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(54) **Title:** ISOLATION OF CARBON DIOXIDE USING A HALOGEN GAS

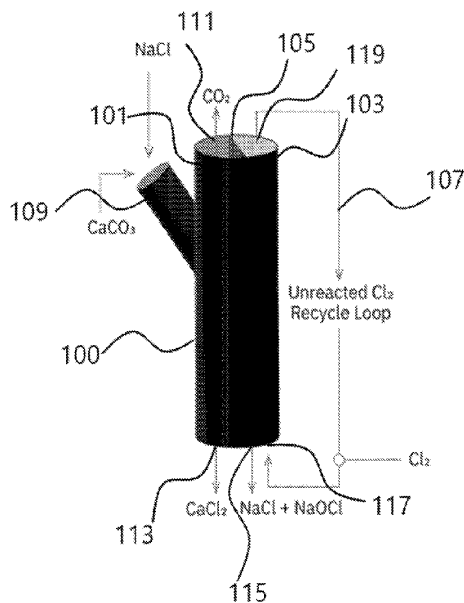


FIG. 1A

(57) **Abstract:** A method of isolating carbon dioxide is disclosed. The method provides a vessel comprising a first chamber and a second chamber separated by a cation exchange membrane, providing in the first chamber a first solution comprising a metal carbonate, providing in the second chamber a second solution comprising an acid, acidifying the first solution by allowing protons from the second solution pass through the cation exchange membrane, forming a salt in the second solution by allowing metal ions from the first solution to pass through the cation exchange membrane, and isolating the carbon dioxide. Apparatus for isolating carbon dioxide is also disclosed.

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