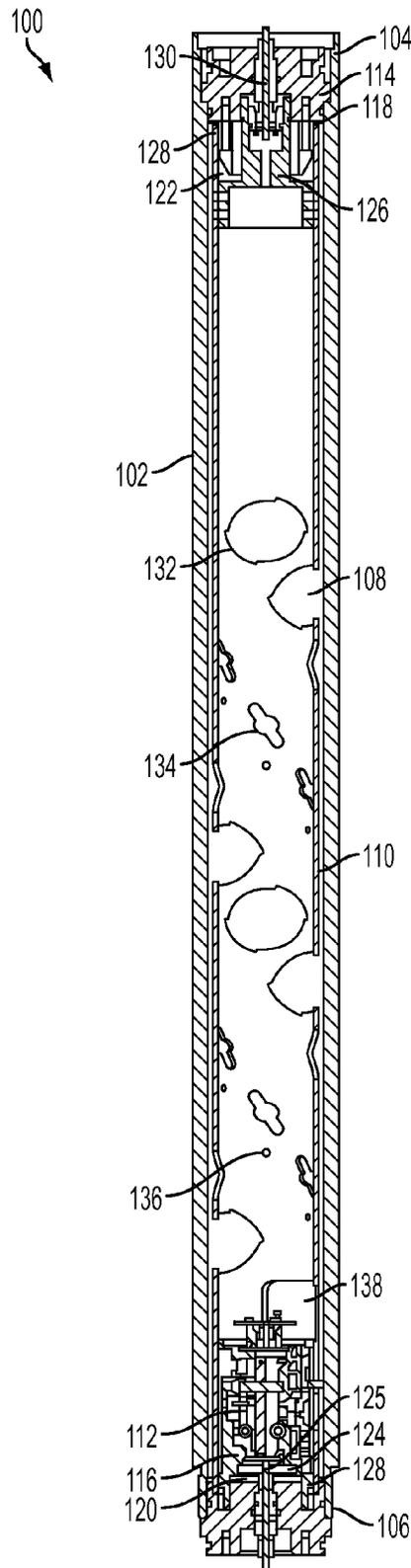


FIG. 1

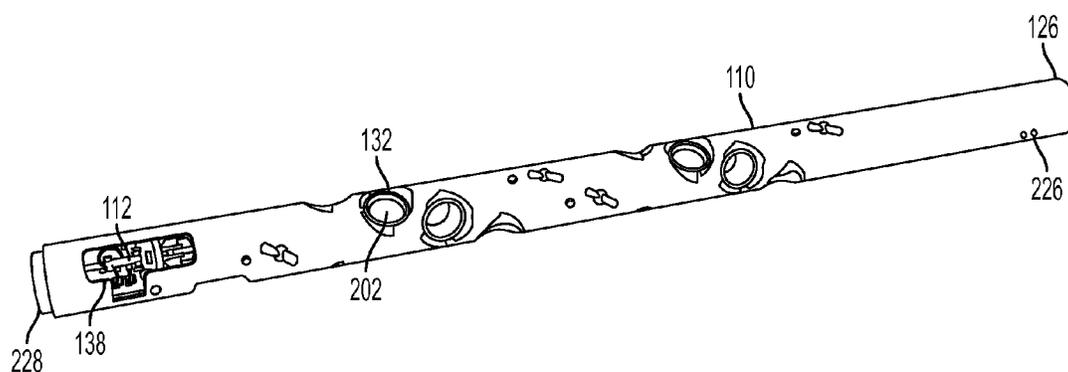


FIG. 2

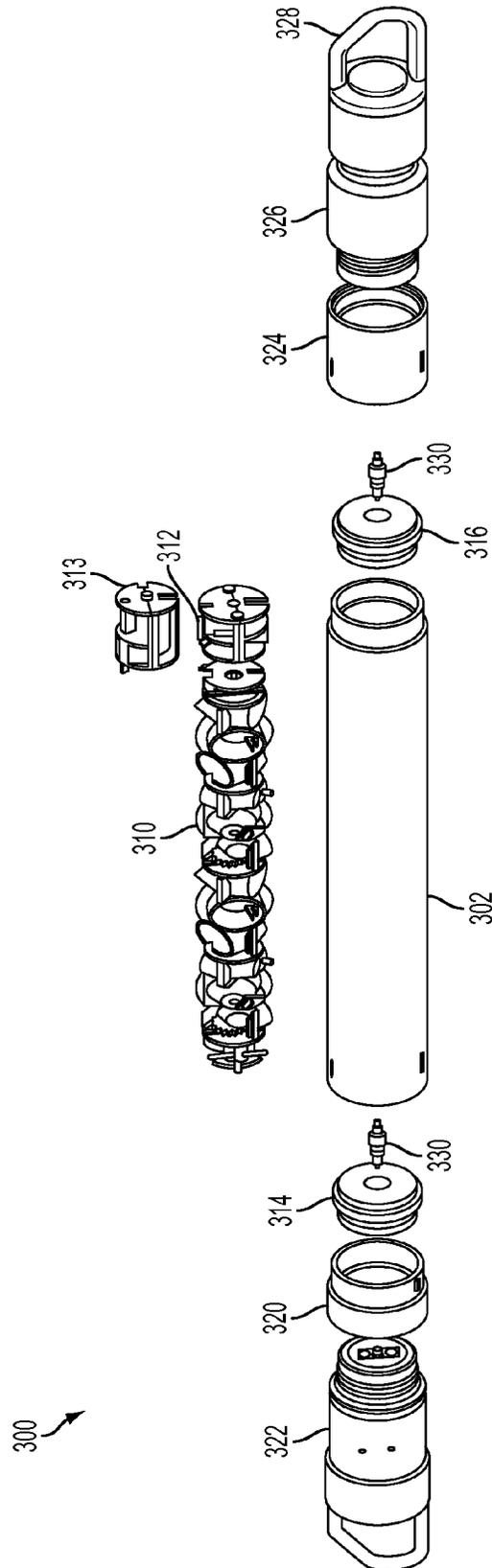


