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(54) Title: RENEWABLE ENERGY SOURCE USING PRESSURE DRIVEN FILTRATION PROCESSES AND SYSTEMS

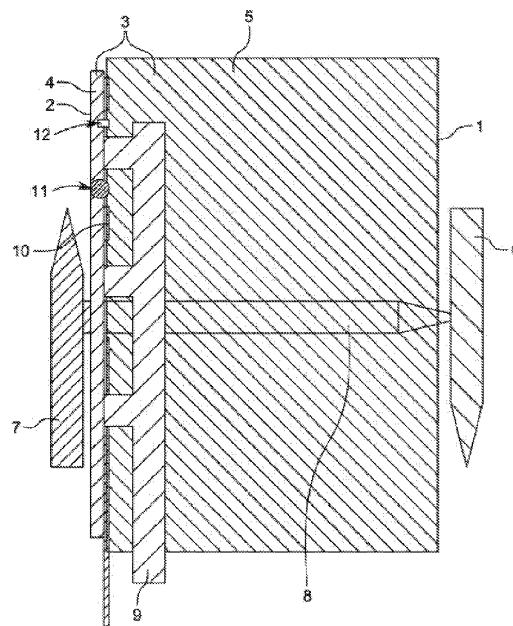


FIG. 2A

(57) Abstract: The co-generation of hydrogen 11 from water 8 produced during pressure driven water desalination/filtration processes, such as reverse osmosis, forward osmosis, pressure retarded osmosis or ultrafiltration. A small part of feed, raw saline solution and/or permeate involved in a desalination/filtration processes is subjected to electrolysis thereby splitting the water to produce hydrogen. This is achieved by the provision of novel RO type semi-permeable membranes and UF type membrane that incorporate electrodes 9, 10 within the membrane to allow splitting of the water via electrolysis.

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