



US 20090272529A1

(19) **United States**

(12) **Patent Application Publication**  
**Crawford**

(10) **Pub. No.: US 2009/0272529 A1**

(43) **Pub. Date: Nov. 5, 2009**

(54) **SYSTEM AND METHOD FOR SELECTIVE  
ACTIVATION OF DOWNHOLE DEVICES IN A  
TOOL STRING**

**Publication Classification**

(51) **Int. Cl.**  
*E21B 43/12* (2006.01)  
(52) **U.S. Cl.** ..... **166/250.15; 166/66; 166/55.1**  
(57) **ABSTRACT**

(75) **Inventor: Donald L. Crawford, Spring, TX  
(US)**

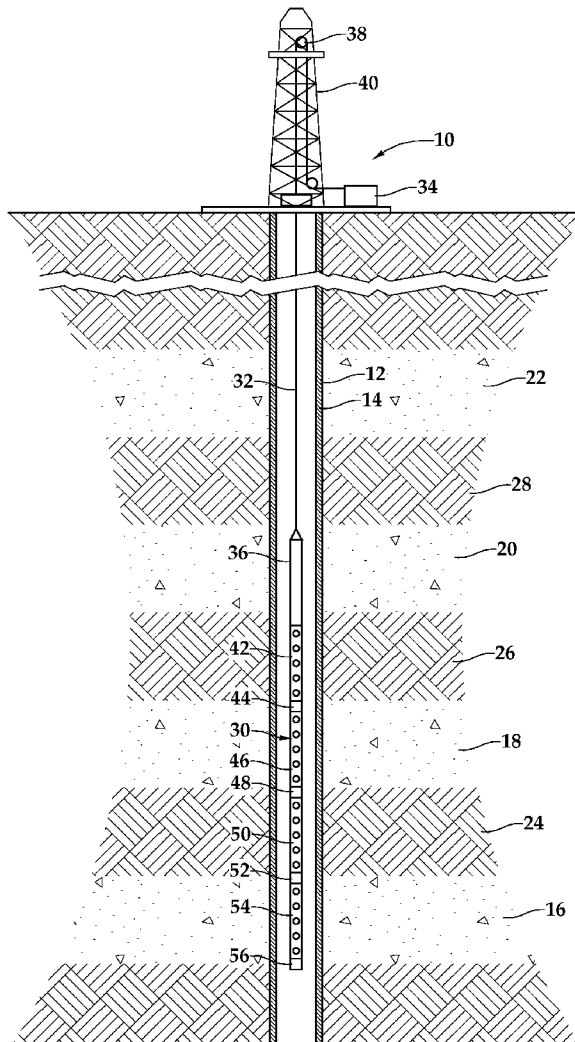
Correspondence Address:  
**LAWRENCE R. YOUST**  
**Lawrence Youst PLLC**  
**2900 McKinnon, Suite 2208**  
**DALLAS, TX 75201 (US)**

