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# United States Patent [19]

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Schoeberl

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[54] **APPARATUS FOR THE STERILIZATION OF WATER**

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[21] Appl. No.: **920,510**

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§ 102(e) Date: **Oct. 1, 1992**

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PCT Pub. Date: **Jul. 9, 1992**

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Khourie and Crew

### [57] ABSTRACT

### [30] Foreign Application Priority Data

Dec. 19, 1990 [DE] Germany ..... 40 40 694.6

An apparatus for sterilizing water by anodic oxidation. A reactor contains a plurality of anodes (3) and cathodes (4) arranged as parallel plates within the reactor. The anodes and cathodes are arranged in series within four modules (2). Each module includes two draw bolts (34, 44) extending through bores in the anodes and cathodes and threadably engaged to contact bolts (7) on either side of the module. The contact bolts provide high surface pressure to the anodes and cathodes so that high electrical currents can be conducted through the reactor. The anodes each consist of materials that provide a greater overvoltage with respect to oxygen generation than with respect to chlorine generation. Thus, the reactor can produce a sufficient quantity of oxidants to sterilize the water without adding chlorine compounds to the water.

[51] Int. Cl.<sup>6</sup> ..... **C02F 1/461**

[52] U.S. Cl. .... **204/263; 204/269; 204/272; 204/275; 204/290 R; 204/290 F**

[58] Field of Search ..... 204/269, 272, 275, 290 R, 204/290 F, 149, 263

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**3 Claims, 6 Drawing Sheets**

