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United States Patent [19]

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Erickson et al.

[45] Date of Patent: **Jun. 28, 1994**

- [54] **CAPACITIVE DISCHARGE CONTROL CIRCUIT FOR USE WITH ELECTROLYTIC FLUID TREATMENT SYSTEMS**
- [75] Inventors: **Robert K. Erickson, Belmont; Francois X. Prinz, San Jose, both of Calif.**
- [73] Assignee: **Water Regeneration Systems, Inc., Belmont, Calif.**
- [21] Appl. No.: **901,411**
- [22] Filed: **Jun. 19, 1992**
- [51] Int. Cl.⁵ **C02F 1/461**
- [52] U.S. Cl. **204/149; 204/152; 204/228; 204/305; 204/400; 204/406; 204/412**
- [58] Field of Search **204/149, 152, 228, 305, 204/400, 406, 412**

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Assistant Examiner—Arun S. Phasge
Attorney, Agent, or Firm—Christensen, O'Connor, Johnson & Kindness

[57] ABSTRACT

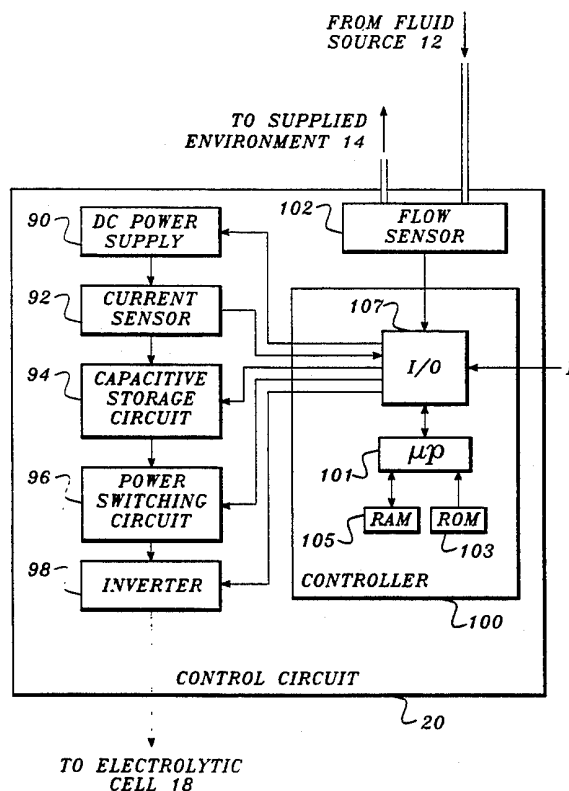
An electrolytic filter system (16) is disclosed for use in treating fluid provided by a fluid source (12) to a supplied environment (14). The system includes an electrolytic cell (18), whose operation is governed by a control circuit (20) to allow a desired average current to be applied to the cell substantially independent of variations in fluid resistivity, to allow the cell to simultaneously achieve, for example, the desired removal of contaminants, killing of biological materials, and alteration of the fluid's chemical characteristics, and to provide relatively high levels of energy to the fluid quickly and efficiently.

27 Claims, 6 Drawing Sheets

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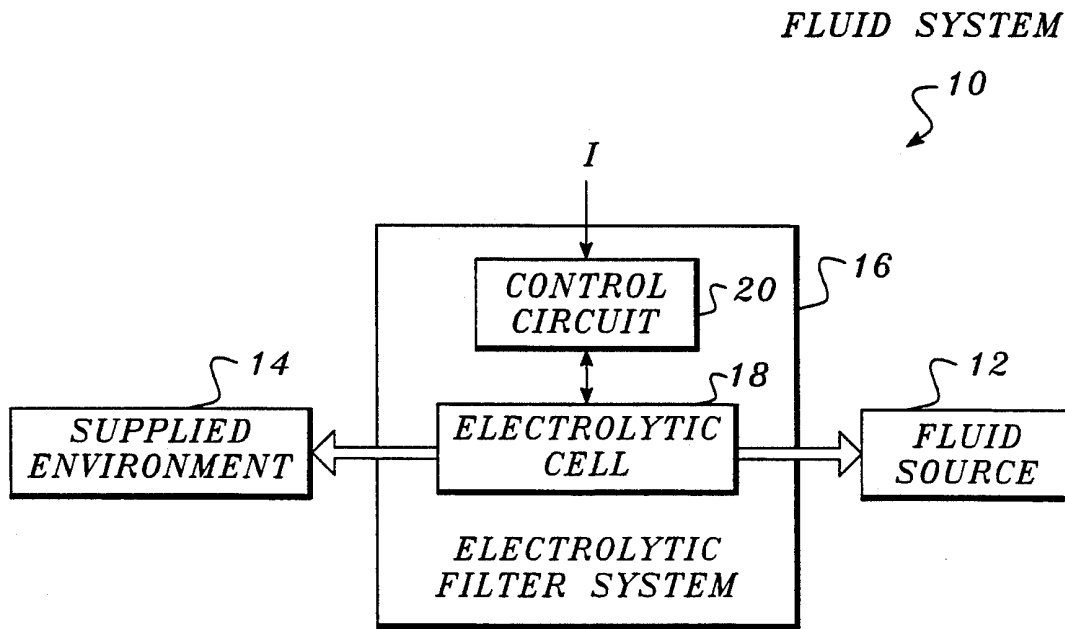