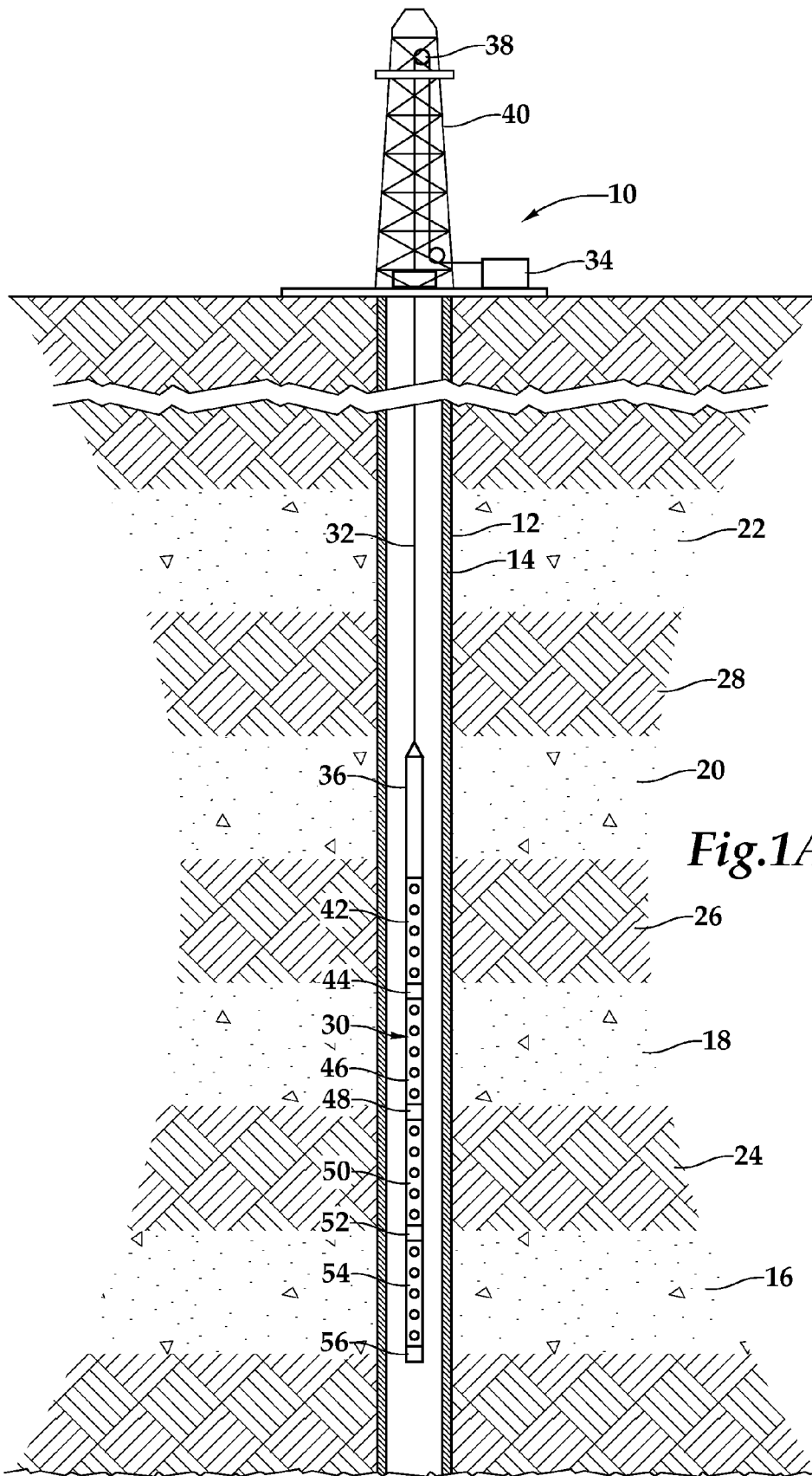
(73) **Assignee: HALLIBURTON ENERGY  
SERVICES, INC., Carrollton, TX  
(US)**