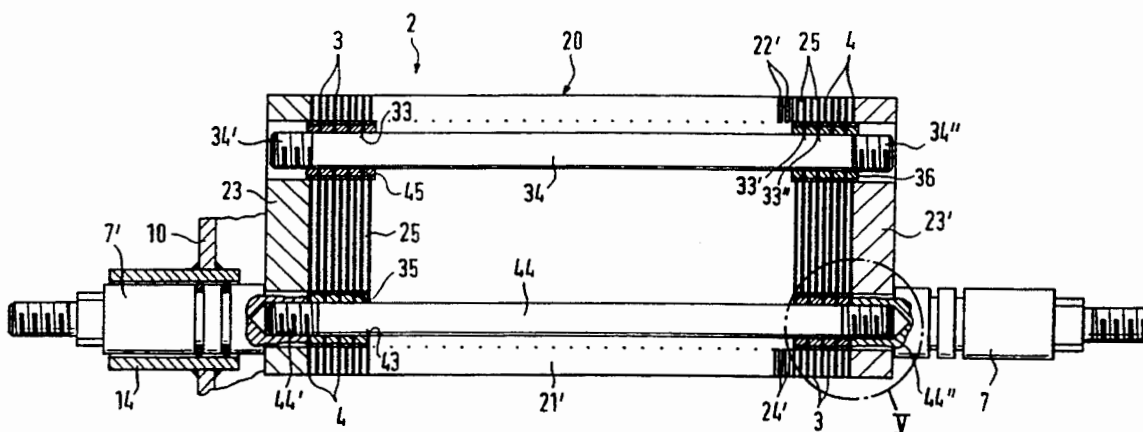


Fig. 1

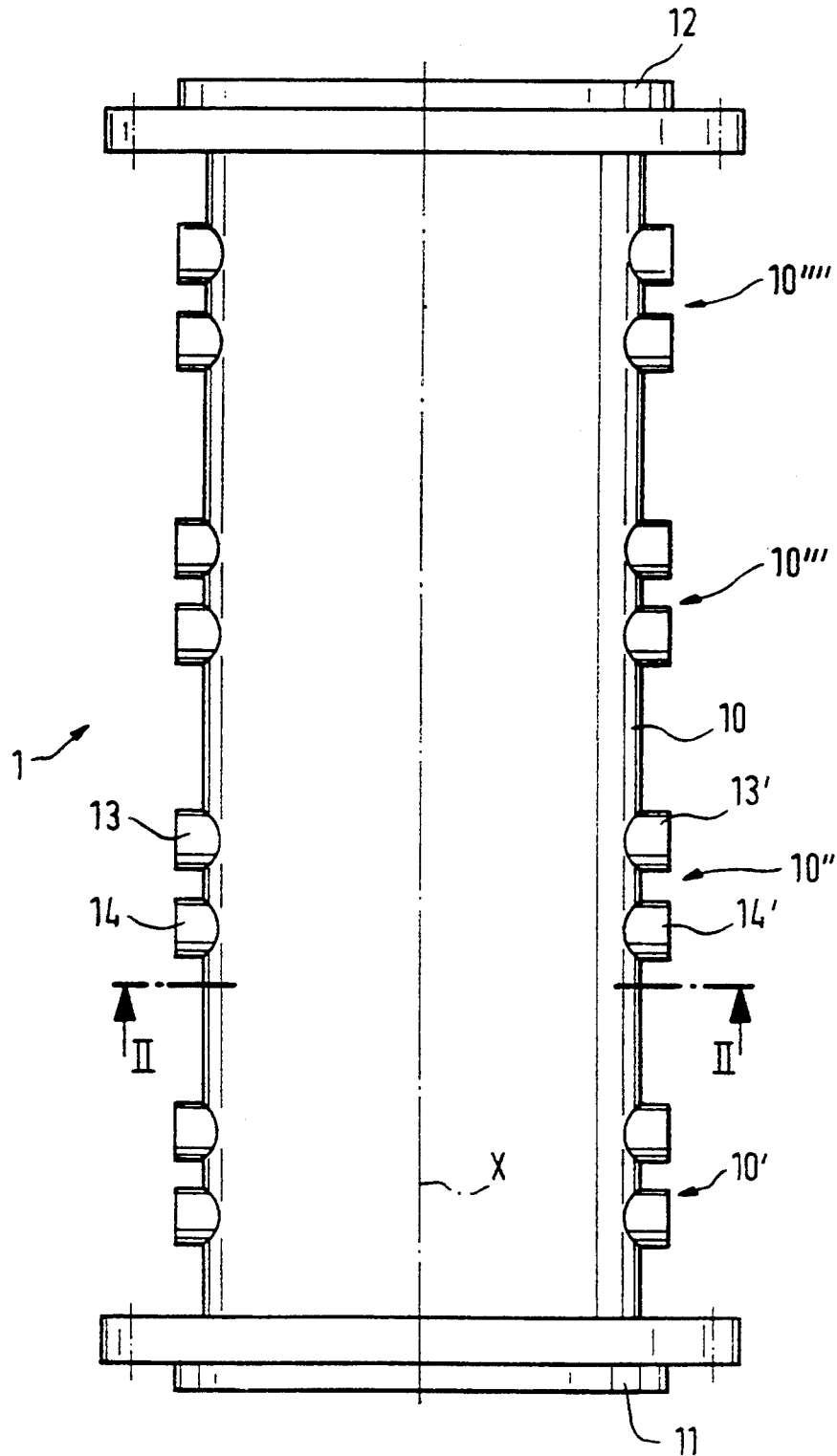


Fig. 2

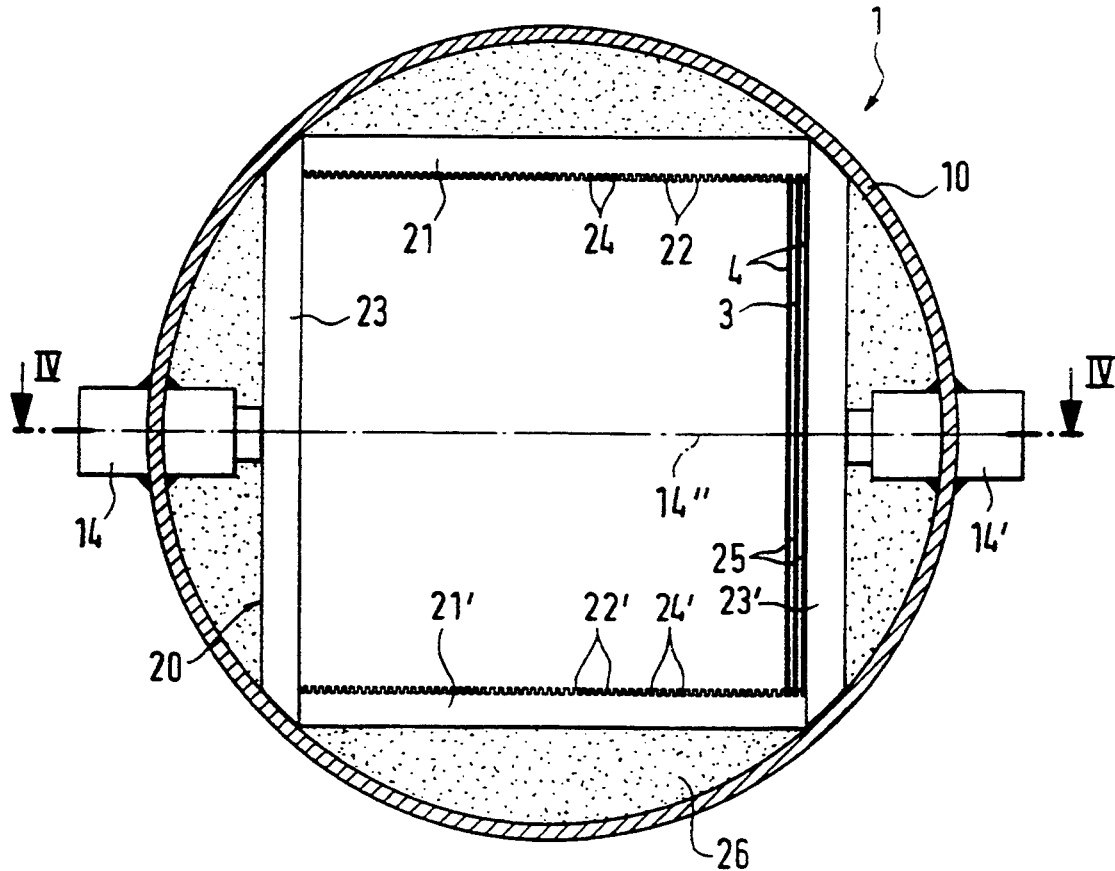


