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(54) Title: MEMBRANE-BASED HYDROGEN PURIFIERS

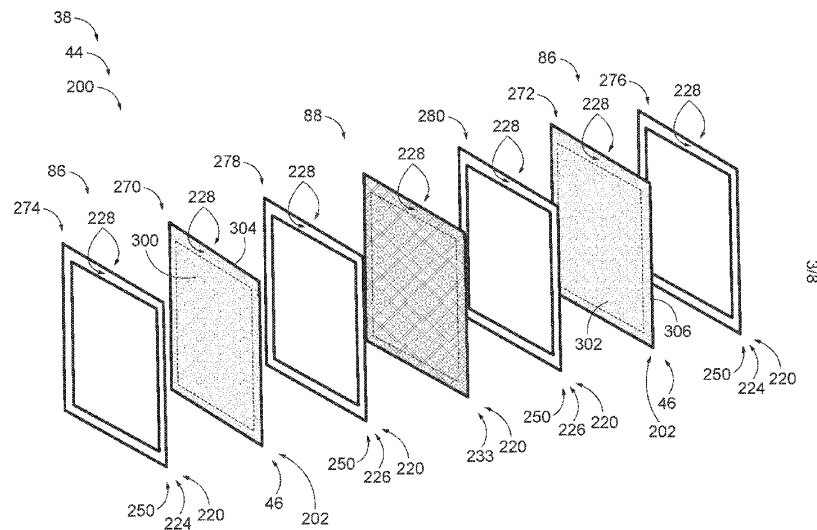


FIG. 3

(57) Abstract: Membrane-based hydrogen purifiers having graphite frame members. The purifiers include a hydrogen-separation membrane module with at least one membrane cell containing at least one hydrogen-selective membrane, which includes a permeate face and an opposed mixed gas face, and a fluid-permeable support structure that physically contacts and supports at least a central region of the permeate face. The membrane cell further includes a permeate-side frame member and a mixed gas-side frame member. The permeate-side frame member is interposed between the hydrogen-selective membrane and the fluid-permeable support structure to physically contact a peripheral region of the permeate face and a peripheral region of the fluid-permeable support structure. The mixed gas-side frame member physically contacts a peripheral region of the mixed gas face. At least one of the permeate-side frame member and the mixed gas-side frame member is a graphite frame member.

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