

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DIANE M. ENGLAND,
KARL J. HALTINER, JR.,
SEAN M. KELLY and
MICHAEL T. FAVILLE

Appeal 2006-2939
Application 10/178,826
Technology Center 1700

Decided: September 8, 2006

Before KIMLIN, GARRIS and OWENS, *Administrative Patent Judges*.
KIMLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-13. Claim 1 is illustrative:

1. In a fuel cell assembly including nickel-containing anodes and passageways leading to and from the anodes for conducting fuel to and from the anodes, wherein at least one of the passageways leading to the anode extends between a reformer and the anodes, the improvement comprising

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oxygen getter means disposed in each of said passageways for preventing gaseous oxygen from reaching and oxidizing said nickel in said anodes during a non-operational state of the fuel cell assembly.

The examiner relies upon the following references as evidence of obviousness:

Wynnyckyi	US 4,607,961	Aug. 26, 1986
Yoshida	JP 07-169493	July 4, 1995
Wakabayashi	JP 8-38884 (A)	Feb. 13, 1996
Badwal	US 5,942,349	Aug. 24, 1999
Coombs	WO 01/19752 A1	Mar. 22, 2001
Takahashi	JP 2001-313049 (A)	Nov. 9, 2001
Haltiner, Jr.	US 6,562,502 B2 (US 2001/0055706 A1)	May 13, 2003 Dec. 27, 2001)

Appellants' claimed invention is directed to a fuel cell assembly comprising nickel-containing anodes, and passageways leading to and from the anodes for conducting fuel. Oxygen getter means are disposed in each of the passageways for preventing oxidation of the nickel in the anodes during non-operation of the fuel cell.

The appealed claims stand rejected under 35 U.S.C. § 103(a) as follows:

- (a) claims 1 and 12 over JP '493 in view of JP '049 and Badwal,
- (b) claims 2-4, and 7 over JP '493 in view of JP '049, Badwal, and JP '884,
- (c) claims 5 and 6 over JP '493 in view of JP '049, Badwal, JP '884, and Wynnyckyi,

(d) claims 8, 10, 11, and 13 over JP '493 in view of JP '049, Badwal, and Haltiner, and

(e) claim 9 over JP '493 in view of JP '049, Badwal, and WO '752.

We have thoroughly reviewed each of Appellants' arguments for patentability. However, we are in complete agreement with the Examiner that the claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning § 103 in view of the applied prior art. Accordingly, we will sustain the Examiner's rejections for essentially those reasons expressed in the Answer, and we add the following primarily for emphasis.

There is no dispute that JP '493, like Appellants, discloses a fuel cell comprising a passageway leading from the anodes comprising oxygen getter means therein. As appreciated by the Examiner, JP '493 is silent with respect to the details of the entire fuel cell assembly, including a passageway leading to the anodes. However, Appellants do not contest the Examiner's factual determination that JP '049 discloses oxygen getter means in passageways leading to the anodes of a fuel cell assembly for the purpose of removing oxygen, carbon monoxide and carbon dioxide from the hydrogen reforming stream to reduce poisoning of the anodes. Accordingly, based on the collective teachings of JP '493 and JP '049, we find no error in the Examiner's legal conclusion that it would have been obvious for one of ordinary skill in the art to either use an oxygen getter in a passageway leading to the anodes of JP '493, or to use an oxygen getter in the exhaust passage of JP '049 leading from the anodes.

Appellants submit that "[t]he fuel cell system described in the '493 reference relates to inflammable-gas purge equipment, and does not relate to supplying hydrogen to the fuel cell power plant (1)" (sentence bridging pages 10 and 11 of principal Br.). Appellants, therefore, conclude that "an artisan would not have been motivated to combine the hydrogen supply device disclosed in the '049 reference since the '493 reference does not relate to the hydrogen supply portion of the fuel cell system" (page 11 of principal Br., first para.).

We are not persuaded by Appellants' argument. Simply because the inventive aspect of JP '493 is not directed to the hydrogen supply side of the fuel cell, this does not mean that the fuel cell of JP '493 does not have such a supply side. Appellants have not refuted the Examiner's finding that the fuel cell of JP '493 has a hydrogen supply passageway to the anodes, and, therefore, Appellants' argument does not address the thrust of the Examiner's rejection. Appellants have advanced no argument why it would have been nonobvious for one of ordinary skill in the art to employ the oxygen getter of JP '049 in a passageway that supplies hydrogen to the anodes of JP '493. Nor have Appellants explained why it would have been nonobvious for one of ordinary skill in the art to utilize an oxygen getter in the exhaust passageway for the fuel cell of JP '049. Appellants' argument that "none of the references teach or suggest disposing oxygen getter means and passageways leading to and from the anodes to protect them from oxidation" (page 11 of principal Br., last sentence) states the obvious inasmuch as neither reference is the basis of a rejection under 35 U.S.C. § 102.

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We note that Appellants also do not contest the Examiner's legal conclusion that it would have been obvious for one of ordinary skill in the art to use a nickel anode of Badwal's fuel cell as the anode in JP '493.

We further note that Appellants do not lodge additional substantive arguments with respect to the separately rejected dependent claims and independent claim 13, but, rather, rely upon the asserted non-combinability of JP '493 and JP '049.

As a final point, we note that Appellants base no argument upon objective evidence of nonobviousness, such as unexpected results, which would serve to rebut the *prima facie* case of obviousness established by the examiner.

In conclusion, based on the foregoing and the reasons well-stated by the Examiner, the Examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(iv)(effective Sept. 13, 2004).

AFFIRMED

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Delphi Technologies, Inc.
M/C 480-410-202
PO Box 5052
Troy, MI 48007