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- [54] **PLATE TYPE REFORMER ASSEMBLY**
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- [51] Int. Cl.⁵ **B01J 10/00**
- [52] U.S. Cl. **422/191; 422/188; 48/94; 48/127.9**
- [58] **Field of Search** **422/188, 191, 202, 204; 48/127.9, 198.7, 94; 429/17, 19**

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[57] ABSTRACT

A reformer assembly includes fuel introduction plates, combustion chamber plates and reforming chamber plates. The fuel introduction plate includes a first plate member and a first masking frame on the periphery of the first plate member. The combustion chamber plate includes a second plate member and a second masking frame on the periphery of the second plate member, and combustion catalyst is placed in the combustion chamber plate. The reforming chamber plate includes a third plate member and a third masking frame on the periphery of the third plate member, and reforming catalyst is placed in the reforming chamber plate. The first masking frame has a fuel feeding port. The second plate member has a number of dispersion holes and the second masking frame has air feeding and exhaust gas discharging ports. The third masking frame has raw material gas feeding and reformed gas discharging ports. These plates are stacked to define a multi-layer unit. The peripheries of the adjacent stacked plates are welded to each other. Manifolds for the aligned gas feeding and discharging ports are mounted on lateral faces of the unit. Sealing is unnecessary between the plates due to the welding. In addition, the feeding and discharging of the various gases become easy since the manifolds are mounted on the multi-layer unit.

29 Claims, 4 Drawing Sheets

