United States Patent [19]

Davies

[54]	ELECTROLYTIC LIQUID PURIFICATION PROCESS AND APPARATUS			
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[51]	Int. Cl.4	C02F 1/46; C25B 15/08; C25B 9/00; B01D 13/02		
[52]				
[58]		arch		
[56]		References Cited		
	U.S. PATENT DOCUMENTS			

2,864,750 12/1958 Hughes, Jr. et al. 204/275 X

3,728,245 4/1973 Preis et al. 204/275

[11] Patent	Number:
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4,917,782

[45] Date of Patent:

Apr. 17, 1990

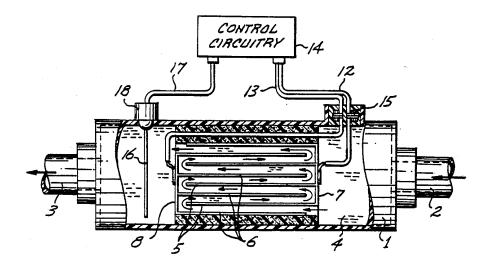
3,835,018	9/1974	Casanovas et al.	204/228
3,865,710	2/1975	Phipps	204/276 X
3,925,176	12/1975	Okert	204/152
4,419,206	12/1983	Frame	204/149 X
4,425,216	1/1984	Neymeyer	204/270
4,436,601	3/1984	Branchick et al.	204/149
4,572,775	2/1986	Paniagua	204/276 X
4,623,436	11/1986	Umehara	204/149

Primary Examiner—Donald R. Valentine Attorney, Agent, or Firm—Christensen, O'Connor, Johnson & Kindness

[57] ABSTRACT

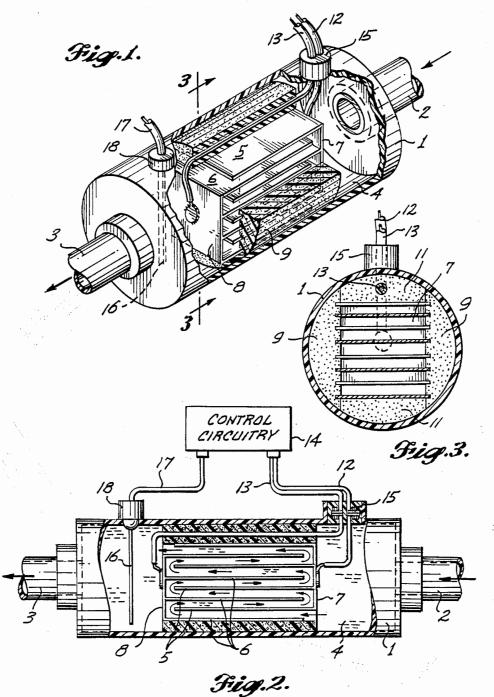
Liquid is clarified by passing it between spaced plates of a stack including two interleaved sets of plates, one set being connected to one direct current lead and the other set being connected to the other direct current lead. The liquid may flow through the spaces between the plates in a single direction in parallel paths or may flow in a serpentine path. Impurities removed from the liquid adhere to the plates and may be purged from the plates periodically by reversing the direction of flow of current between the plates. Impurities sloughed off the plates are trapped in a filter in the cell outlet.

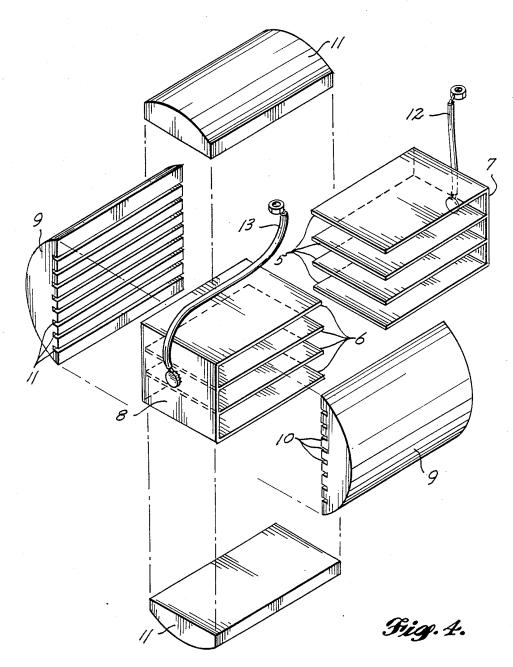
4 Claims, 11 Drawing Sheets

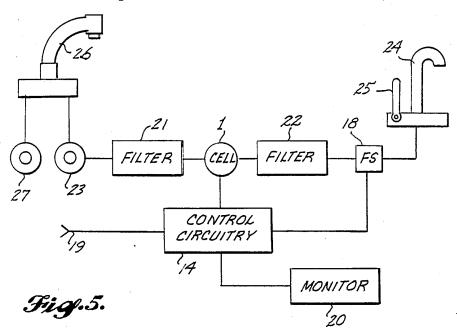


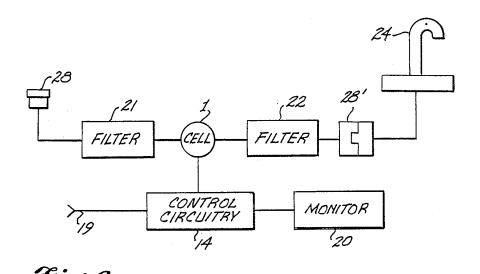


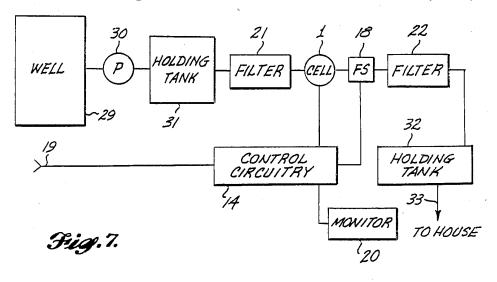
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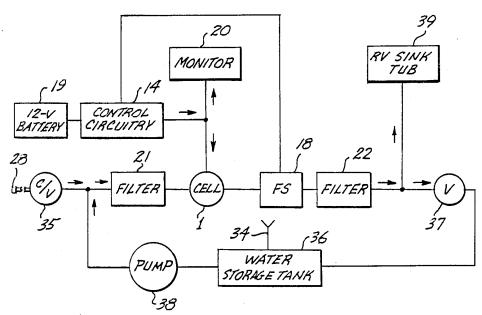


Fig. 8.

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