Fig. 3

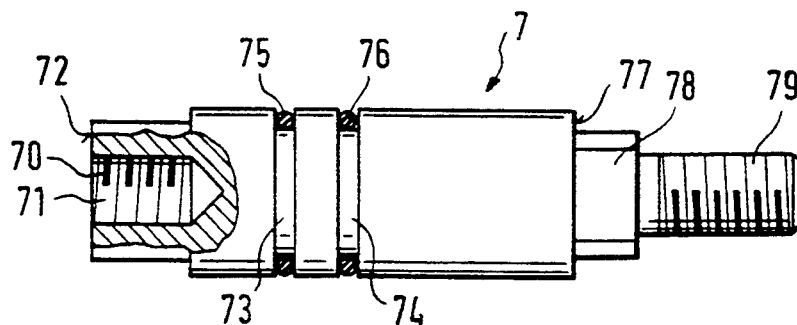


Fig. 4

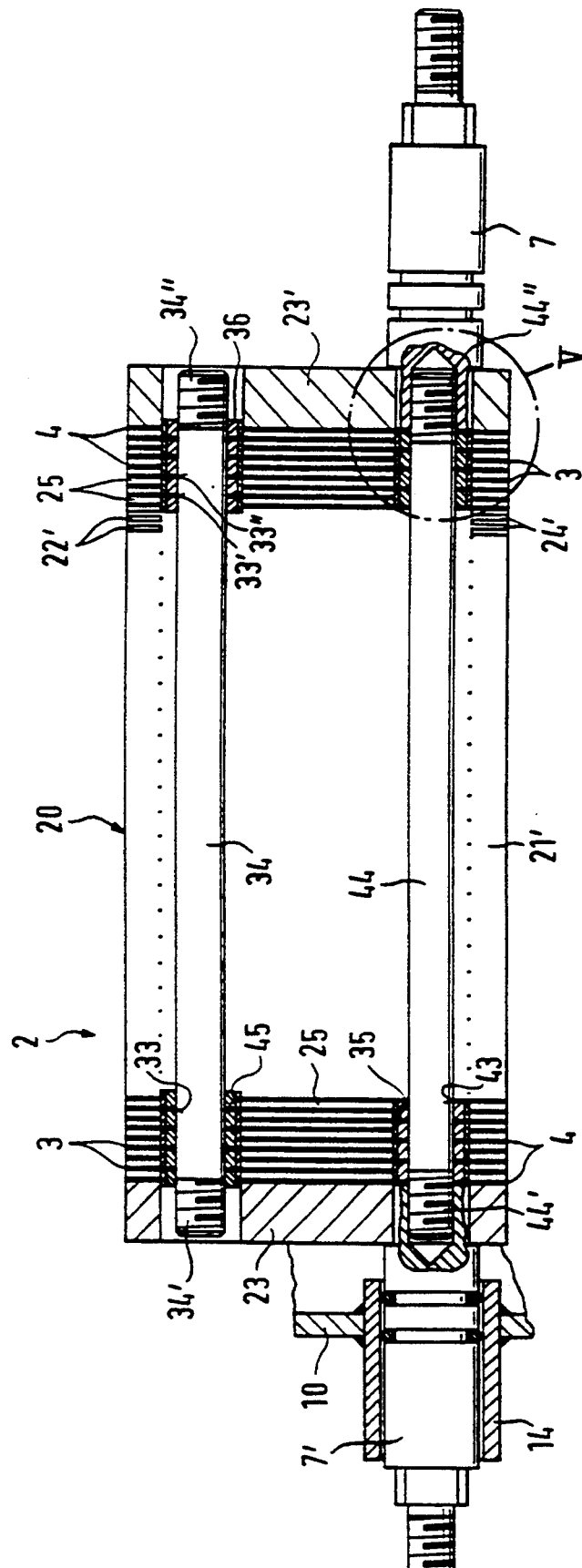


Fig.5

