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

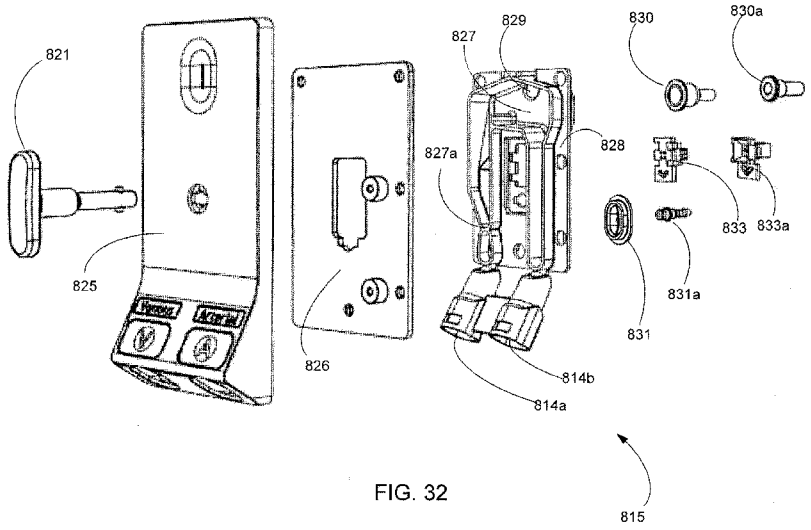


FIG. 32

(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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