



US 20040054291A1

(19) **United States**

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

(10) **Pub. No.: US 2004/0054291 A1**

(43) **Pub. Date: Mar. 18, 2004**

(54) **PULSE OXIMETRY EAR SENSOR**

Publication Classification

(76) Inventors: **Christian Schulz**, Rancho Santa Margarita, CA (US); **Massi E. Kiani**, Laguna Niguel, CA (US); **Eugene Mason**, La Mirada, CA (US)

(51) **Int. Cl.⁷ A61B 5/00**

(52) **U.S. Cl. 600/500; 600/559**

Correspondence Address:

KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614 (US)

(57) **ABSTRACT**

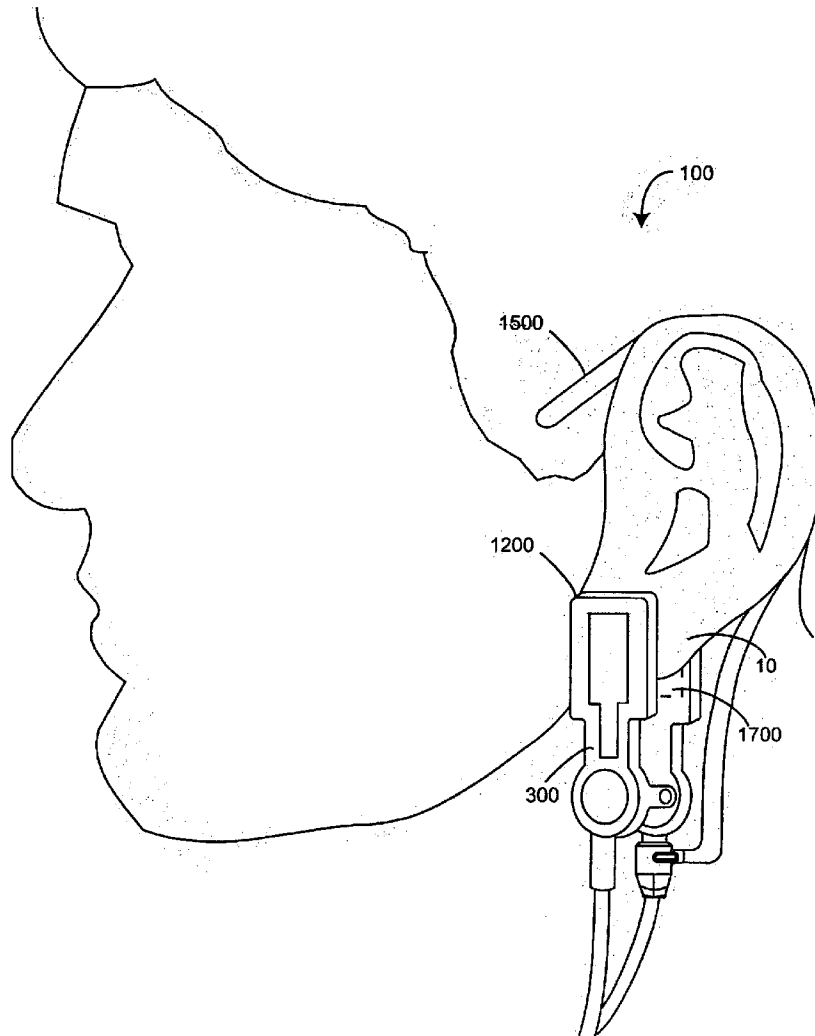
An embodiment of an ear sensor assembly comprises an emitter pad and a detector pad. A clip is configured to removably retain each of the pads. The clip has an open position for placement on an ear tissue site and a closed position for securing the pads to opposite sides of the site. The assembly includes a sensor connector adapted to electrically communicate with a host instrument. A sensor cable has a first end terminating at the pads and a second end terminating at the sensor connector and provides electrical communications between the pads and the connector. In one embodiment, one or more silicone lenses or removable adhesive tabs aid in relieving patient discomfort and pressure necrosis.

