

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte GERALD L. BAUER and WILLIAM VES CHILDS

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Appeal No. 1996-2809  
Application No. 08/399,961

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HEARD: January 24, 2000

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Before GARRIS, PAK, and OWENS, Administrative Patent Judges.

PAK, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's final rejection of claims 1 through 20 which are all of the claims pending in the application.

Claim 1 is representative of the subject matter on appeal and reads as follows:

1. An electrochemical cell for the production of fluorine, comprising:

(1) a cell housing;

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- (2) a  $KF_2HF$  electrolyte;
- (3) a cathode, in contact with the electrolyte, at which hydrogen gas is generated;
- (4) an anode assembly comprising:
  - (a) a carbon anode, in contact with the electrolyte, at which fluorine gas is generated;
  - (b) an internal metal conductor, positioned in a centrally located internal channel, wherein the internal metal conductor is not in contact with the electrolyte and extends from the top of the carbon anode to below the electrolyte;
  - (c) an outer gas separator positioned equidistant between the anode assembly and the cathode; and
  - (d) an anode hanger abutted to the carbon anode; mechanically and electrically connected to the carbon anode using a sleeve and compression means to hold the sleeve, anode hanger and carbon anode in alignment;
- (5) a means for supplying current to the cathode and the anode; and
- (6) means for removing the generated fluorine gas and a means for removing the generated hydrogen gas.

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

Ruehlen et al. (Ruehlen) 2, 1973	3,706,416	Jan.
Ashe, Jr. et al. (Ashe) 1973	3,720,597	Mar. 13,
Tricoli et al. (Tricoli) 20, 1973	3,773,644	Nov.

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Saprokhin et al. (Saprokhin)	4,511,440	Apr.
16, 1985		
Marshall	2 135 335 A	Aug. 30, 1984
(Published Great Britain Patent Application)		

The references of record relied upon by appellants are:

Van Nostrand's Scientific Encyclopedia, 6th ed., Considine et al., 1983, page 484 (hereinafter referred to as "Considine").

Techniques of Chemistry, Vol. V, Part III, "Technique of Electroorganic Synthesis," Weinberg, 1982, page 375 (hereinafter referred to as "Weinberg").

The appealed claims stand rejected as follows:

(1) Claims 10 and 20 under 35 U.S.C. 112, first paragraph, "as failing to provide an adequate written description of the invention";

(2) Claims 1 through 3, 6, and 8 through 11 under 35 U.S.C. 103 as unpatentable over Saprokhin in combination with Tricoli;

(3) Claims 4, 5 and 12 through 18 under 35 U.S.C. 103 as unpatentable over Saprokhin in combination with Tricoli "as applied to claims 1-3[, 6] and 8-11 above, and further in view of Ashe...";

(4) Claim 7 under 35 U.S.C. 103 as unpatentable over Saprokhin in combination with Tricoli "as applied to claims 1-3, 6, and 8-11 above, and further in view of Ruehlen..."; and

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(5) Claims 19 and 20 under 35 U.S.C. 103 as unpatentable over Saprokhin in combination with Tricoli "as applied to claims 1-[ , 6] and 8-11 above, and further in view of [Marshall]."

We reverse each of the foregoing rejections. Our reasons for this determination follow.

We turn first to the rejection of claims 10 and 20 under 35 U.S.C. § 112, first paragraph, as failing to provide an adequate written description of the invention. We note that while the examiner states her rejection is based on an adequate written description of the invention<sup>1</sup>, it is apparent to us from the examiner's comments and arguments that the rejection is in reality based upon a non-enabling disclosure. With regard to the question of enablement, the court in ***In re Gaubert***, 524 F.2d 1222, 1226, 187 USPQ 664, 667 (CCPA 1975) sets forth a quote from ***Martin v. Johnson***, 454 F.2d 746, 751, 172 USPQ 391, 395 (CCPA 1972) as follows:

To satisfy §112, the specification disclosure must be sufficiently complete to enable one of ordinary skill in the art to make the invention without undue

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<sup>1</sup> The limitations recited in claims 10 and 20 are part of the original disclosure and do not violate the written description requirement under 35 U.S.C. § 112, first paragraph.