FIG. 1.

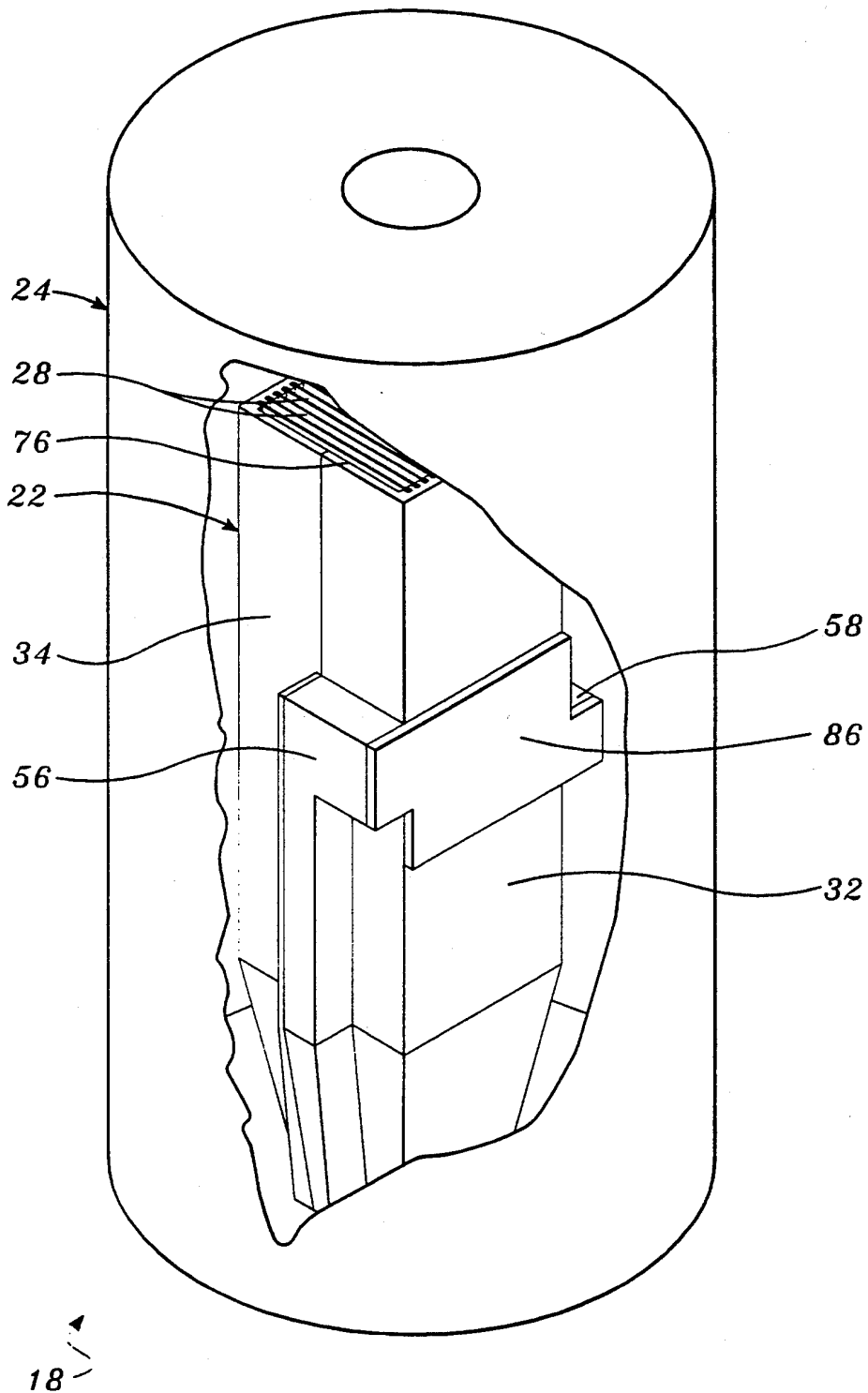