FIG. 3

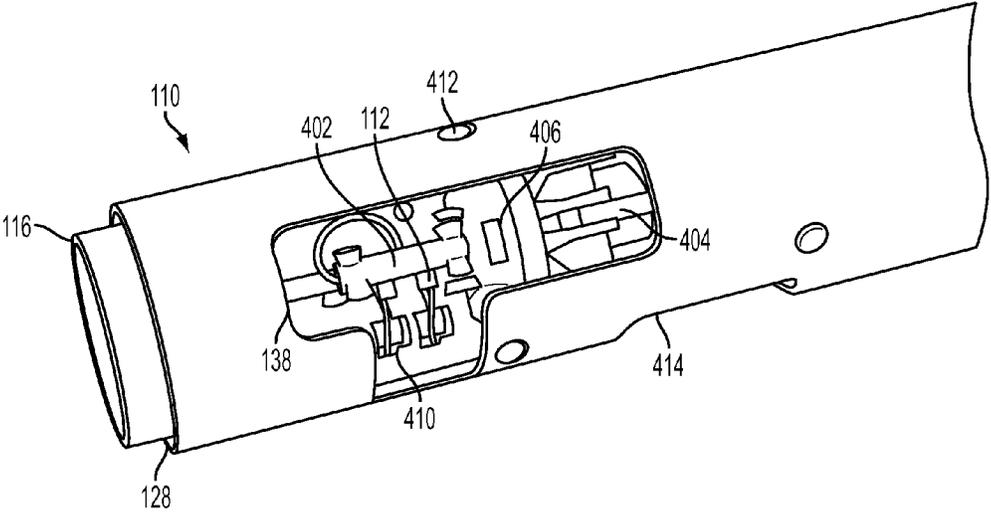


FIG. 4

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.