(21) Appl. No.: **10/631,882**

(22) Filed: **Jul. 31, 2003**

Related U.S. Application Data

(60) Provisional application No. 60/412,281, filed on Sep. 21, 2002. Provisional application No. 60/410,499, filed on Sep. 14, 2002.



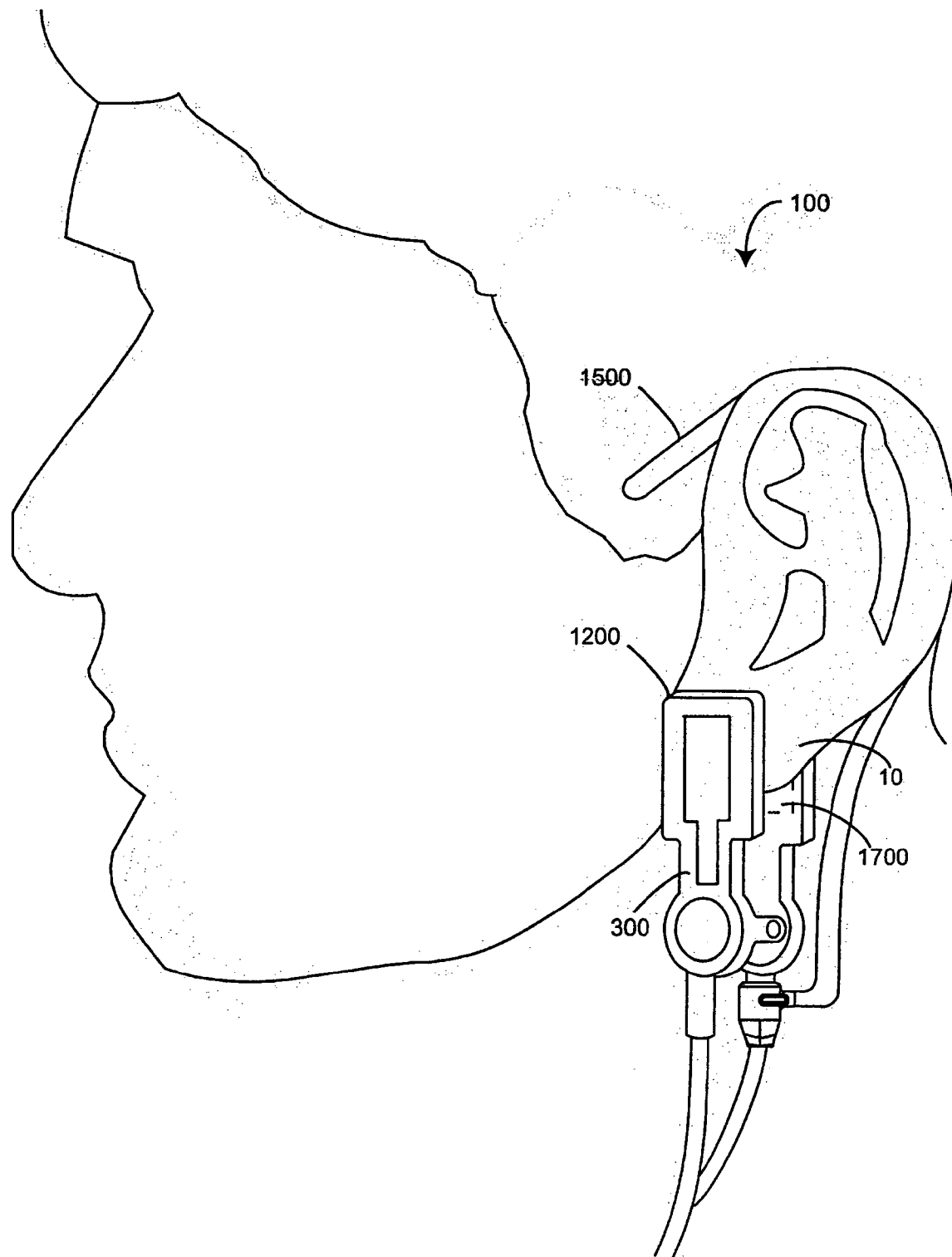


FIG. 1

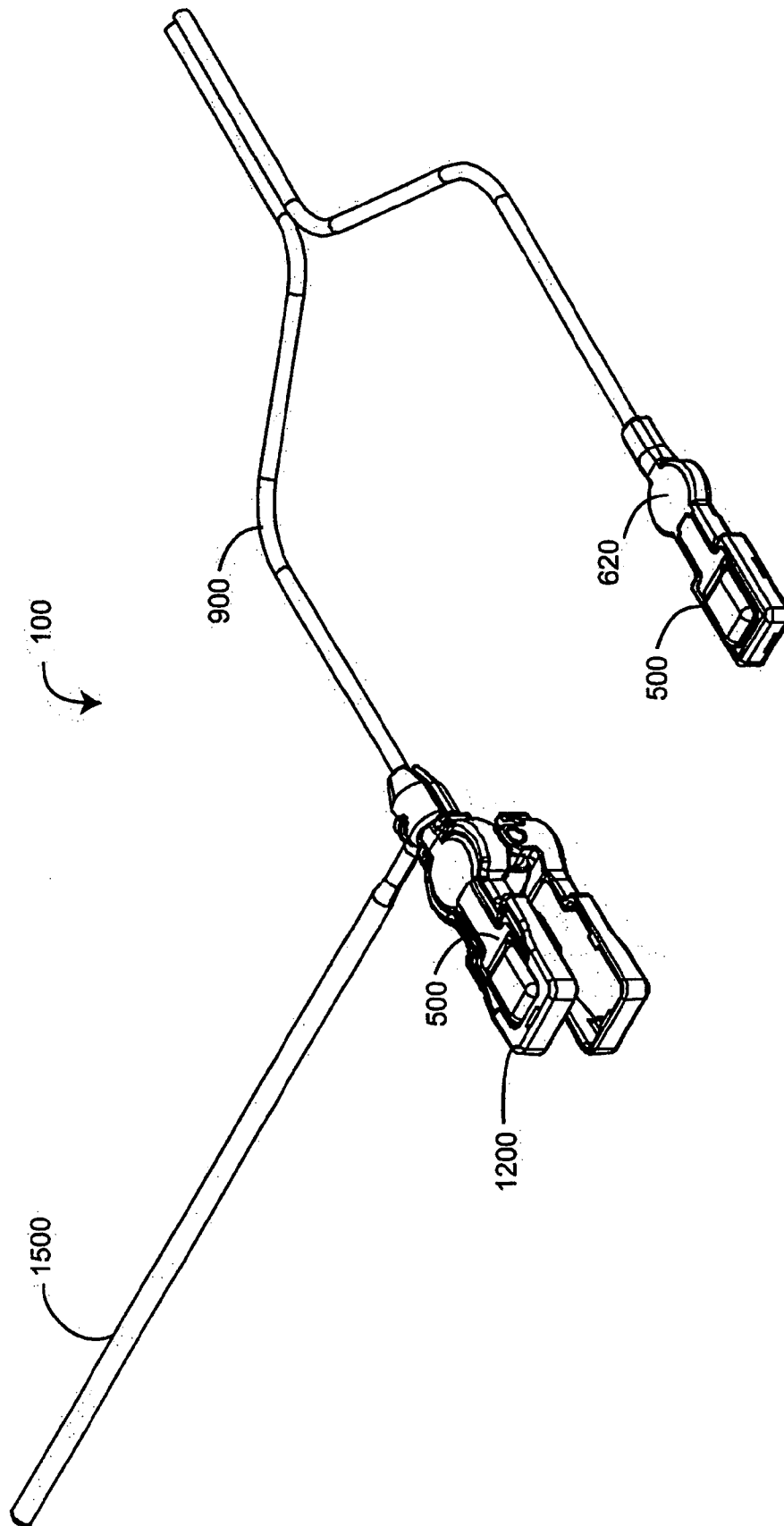


FIG. 2

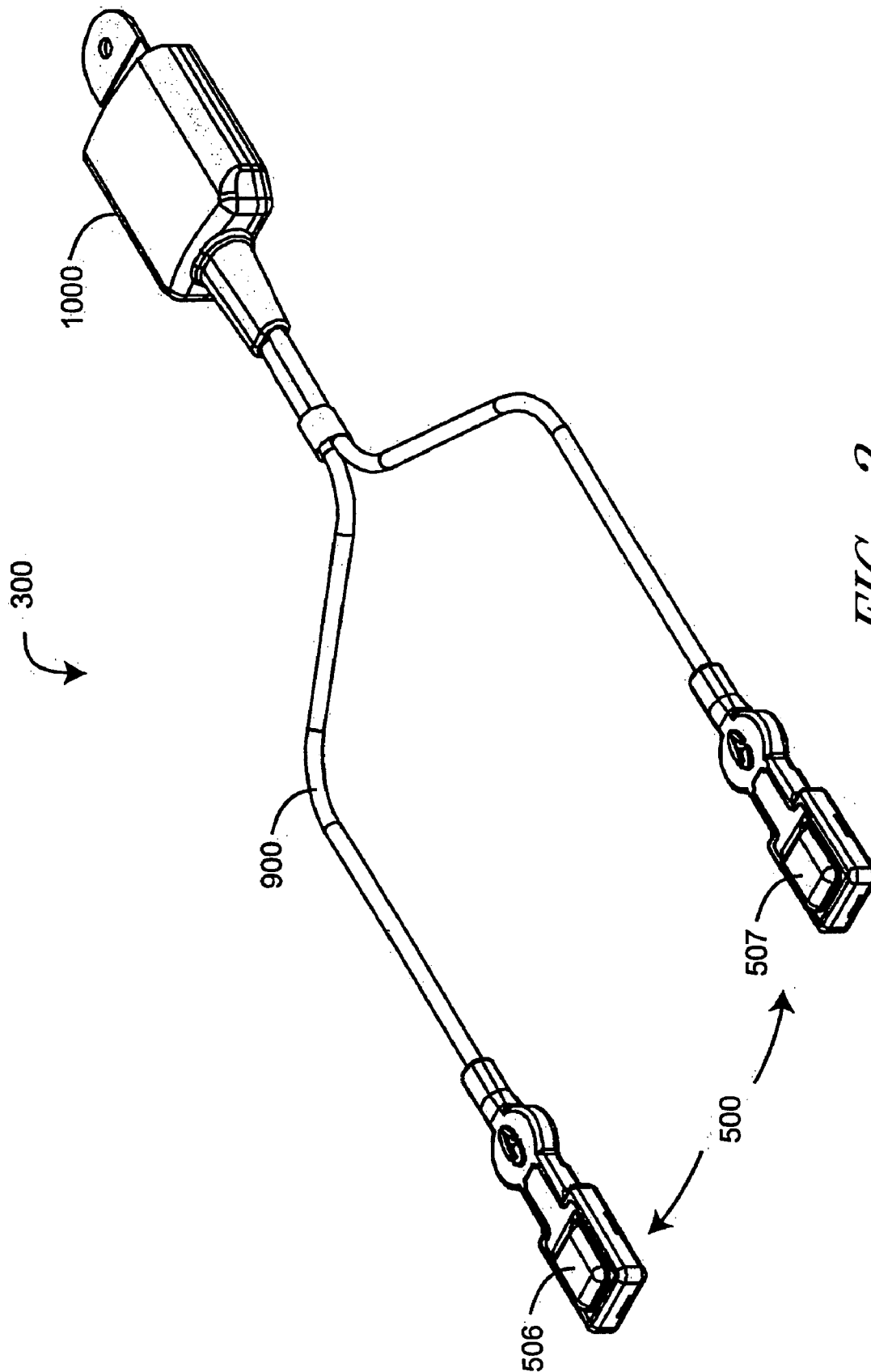