FIG. 2.

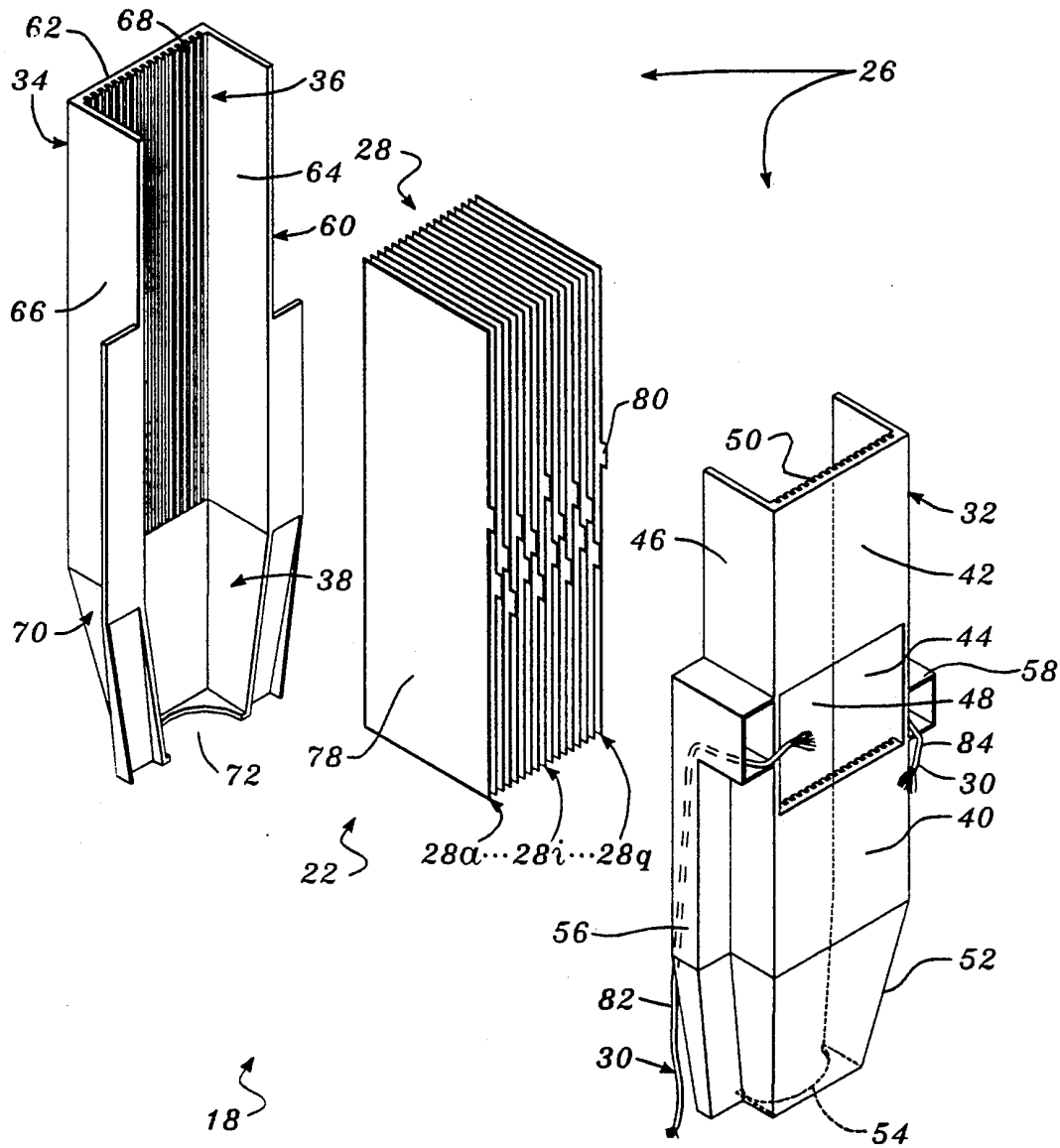


FIG. 3.