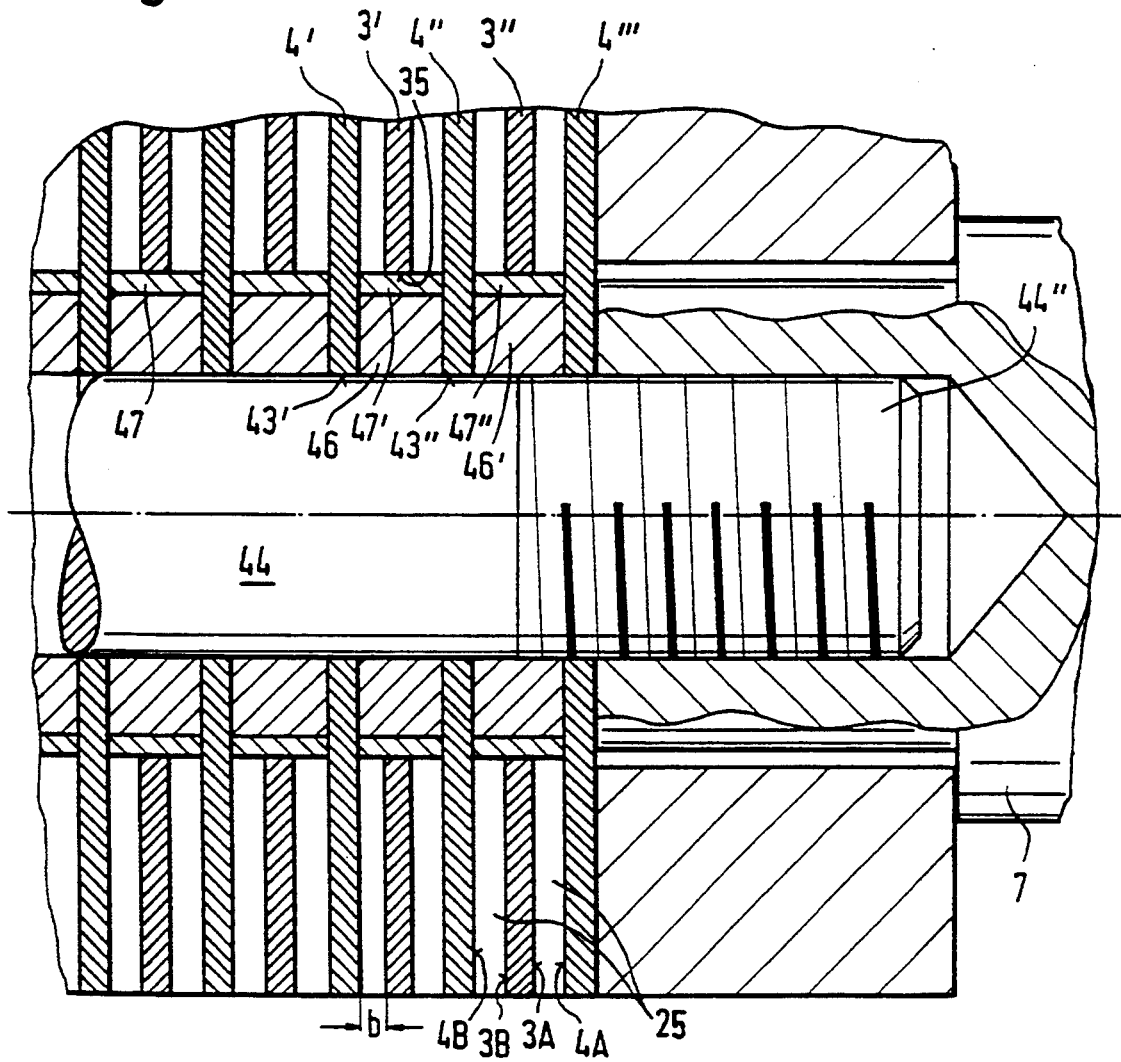
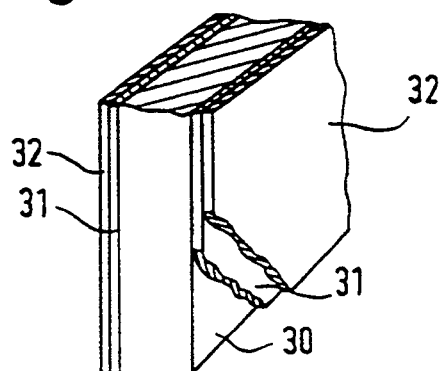


Fig.6



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