(21) **Appl. No.: 12/112,016**

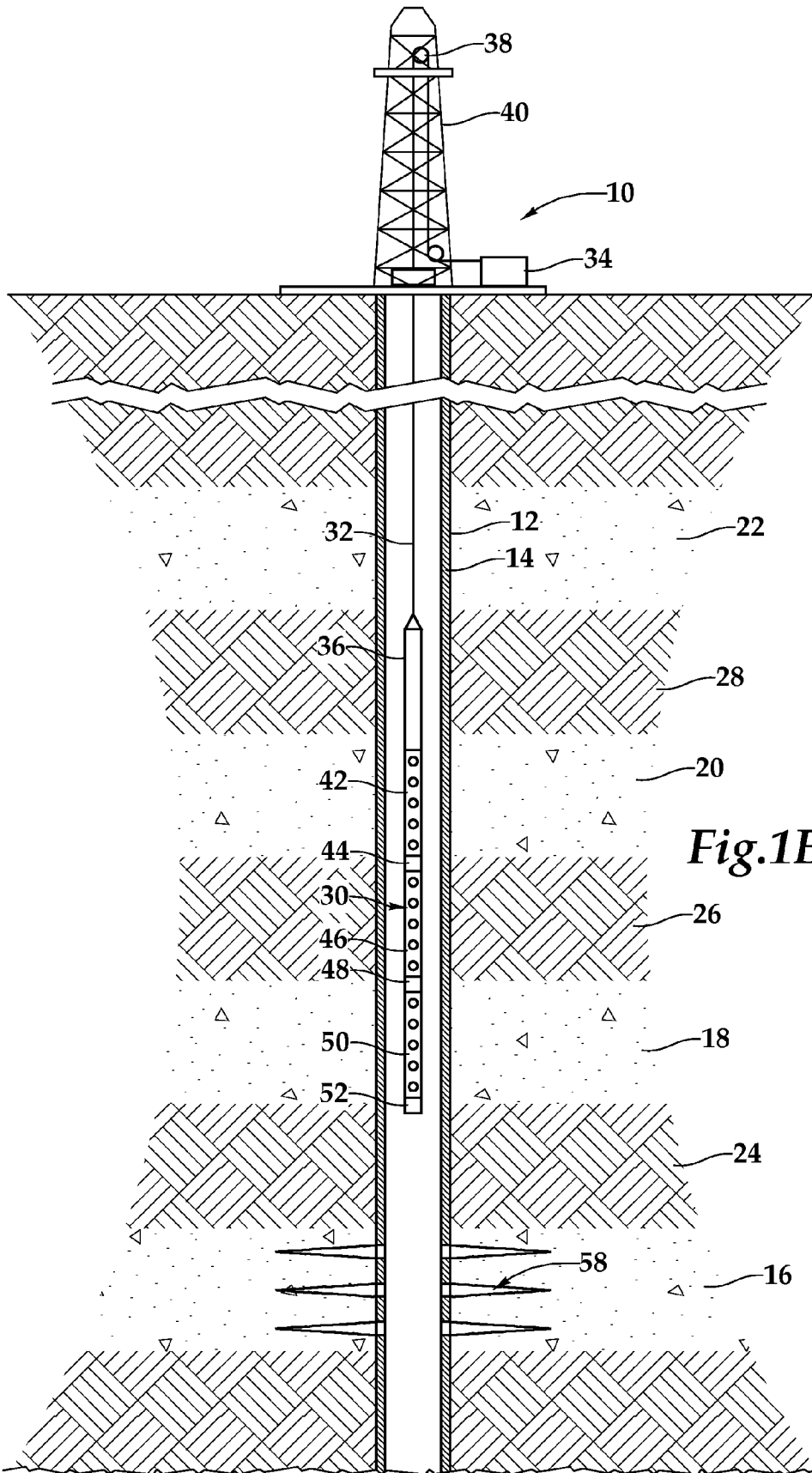
(22) **Filed: Apr. 30, 2008**

A system (100) for selective activation of explosive devices (126, 128, 130, 132) includes a surface controller (102), a downhole controller (106) operable to communicate bidirectionally with the surface controller over a first communication link (108) and a plurality of downhole remote units (114, 116, 118, 120) operable to communicate bidirectionally with the downhole controller (106) over a second communication link (112). One or more sensors (162) are operably associated with the downhole controller (106) and one of the explosive devices (126, 128, 130, 132) is operably associated with each of the downhole remote units (114, 116, 118, 120) such that, responsive to a detonation event, the sensors (162) detect the intensity level of the detonation which is communicated from the downhole controller (106) to the surface control (102) over the first communication link (108).





