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(54) Title: JOHNSON AMBIENT HEAT ENERGY CONVERTER

(57) Abstract: An ambient heat energy converter includes a first positive evaporating electrode which functions as the cathode, a membrane separator, a porous barrier membrane, and a second, negative condensing electrode which functions as the anode. Electrodes are porous and facilitate hydrogen-oxygen reactions that electrolyze and reduce water respectively. Porous barrier membrane allows water and protons to pass through but prevents hygroscopic acid or base ions in condensing electrode from passing through, only water and protons can pass. During operation, membrane separator's high affinity for liquid water maintains a tension that pulls liquid water through porous barrier membrane from condensing electrode. Barrier membrane does not allow ions other than water that comprise the hygroscopic material in condensing electrode to pass through. Conversely, the hygroscopic nature of condensing electrode maintains water tension in the opposite direction. A housing surrounds the electrodes and creates a free flowing path.



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