FIG. 3

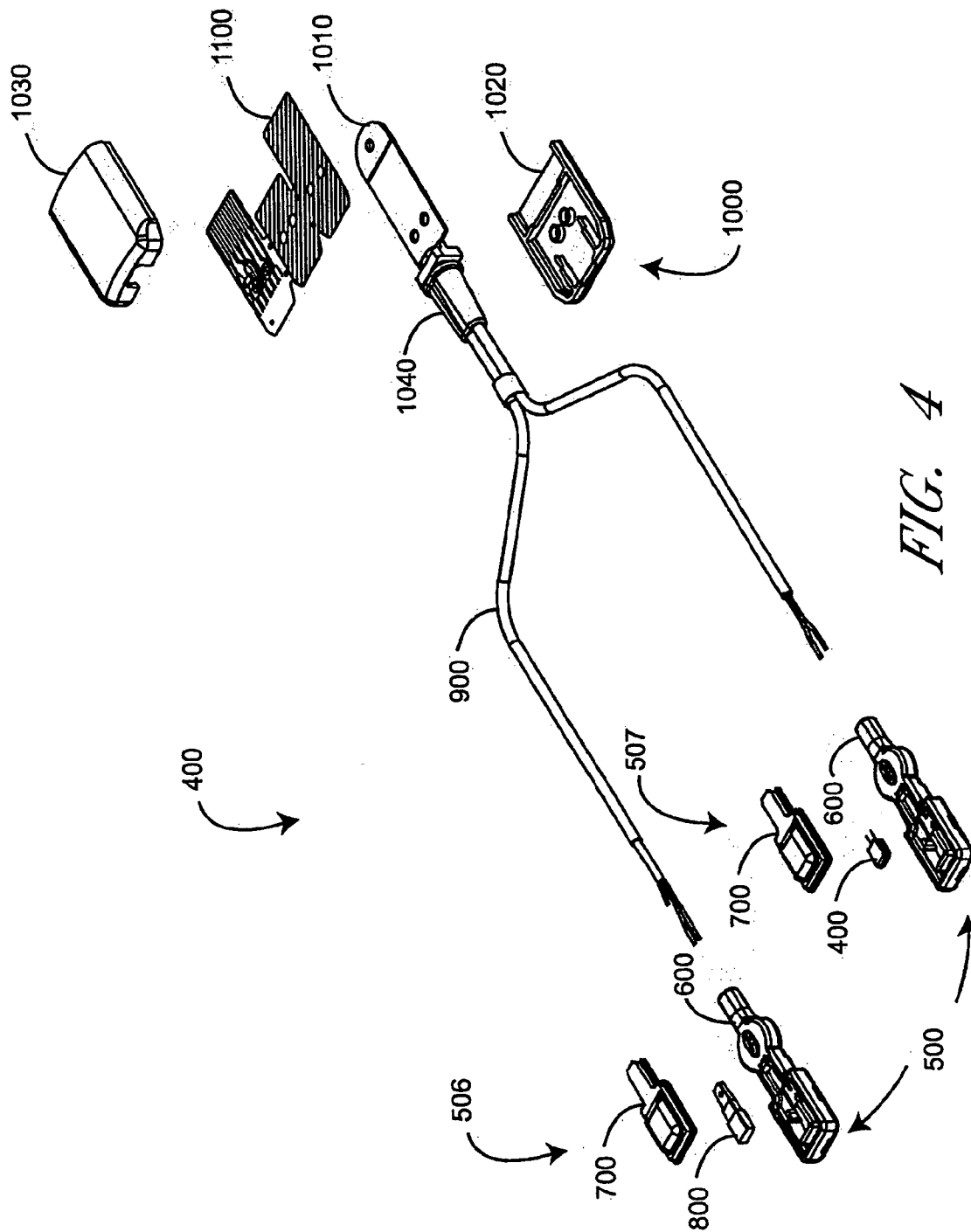


FIG. 4

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.