

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2002/0007137 A1 Utterberg et al.

(43) Pub. Date: Jan. 17, 2002

(54) DIALYSIS PRESSURE MONITORING WITH **CLOT SUPPRESSION**

Inventors: David S. Utterberg, Seattle, WA (US); William J. Schnell, Libertyville, IL (US)

> Correspondence Address: **Garrettson Ellis** SEYFARTH SHAW 55 East Monroe Street Chicago, IL 60603 (US)

(21) Appl. No.: 09/957,990

(22) Filed: Sep. 21, 2001

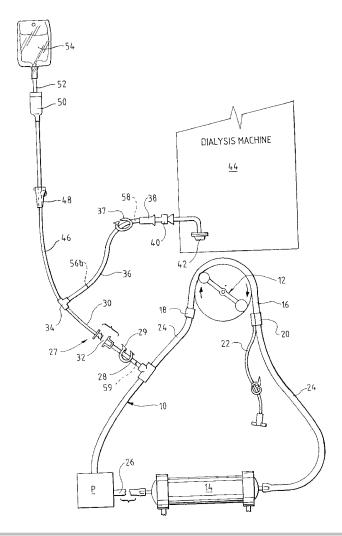
Related U.S. Application Data

(63) Continuation-in-part of application No. 09/203,274, filed on Dec. 1, 1998.

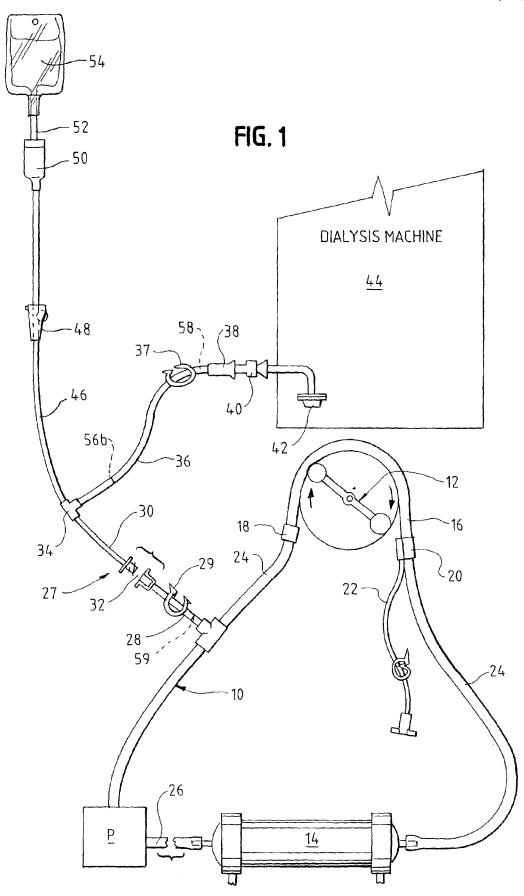
Publication Classification

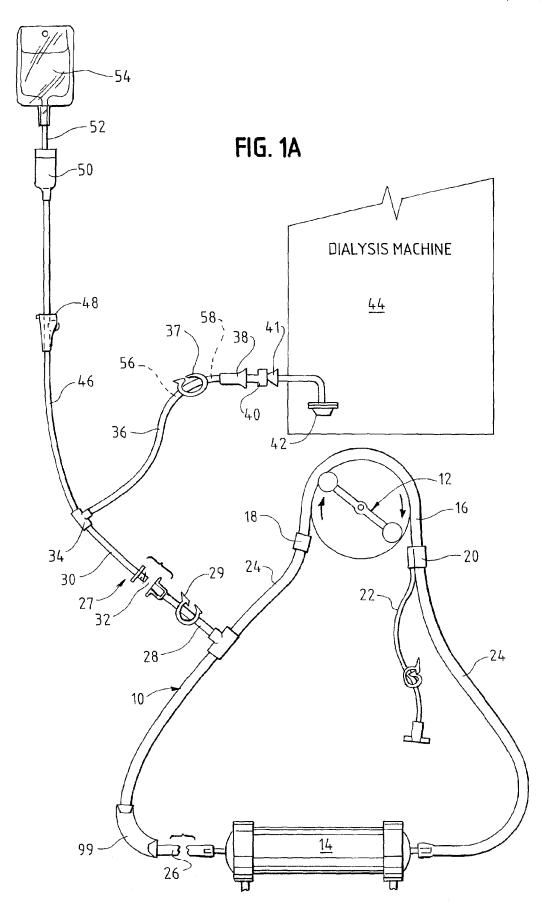
ABSTRACT (57)

