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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/254,997	10/21/2008	Frank BAUMANN	022862-9091	2538
34044	7590	02/27/2013	EXAMINER	
MICHAEL BEST & FRIEDRICH LLP (Bosch) 100 EAST WISCONSIN AVENUE MILWAUKEE, WI 53202			MEKHLIN, ELI S	
			ART UNIT	PAPER NUMBER
			1758	
			NOTIFICATION DATE	DELIVERY MODE
			02/27/2013	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte FRANK BAUMANN, FLORIAN WAHL,
WOLFGANG FRIEDE, and UWE LIMBECK

Appeal 2012-000549
Application 12/254,997
Technology Center 1700

Before ROMULO H. DELMENDO, LINDA M. GAUDETTE, and
DONNA M. PRAISS, *Administrative Patent Judges*.

GAUDETTE, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's decision¹ twice rejecting claims 1-4 and 8-10 under 35 U.S.C. § 103(a) as unpatentable over Ewan (US 5,346,778 issued Sep. 13, 1994) or Sprouse (US 5,407,756 issued Apr. 18, 1995) in view of Yonekura (WO 2007/107838 A2 published Sep. 27, 2007) and Challenger (US 5,316,518 issued May 31, 1994), and claims 5-7 under 35 U.S.C. § 103(a) as unpatentable over the same references, further in view of Schmid (US 6,080,503 issued Jun. 27, 2000).² We have jurisdiction under 35 U.S.C. § 6(b).

Claim 1 is representative of the invention and is reproduced below from the Claims Appendix to the Appeal Brief:

1. A method for avoiding gaseous impurity inclusions in at least one gas chamber of a fuel cell during an idle period of the fuel cell through the production of a positive pressure in the at least one gas chamber, comprising the steps of:
 - producing, through the supply of energy, educts that are supplied to the fuel cell for operation of the fuel cell during an operating mode,
 - supplying the educts to the gas chamber so that the gas chamber is at least partially filled with the educts, and
 - filling the gas chamber to produce a positive pressure in the gas chamber during the idle period of the fuel cell and thereby essentially avoiding gaseous impurity inclusions.

We decide the following issue in favor of Appellants and, therefore, REVERSE the Examiner's decision to reject claims 1-10: did the Examiner reversibly err in finding Challenger qualifies as analogous prior art for purposes of an obviousness determination under 35 U.S.C. §103(a)?

¹ Office Action mailed Feb. 15, 2011.

² Appeal Brief filed May 13, 2011 ("Br.").

During an idle period of a fuel cell, it is not possible to hermetically seal the gas chambers. (Spec.³ [0004].) As a result, the gas chambers can become filled with impurities, such as air, which can produce corrosion effects resulting in accelerated deterioration of the cathode. (*Id.*) To address this problem, it is known in the art to feed an inert gas into the gas chambers, prior to introducing the reaction gas, when the fuel cell is switched into operating mode. (*Id.*) Ewan attempts to prevent buildup of impurities in the hydrogen side of a fuel cell by opening and closing a hydrogen purge solenoid valve at predefined intervals.⁴ (Br. 10 (citing Ewan col. 8, l. 47 et seq.)) Yonekura discloses the buildup of impurities caused by nitrogen leakage from the oxidant electrode side during the idle period can be prevented by controlling the amount of time the fuel cell is in the idle period. (*Id.* at 11 (citing Yonekura ¶¶ [0014], [0040], and [0041]).)

The Examiner relies on Challenger to establish it would have been obvious to prevent leakage of impurities into a fuel cell gas chamber by maintaining the chamber at a positive pressure. (Ans. 6.) The Examiner acknowledges Challenger relates to clean rooms and, therefore, is not within the same field of endeavor as the present invention.⁵ (*See id.* at 12 (“A clean room is not a fuel cell.”).) However, the Examiner contends “Challenger can be considered analogous art

³ Specification filed Oct. 21 2008.

⁴ Sprouse, like Ewan, teaches a method of operating a fuel cell system, but “is silent as to whether the fuel cell is penetrated by impurities during an idle mode and how these impurities can be expelled.” (Examiner’s Answer mailed Jul. 5, 2011 (“Ans.”) 8.)

⁵ “Two separate tests define the scope of analogous prior art: (1) whether the art is from the same field of endeavor, regardless of the problem addressed and, (2) if the reference is not within the field of the inventor’s endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved.” *In re Klein*, 647 F.3d 1343, 1348 (Fed. Cir. 2011) (quoting *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004)).

because . . . [it] address[es] the problem of preventing impurity inclusions from entering a partially closed system.” (*Id.*)

We agree with Appellants that the Examiner’s characterization of the problem addressed by Challenger is based on improper hindsight reasoning. (*See* Br. 13-14.) Challenger’s “invention is based on the realisation that a work room in a clean containment room construction can be kept cleaner if it is maintained at an air pressure which is positive with respect to atmospheric pressure rather than at a pressure which is negative with respect to atmospheric pressure.” (Challenger col. 1, ll. 41-46.) As noted by Appellants (Br. 13), there is no indication in the prior art of record that one of ordinary skill in the art would have recognized the buildup of impurities in a fuel cell gas chamber resulted from a pressure differential occurring during the idle period of the fuel cell. Thus, there is no evidence that the ordinary artisan, in attempting to solve the problem of preventing impurities from entering a fuel cell gas chamber, would have looked outside the fuel cell art and considered prior art directed to the more general problem of adjusting pressure differential between the atmospheres inside and outside an enclosure.

Appellants have persuasively argued the Examiner reversibly erred in finding Challenger qualifies as analogous art and, therefore, failed to establish a prima facie case of obviousness. *See Innovention Toys, LLC v. MGA Entm’t, Inc.*, 637 F.3d 1314, 1321 (Fed. Cir. 2011) (explaining that to qualify as prior art for an obviousness analysis, a reference must qualify as analogous art).

REVERSED

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