US009289741B2

(12) **United States Patent**
TeGrotenhuis et al.

(10) **Patent No.: US 9,289,741 B2**
(45) **Date of Patent: Mar. 22, 2016**

(54) **SUSPENDED-SLURRY REACTOR**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 441 days.

(21) Appl. No.: **13/753,714**

(22) Filed: **Jan. 30, 2013**

(65) **Prior Publication Data**

US 2013/0197109 A1 Aug. 1, 2013

Related U.S. Application Data

(60) Provisional application No. 61/593,486, filed on Feb. 1, 2012.

(51) **Int. Cl.**
B01J 8/02 (2006.01)
C01B 3/26 (2006.01)
(Continued)

(52) **U.S. Cl.**
CPC .. ***B01J 8/02*** (2013.01); ***B01J 8/009*** (2013.01); ***B01J 10/007*** (2013.01); ***B01J 19/0053*** (2013.01); ***B01J 19/0093*** (2013.01); ***B01J 19/249*** (2013.01); ***B01J 19/2475*** (2013.01); ***B01J 23/42*** (2013.01); ***B01J 23/44*** (2013.01); ***B01J 35/002*** (2013.01); ***B01J 35/023*** (2013.01); ***C01B 3/26*** (2013.01); ***C10G 2/00*** (2013.01); ***C10G 2/342*** (2013.01); *C01B 2203/0277* (2013.01); *C01B 2203/1064* (2013.01); *C01B 2203/1082* (2013.01)

(58) **Field of Classification Search**
CPC B01J 8/02; B01J 8/009; B01J 7/00; B01J 7/02; C01B 3/0015; C01B 3/26
See application file for complete search history.

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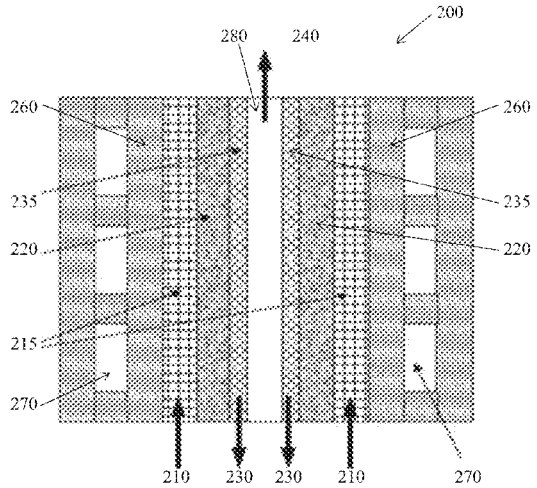
(57) **ABSTRACT**

An apparatus for generating a large volume of gas from a liquid stream is disclosed. The apparatus includes a first channel through which the liquid stream passes. The apparatus also includes a layer of catalyst particles suspended in a solid slurry for generating gas from the liquid stream. The apparatus further includes a second channel through which a mixture of converted liquid and generated gas passes. A heat exchange channel heats the liquid stream. A wicking structure located in the second channel separates the gas generated from the converted liquid.

17 Claims, 16 Drawing Sheets