

**EUROPEAN PATENT APPLICATION**

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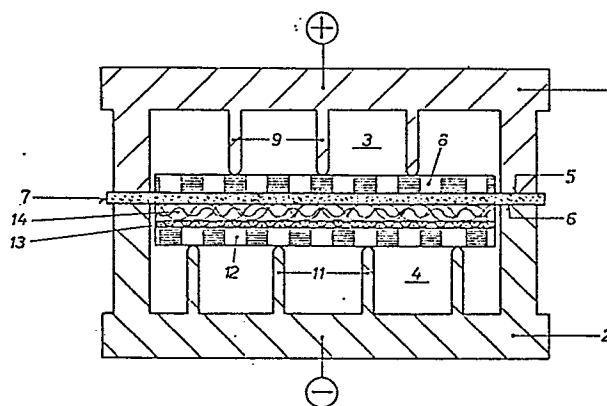
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**Electrolysis cell and method of generating halogen.**

Halogen is produced by electrolyzing an aqueous halide in a specially designed cell. The cell comprises an anolyte chamber (3) and a catholyte chamber (4) separated by a permeable membrane or diaphragm (7), notably an ion exchange (generally cation exchange) polymer. At least one electrode comprises at least two sections (13, 14). One section comprises a gas and electrolyte permeable layer, sheet or mat having a catalytic surface, (13) i.e. one having a low overvoltage, (low hydrogen overvoltage if the cathode and low halogen overvoltage if the anode). This layer is spaced from the membrane by a second portion (14) comprising an electroconductive resiliently compressible layer or mat, which is in contact with the membrane on one side thereof, the other side thereof being in contact with the main cathode.

This second or spacer section advantageously has an electrode surface having a higher overvoltage than the first electrode surface. Preferably the cathode has the above construction.

Upon electrolysis of alkali metal chloride or other halide in such a cell and with a cathode of the type described above, a low voltage is obtained even at high current densities and the cathode efficiency is high.





DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. <sup>3</sup> )
X	EP-A-0 050 373 (DE NORA)  * Page 17, lines 25-33; page 18, lines 1-10; figures 1,2; claims *  ---	1,2,3,4	C 25 B 9/00 C 25 B 1/46
P,X	PATENTS ABSTRACTS OF JAPAN, vol. 7, Nr. 195 (C-183) (1340), August 25, 1983 & JP-A-58 96 886 (ASAHI GLASS K.K.), 09-06-1983  * Whole abstract *  ---	1	
A	CHEMICAL ABSTRACTS, vol. 99, July 1983, Nr. 2, page 448, Nr. 12849r. COLUMBUS, OHIO, (US). & JP-A-58 37 181 (TOKUYAMA SODA CO) 04-03-1983.  * Whole abstract *  ---	1	TECHNICAL FIELDS SEARCHED (Int. Cl. <sup>3</sup> )  C 25 B 9/- C 25 B 1/-
A	US-A-4 105 514 (D.D. JUSTICE)  * Column 3, lines 50-68; column 4, lines 1-35  -----	1	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 28-01-1985	Examiner GROSEILLER
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons  & : member of the same patent family, corresponding document	