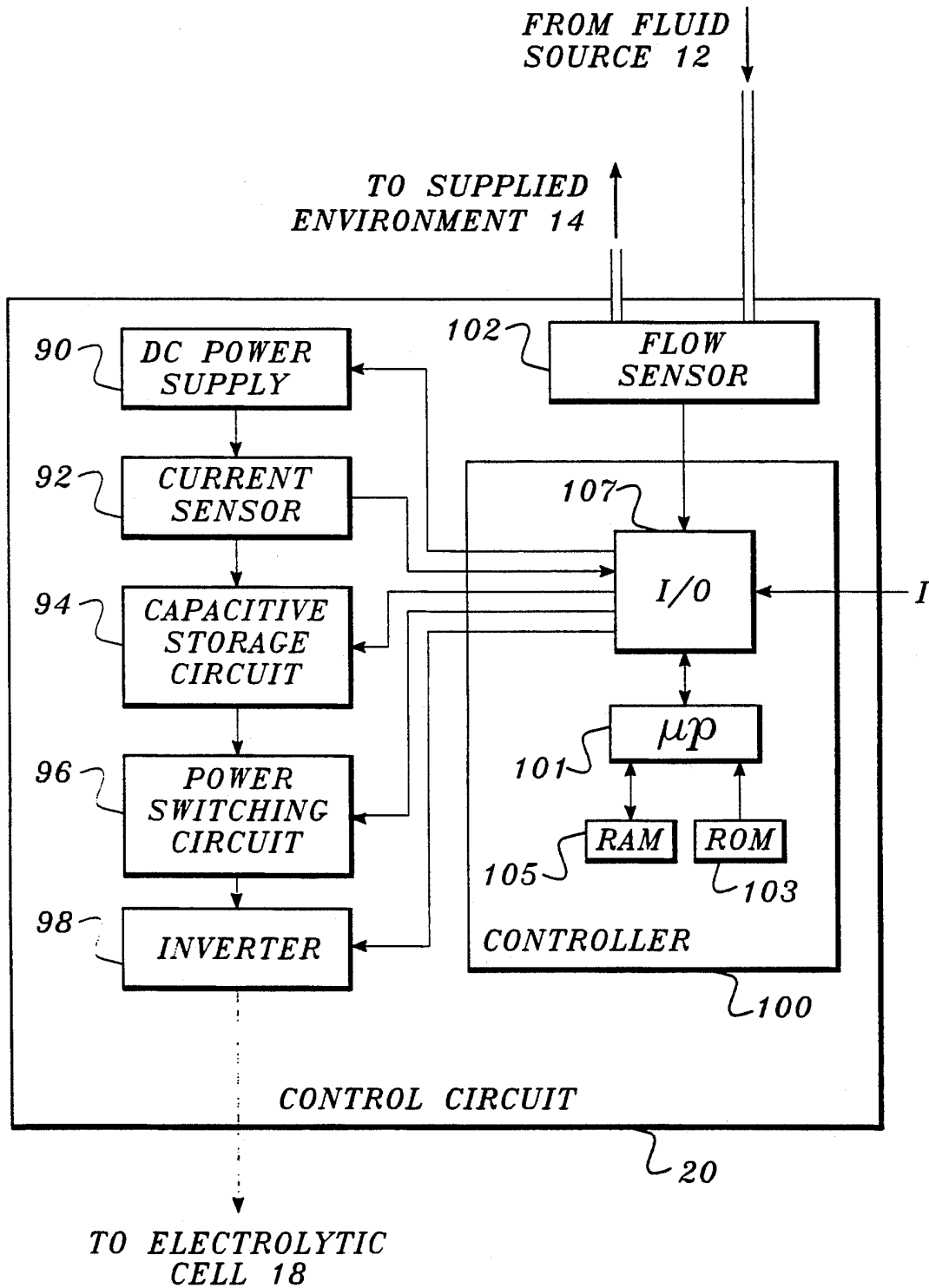


FIG. 4.

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