

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte SOLOMON ZAROMB

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Appeal No. 1996-1556  
Application No. 08/154,135<sup>1</sup>

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HEARD: December 9, 1999

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Before PAK, WALTZ, and KRATZ, Administrative Patent Judges.

PAK, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's refusal to allow claims 1, 3 through 10, 12, 15 through 17 and 21 through 23. Claim 1, 10, 16 and 17 were amended subsequent to the final Office action dated May 22, 1995, Paper No. 11.

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<sup>1</sup> Application for patent filed November 18, 1993. According to appellant, the application is a division of Application No. 07/648,649, filed January 31, 1991, now abandoned.

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The remaining claims, namely claims 11, 13, 14 and 18, stand withdrawn from consideration by the examiner.

Claims 1 and 10 are representative of the subject matter on appeal and read as follows:

1. A method of testing a sampled gas for the presence of a selected analyte comprising the steps of:

providing an amperometric sensor, having a substantially water-free, non-hygroscopic, water-insoluble, solid-state electrolyte that has an ionic conductivity of at least  $10^{-4} \text{ohm}^{-1} \text{-cm}^{-1}$  at room temperature, said sensor exhibiting sensitivity to the selected analyte;

exposing said sensor to the sampled gas; and

measuring current flow in said sensor upon the presence of said analyte in said sampled gas.

10. A method of producing an amperometric sensor for use in detecting selected analytes which comprises:

applying a sensing electrode and a counter-electrode to a solid-state electrolyte, and

providing a biasing circuit for applying a biasing potential between said electrodes and a current-measuring circuit for measuring the current between said electrodes that is generated by the presence of said analyte,

said electrolyte being characterized by being substantially water-free, non-hygroscopic, water-insoluble, and having a composition resulting in an ionic conductivity of at least  $10^{-4} \text{ohm}^{-1} \text{-cm}^{-1}$  at room temperature.

The prior art references of record relied upon by the examiner are:

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Lilly Jr. et al. (Lilly) 6, 1973	3,719,564	Mar.
Topol et al. (Topol) 1974	3,821,090	Jun. 28,
Madou et al. (Madou) 1989	4,851,303	Jul. 25,
Oswin et al. (Oswin)	Re. 31,916	Jun. 18, 1985

The appealed claims stand rejected as follows:

- (1) Claims 1, 3 through 8, 10, 12, 15 through 17 and 21 through 23 under 35 U.S.C. § 103 as unpatentable over Madou;
- (2) Claims 1, 3 through 8, 10, 12, 15 through 17 and 21 through 23 under 35 U.S.C. § 103 as unpatentable over Madou in view of Lilly or Topol; and
- (3) Claim 9 under 35 U.S.C. § 103 as unpatentable over Madou, with or without Lilly or Topol, in view of Oswin.

We reverse.

As evidence of obviousness of the claimed subject matter under 35 U.S.C. § 103, the examiner primarily relies on Madou. The examiner takes the position that Madou essentially describes the claimed method. See Answer, page 3. According to the examiner, the only difference between the method described in Madou and the claimed method is Madou's preference for operating a solid electrolyte gas sensor in the potentiometric mode, rather than the claimed current mode,

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i.e., using an amperometric sensor. Id. However, relying on the teaching of Madou regarding the current mode, or alternatively based on his official notice regarding the current mode, the examiner concludes that "[i]t would be obvious for Madou to use electrolytes (c) or d(d)[ $\text{Pb}_{0.75}\text{-Bi}_{0.25}\text{-F}_{2.25}$  and  $\text{Ce}_{0.95}\text{-Ca}_{0.05}\text{-F}_{2.95}$ ] in a gas sensor in the current mode". Id. The examiner also relies on the disclosure of Lilly or Topol to show that it would have been obvious to one of ordinary skill in the art to operate a solid electrolyte gas sensor in the current mode. See Answer, page 4. The examiner relies on the disclosure of Oswin to show that it would have been obvious to use "a plurality of sensors and voltage biasing means for different analytes" in the method described in Madou as required by dependent claim 9. Id.

Appellant does not dispute that Madou is qualified as "prior art" under 35 U.S.C. § 102 (b). See Brief, pages 6 and 7. Appellant, however, argues that he cannot be barred from swearing back of such prior art under 37 CFR § 1.131 because 35 U.S.C.

§ 103 dictates that obviousness must be considered **at the time the invention was made (conceived)**. See Brief, pages 7 and 8.