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experimentation, although the need for a minimum amount of experimentation is not fatal \* \* \*. Enablement is the criterion, and every detail need not be set forth in the written specification if the skill in the art is such that the disclosure enables one to make the invention. [Citations omitted.]

The determination of what constitutes undue experimentation in a given case requires the application of a standard of reasonableness, having regard for the nature of the invention and the state of the art. *See Ex parte Forman*, 230 USPQ 546, 547 (Bd. Pat. App. & Int. 1986).

Here, the examiner appears to allege that failure to define the term "a callandria cell" in the specification would prevent one of ordinary skill in the art to make and/or practice the claimed subject matter. See Answer, pages 5 and 15. In so alleging, the examiner fails to take into account the nature of the invention as well as the state of the art.

*Id.* When appellants refer to the state of the art as represented by Weinberg, page 375, and Considine, page 484, to show that the meaning of "a callandria cell" is well known, see Brief, page 14, the examiner requires appellants to provide such a meaning in the specification, see Answer, page 15. The examiner simply does not recognize that "every detail

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need not be set forth in the written specification if the skill in the art is such that the disclosure enables one to make [and practice] the invention." *In re Gaubert*, 524 F.2d at 1226, 187 USPQ at 667. Accordingly, we agree with appellants that the examiner on this record has not established a *prima facie* case of unpatentability within the meaning of 35 U.S.C. 112, first paragraph. *In re Marzocchi*, 439 F.2d 220, 224, 169 USPQ 367, 370 (CCPA 1971)(the examiner has the initial burden of producing reasons that substantiate a rejection based on lack of enablement).

We turn next to the Section 103 rejections of claims 1 through 20. The examiner takes the position that Saprokhin essentially describes the electrochemical cell recited in independent claim 1 except for an anode hanger and an outer gas separator positioned equidistance between the claimed anode assembly and the claimed cathode. The examiner then relies on Tricoli to establish obviousness of incorporating the anode hanger and the particularly positioned outer gas separator in the electrochemical cell described in Saprokhin. The remaining references are relied upon to show obviousness

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of incorporating features in the dependent claims in the electrochemical cell described in Saprokhin.

Having reviewed the record, we agree with appellants that the prior art references as a whole would not have suggested to one of ordinary skill in the art to place an outer gas separator equidistance between the anode assembly and the cathode of the electrochemical cell described in Saprokhin. See, e.g., Brief, pages 15 and 16. The purpose of Saprokhin is to employ an anode having internal fluorine passages, rather than external fluorine passages, in its electrochemical cell to obtain various advantages thereof. See column 3, lines 1-15. To accommodate fluorine leaving the internal fluorine passages of the anode assembly, a gas impermeable barrier is placed on the upper part of the anode assembly. See Figure 1 in conjunction with column 2, lines 40-46. There simply is no reason or incentive to place a gas impermeable barrier equidistance between the anode assembly and the cathode to form external fluorine passages. This is especially true since sufficient fluorine passages are already internally available in the anode assembly of the electrochemical cell described in Saprokhin. Note also that

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Saprokhin teaches away from having fluorine passages external to the anode assembly in order to avoid any deleterious effects associated therewith. Thus, in our view, the examiner's proposed combination would destroy the invention on which Saprokhin, the examiner's primary reference, is based.

***See Ex parte Hartmann***, 186 USPQ 366, 367 (Bd. App. 1974).

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

The decision of the examiner is reversed.

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

REVERSED

BRADLEY R. GARRIS                    )  
Administrative Patent Judge        )  
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CHUNG K. PAK	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
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TERRY J. OWENS	)	
Administrative Patent Judge	)	

CKP:lp

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3M OFFICE OF INTELLECTUAL PROP COUNSEL  
P.O. BOX 33427  
ST PAUL MN 55133-3427

***Leticia***

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APJ PAK

APJ OWENS

APJ GARRIS

DECISION: REVERSED  
Send Reference(s): Yes No  
or Translation (s)  
Panel Change: Yes No  
Index Sheet-2901 Rejection(s):  
Prepared: December 15, 2000

Draft                  Final

3 MEM. CONF.    Y                  N

OB/HD                  GAU

PALM /ACTS 2/BOOK  
DISK(FOIA)/REPORT