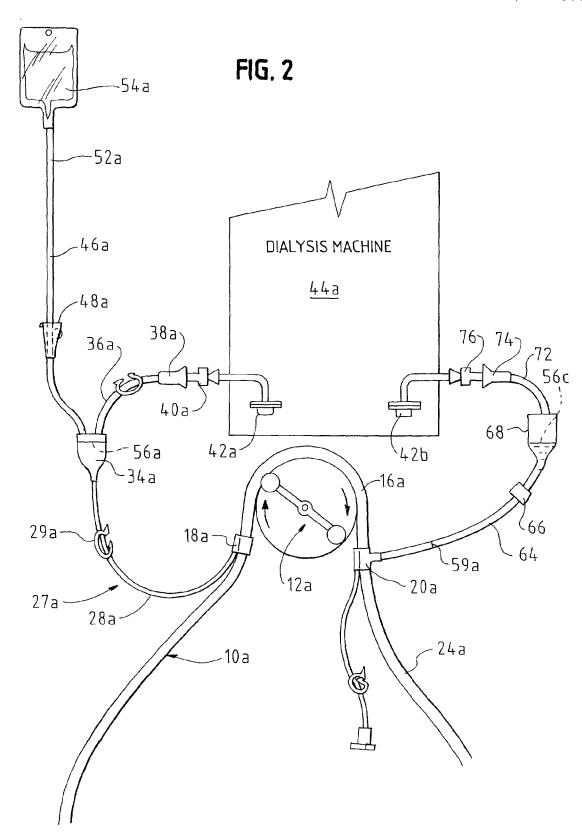
Pressure is sensed in blood flow tubing by placing an aqueous, preferably isotonic, substantially cell-free solution into branch connection tubing (branch tube) that connects in branching relation with the blood flow tubing at one end. The branch connection tubing may also connect in use with a pressure transducer unit at its other end, or pressure may be mechanically indicated. An air volume is maintained, occupying a portion of the branch connection tubing which is adjacent to the other end. One flows positively or negatively pressurized blood through the blood flow tubing, with the result that the pressure of the blood is communicated through the aqueous solution and the air volume in the branch connection tubing to the pressure transducer unit, with the blood being spaced from the air volume. Preferably, substantially all of the branch connection tubing containing the aqueous solution and air volume has an inner diameter of substantially no more than 5 mm. This facilitates the continued separation of blood and solution when pressurized blood enters the branch connection tubing through the one

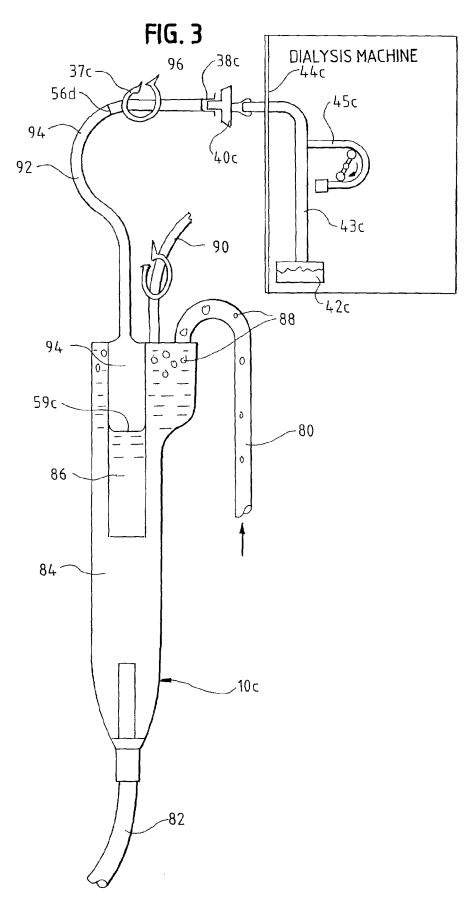












DOCKET A L A R M

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.