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Appellant then argues that his own declaration of record establishes that the conception date of the claimed invention is prior to the publication and filing dates of the Madou reference. See Brief, page 8. Thus, appellant submits that the examiner has not established a prima facie case of obviousness since Madou is no longer available as "prior art". Id. In the alternative, appellant submits that the content of Madou would not have suggested using the claimed solid electrolyte in a gas sensor that operates in the current mode (an amperometric sensor). See Brief, pages 8-14. Appellant also takes the position that the deficiencies of Madou are not remedied by the disclosures of Lilly, Topol and Oswin. See Brief, pages 11-14.

We agree with the examiner that appellant is barred from swearing behind back the publication and filing dates of the Madou reference since it is qualified as "prior art" under 35 U.S.C.

§ 102(b). We observe that 37 CFR § 1.131 (a)(1993) prohibits appellant from antedating prior art which is available under Section 102(b). 37 CFR 1.131(a) specifically states that:

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(a) When any claim of an application or a patent under reexamination is rejected on reference to a domestic patent which substantially shows or describes but does not claim the same patentable invention, as defined in § 1.601(n), as the rejected invention, or on reference to a foreign patent or to a printed publication, and the inventor of the subject matter of the rejected claim, the owner of the patent under reexamination, or the person qualified under §§ 1.42, 1.43 or 1.47, shall make oath or declaration as to facts showing a completion of the invention in this country before the filing date of the application on which the domestic patent issued, or before the date of the foreign patent, or before the date of the printed publication, then the patent or publication cited shall not bar the grant of a patent to the inventor or the confirmation of the patentability of the claims of the patent, **unless the date of such patent or printed publication is more than one year prior to the date on which the inventor's or patent owner's application was filed in this country.**

(Emphasis supplied).

This rule is consistent with the holding in In re Foster, 343 F.2d 980, 989-90, 145 USPQ 166, 174-75 (CCPA 1965), reh'g denied, 384 U.S. 934 (1966), which indicates that a one-year time-bar under 102(b), otherwise known as "statutory bar", is applicable to "obviousness" situations under 35 U.S.C. § 103.

Having concluded that Madou cannot be removed as "prior art", we look to its content to determine whether there is a sufficient suggestion to arrive at the claimed invention

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within the meaning of 35 U.S.C. § 103. As indicated by appellant, Madou discloses an extremely broad genus of chemical compositions which happen to include the claimed solid electrolyte species. See Brief, page 10, together with Madou, columns 3 and 4. We find that Madou gives no guidance or direction as to which solid composition is suitable for an amperometric sensor. See Brief, page 10, together with Madou in its entirety. Specifically, we find that Madou does not recognize the importance of using a water free, non-hygroscopic, water-insoluble, solid-state electrolyte having an ionic conductivity of at least  $10^{-4}$  ohm<sup>-1</sup> cm<sup>-1</sup> at room temperature in an amperometric sensor. See Madou in its entirety. Rather, we find that Madou suggests using a solid electrolyte having an ionic conductivity of about  $10^{-7}$  ohm<sup>-1</sup> cm<sup>-1</sup> at room temperature, which conductivity is significantly lower than that claimed. Compare Madou, column 7, with claim 1. Under these circumstances, we cannot agree with the examiner that Madou, as a whole, would have suggested the use of the claimed solid electrolytes in an amperometric sensor. In re Jones, 958 F.2d 347, 350, 21 USPQ2d 1941, 1943

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(Fed. Cir. 1992). (A prior art disclosure of an extremely large chemical genus by itself does not necessitate a finding of obviousness for a claimed feature that falls within the genus).

The examiner relies on the remaining references to demonstrate obviousness regarding the operation of a solid electrolyte gas sensor in the current mode or the application of a plurality of sensors and voltage biasing means for different analytes. These references are not relied upon to show the importance of using a solid electrolyte having the claimed ionic conductivity in an amperometric sensor. Accordingly, we conclude that the examiner has not discharged his burden of establishing a prima facie case of obviousness within the meaning of 35 U.S.C.

§ 103.

In view of the foregoing, we reverse the examiner's decision rejecting the appealed claims under 35 U.S.C. § 103.

No period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

REVERSE

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CHUNG K. PAK	)	
Administrative Patent Judge	)	
	)	
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	)	
	)	BOARD OF PATENT
THOMAS A. WALTZ	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
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	)	
PETER F. KRATZ	)	
Administrative Patent Judge	)	

CKP:lp

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DECISION: REVERSE  
Send Reference(s): Yes No  
or Translation (s)  
Panel Change: Yes No  
Index Sheet-2901 Rejection(s):  
Prepared: June 21, 2001  
Draft            Final

3 MEM. CONF.    Y            N

OB/HD            GAU

PALM /ACTS 2/BOOK

DISK(FOIA /REPORT