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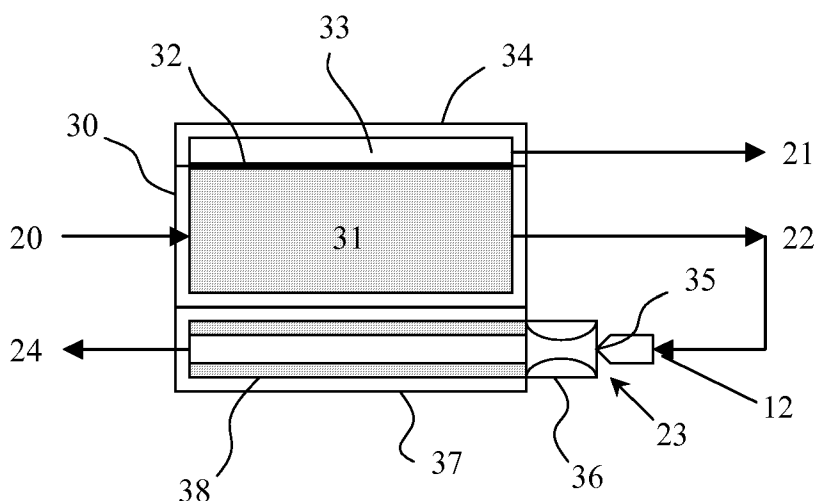
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(57) Abstract: Method and apparatus for generating hydrogen from a fuel comprising an endothermically decomposable compound, preferably methanol, and optionally comprising water. A catalyst is preferably used to decompose the methanol into hydrogen and CO. The catalyst preferably has low selectivity for reacting the CO and water to form CO₂ and hydrogen. A permselective membrane, preferably cleaned by the water, is used to separate the hydrogen. The retentate has fuel value and is reacted or otherwise burned in order to provide heat for the decomposition reaction.

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