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(71) Applicant *(for all designated States except US)*: **DEKA PRODUCTS LIMITED PARTNERSHIP** [US/US]; 340 Commercial Street, Manchester, NH 03101 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **GRANT, Kevin, L.** [US/US]; 12 Burgess Drive, Litchfield, NH 03052 (US). **WILT, Michael, J.** [US/US]; 136 Castle Hill Road, Windham, NH 03087 (US). **TRACEY, Brian, D.** [US/US]; 151 Talent Road, Litchfield, NH 03052 (US). **RUDOLF, Brett, A.** [US/US]; 4 Nancy Lane, Hooksett, NH 03106 (US). **COLLINS, David, E.** [US/US]; 945 Riverside Drive, Unit 25D, Methuen, MA 01844 (US). **PANNETON, Lisa, A.** [US/US]; 641 Hevey Street, Manchester, NH 03102 (US). **DALE, James, D.** [US/US]; 37 White Plans Drive, Nashua, NH 03062 (US). **BODWELL, Jesse, T.** [US/US]; 168 Island Pond Road, Manchester, NH 03109 (US).

(74) Agent: **HUNT, Robert, E.**; Wolf, Greenfield & Sacks, P.C., 600 Atlantic Avenue, Boston, MA 02210-2206 (US).

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(54) **Title**: HEMODIAL YSIS SYSTEM

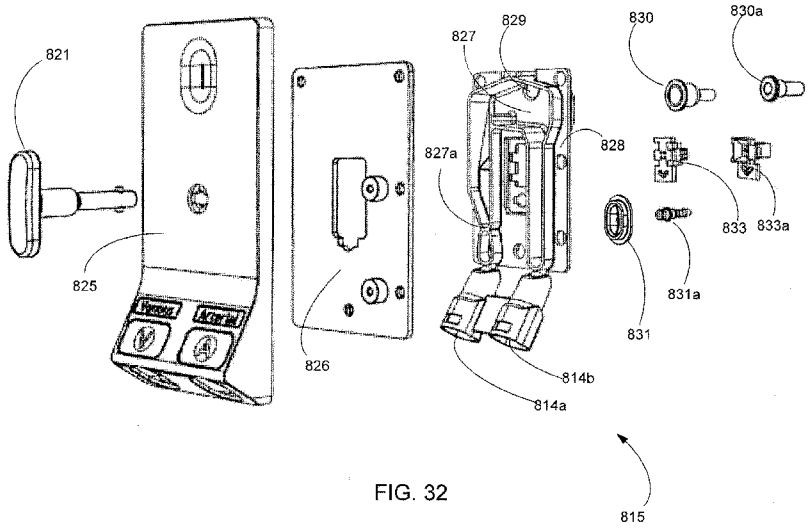


FIG. 32

(57) **Abstract**: A drain cassette for a dialysis unit has a fluid channel between venous and arterial connection ports, and a valve may controllably open and close fluid communication between a drain outlet port and the venous connection port or the arterial connection port. A blood circuit assembly and drain cassette may be removable from the dialysis unit, e.g., by hand and without the use of tools. A blood circuit assembly may include a single, unitary member that defines portions of a pair of blood pumps, control valves, channels to accurately position flexible tubing for an occluder, an air trap support, and/or other portions of the assembly. A blood circuit assembly engagement device may assist with retaining a blood circuit assembly on the dialysis unit, and/or with removal of the assembly. An actuator may operate a retainer element and an ejector element that interact with the assembly.

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