*Fig. 1A*



*Fig.1B*

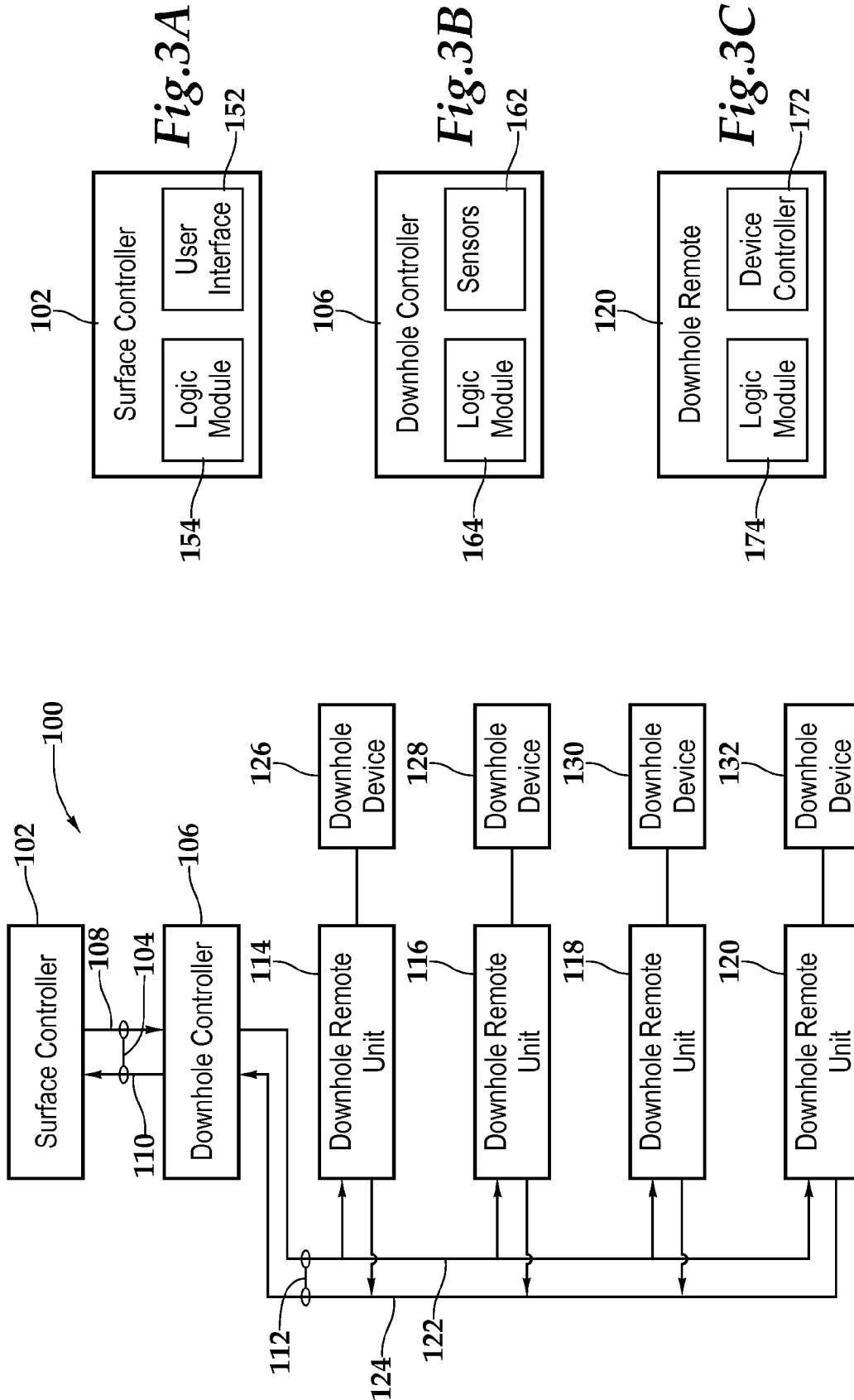
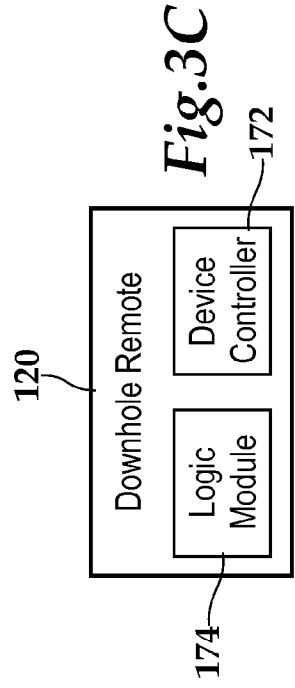
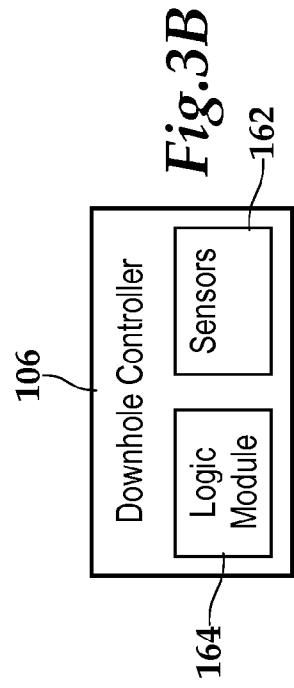
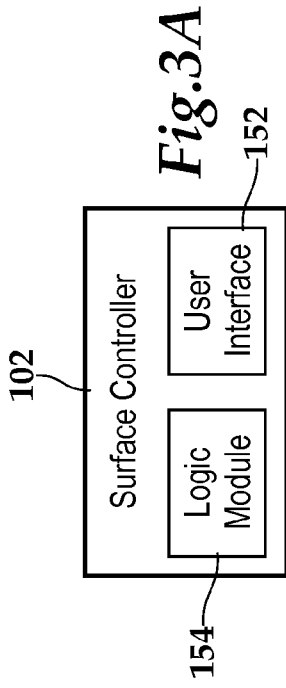


