

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

Paper No. 13

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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**Ex parte** LINDSEY H. HALL,  
CHARLES R. SCHRAEDER,  
and  
JENNIFER A. SEES

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Appeal No. 1998-1568  
Application No. 08/336,352

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ON BRIEF

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Before PAK, LIEBERMAN, and JEFFREY SMITH, **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 through 4 and 7 through 10, which are all of the claims pending in the application.<sup>1</sup> Claims 1

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<sup>1</sup>At page 2 of the Brief, appellants stated that "Appendix A attached hereto contains pending claims 10-12 which are

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and 7 were amended subsequent to the final Office action dated November 25, 1996, Paper No. 5.

Claims 1 and 7 are representative of the subject matter on appeal and read as follows:

1. A method of formulating a strong oxidizing solution of Caro's acid which comprises the steps of:

(a) formulating a strong oxidizing solution of Caro's acid by mixing about 2 to 5 percent PDSA by volume with concentrated sulfuric acid in the ratio of about 1 part PDSA: 8 parts sulfuric acid by volume to about 1 part PDSA: 20 parts sulfuric acid by volume; and

(b) storing said strong oxidizing solution in a container having a space over said solution containing one of a vacuum or a non-oxidizing atmosphere inert to said oxidizing solution.

7. A method of formulating a strong oxidizing solution of Caro's acid which comprises the steps of:

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appealed." Appellants also stated in the subsequent sentence in the same Brief that "[n]o other claims exist; no claims are allowed." However, Appendix A contains claims 1 through 4 and 7 through 10 which are the only claims actually pending in this application. The Brief at pages 3 and 4 also discusses only the propriety of the examiner's rejection of claims 1 through 4 and 7 through 10. Moreover, appellants clearly stated in their Notice of Appeal dated February 28, 1997, Paper No. 8, that they appealed from the examiner's final rejection of claims 1 through 4 and 7 through 10. Further, the examiner was not prejudiced by appellants' misstatement since he recognized that the appeal involved the rejection of claims 1 through 4 and 7 through 10 as is apparent from page 1 of the Answer.

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(a) formulating a strong oxidizing solution of Caro's acid by mixing about 40 to 60 percent hydrogen peroxide by volume with concentrated sulfuric acid in the ratio of about 1 part hydrogen peroxide: 8 parts sulfuric acid by volume to about 1 part hydrogen peroxide: 20 parts sulfuric acid by volume; and

(b) storing said strong oxidizing solution in a container having a space over said solution containing one of a vacuum or a non-oxidizing atmosphere inert to said oxidizing solution.

As evidence of obviousness, the examiner relies on the following prior art:

Jayawant 1975	3,927,189	Dec. 16,
Bardy et al. (Bardy) 1976	3,931,396	Jan. 6,
Haynes et al. (Haynes) 1980	4,229,544	Oct. 21,
Ota et al. (Ota) 1982	4,334,610	Jun. 15,

Appellants' admission at pages 1 and 2 of the specification (hereinafter referred to as "admitted prior art").

Claims 1 through 4 and 7 through 10 stand rejected under 35 U.S.C. § 103 as unpatentable over the combined teachings of the admitted prior art and either Jayawant, Bardy, Ota, or Haynes.

We have carefully reviewed the claims, specification and applied prior art, including all of the arguments advanced by both the examiner and appellants in support of their

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respective positions. This review leads us to conclude that the examiner has not established a *prima facie* case of obviousness regarding the claimed subject matter for essentially those reasons set forth at pages 3 and 4 of the Brief. We only add that none of the applied prior art references alone, or in combination, teaches or suggests using a non-oxidizing atmosphere or vacuum to enhance the stability and the shelf life of a strong oxidizing etching solution, much less the claimed Caro's acid ( $H_2SO_5$ ). Jayawant, the best secondary reference relied upon by the examiner, for example, only teaches introducing  $SO_3$  into a reactor with a suitable inert gas, such as nitrogen, oxygen, air or their mixtures. See column 3, lines 39-47 and column 6, lines 5-25. There is no teaching or suggestion that nitrogen, oxygen, air or mixtures thereof will enhance the stability and the shelf life of a strong oxidizing etching solution, much less Caro's acid. See Jayawant in its entirety.

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In view of the foregoing, we agree with appellants that the examiner on this record fails to establish a *prima facie* case of obviousness regarding the claimed subject matter within the meaning of 35 U.S.C. § 103. Accordingly, we reverse the examiner's decision rejecting claims 1 through 4 and 7 through 10 under 35 U.S.C. § 103.

**REVERSED**

CHUNG K. PAK	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
PAUL LIEBERMAN	)	APPEALS AND
Administrative Patent Judge	)	INTERFERENCES
	)	
	)	
JEFFREY T. SMITH	)	
Administrative Patent Judge	)	

CKP:hh

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