Fig. 2



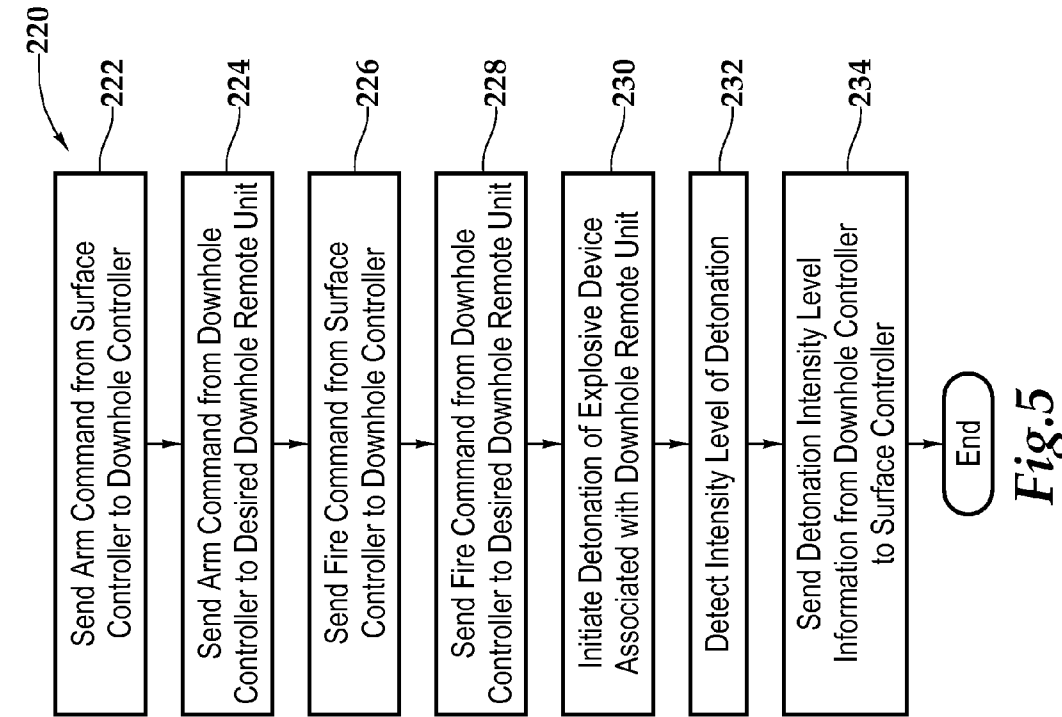


Fig.5

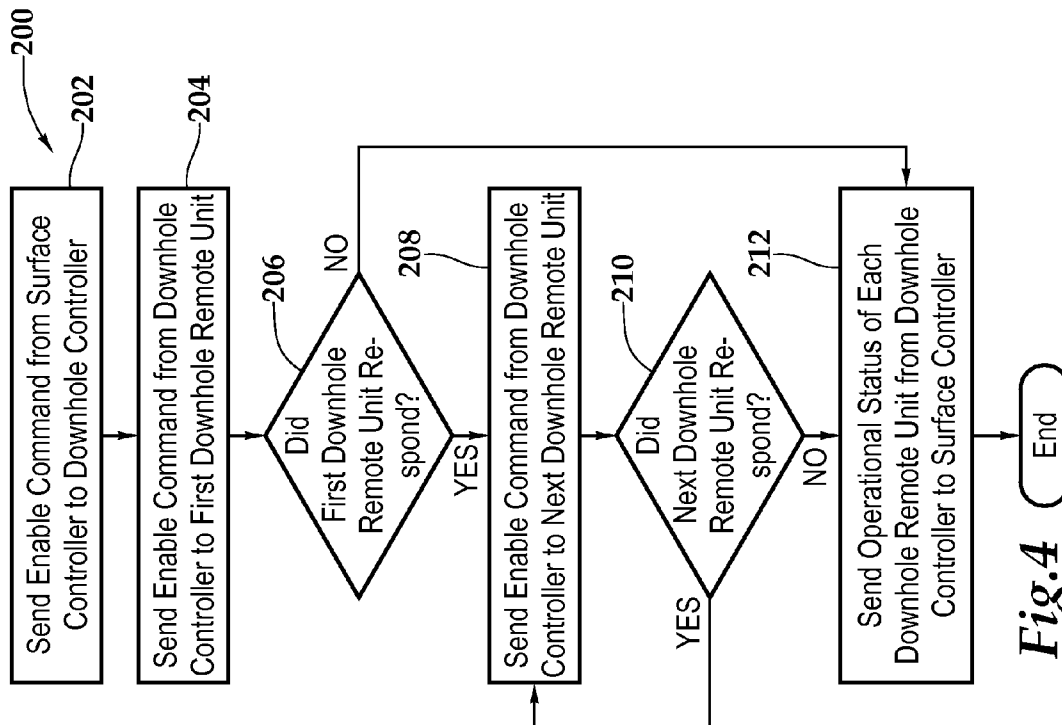


Fig.4

# 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.