

gives each different blend a distinct designation number, or Refrigerant Number. In the case of blends having the same components but differing only in the proportions of the components the differences are identified by designating each different blend with the same Refrigerant Number to show the blends have the same components but with a different uppercase letter to recognize the different blends result in different refrigerants. See Addendum e. Thus, for example, ASHRAE has granted different refrigerant designation numbers to refrigerant compositions consisting of difluoromethane (HFC-32), pentafluoroethane (HFC-125) and tetrafluoroethane (HFC-134a) where these three refrigerant components are present in different proportions as evidenced by designation numbers R407A (a 20-40-40 proportion blend), R407B (a 10-70-20 proportion blend), R407C (a 23-25-52 proportion blend), R407D (a 15-15-70 proportion blend), and R407E (a 25-15-60 proportion blend). See Addendum c to ANSI/ASHRAE Standard 34-2001 (2003). One skilled in the refrigerant art would expect that, for example, refrigerant R407A would have different refrigerant properties than those of refrigerant R407B.

5) In response to Appellants' Appeal Brief arguments that the claimed compositions have a superior property not recognized by Takigawa, the Answer attempts to rephrase the Ponder and Gbur Declarations and completely misses the point of these Declarations. Appellants dispute the claim in the Answer that *prima facie* obviousness is established over the rejected claims. However, even if a factual foundation for *prima facie* obviousness is shown, the burden merely shifts to Appellants to rebut. *Prima facie* obviousness is a rebuttable presumption. To the extent that any valid *prima facie* case of obviousness is presented herein (which Appellants dispute), such *prima facie* case has been sufficiently rebutted by the evidence submitted by Appellants.

Evidence presented by Appellants to negate or rebut *prima facie* obviousness may be summarized as including, for example:

(a) Takigawa solves a different problem than the rejected claims.

Specifically, the refrigerant composition recited in the rejected claims was "developed as a replacement for R-22 refrigerant." Ponder Declaration, p. 3. In contrast, Takigawa is drawn to providing a specific refrigerator oil suitable for use with HFC refrigerants. This difference is substantial. For example, even if Takigawa could be construed as teaching an HFC-134a/HFC-125 composition, Takigawa offers no guidance to arrive at the ratios of HFC-134a/HFC-125 recited in the rejected claims. Put simply, even if the skilled artisan interprets "to be mixed with" like the Examiner as meaning "no additional HFC's need to be mixed with", the skilled artisan is left to derive every feature of the specific refrigerant composition recited in the rejected claims

from a reference which is directed to a specific refrigerator lubricant. There is no clear rationale presented as to how the skilled artisan would arrive at the claimed refrigerant composition using only Takigawa, a reference directed toward refrigerator lubricants.

(b) Appellants' refrigerant mixtures possess unexpectedly advantageous or superior properties.

Appellants submitted a Declaration May 16, 2008 from Andy Gbur (hereinafter, "Gbur Declaration") who served five years on the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) committee responsible for issuing industry standards for refrigerant blends. In essence, the Gbur Declaration demonstrates that the industry recognizes refrigerant blends having the same component gases may possess very different properties. Specifically, the Gbur Declaration explains,

"ASHRAE recognizes that blends of refrigerant gases having the same components in different proportions can produce refrigerant blend compositions having different refrigerant properties as typically reflected by the differences in temperature/pressure profiles of the refrigerant blend compositions." (pp. 1 and 2).

Even if Takigawa is misconstrued as teaching an HFC-134a/HFC-125 composition, by no means does it teach a composition capable of R-22 replacement. Following the logic of the Examiner, regardless of the ratios or proportions used, no refrigerant composition is patentable if all components of the composition are known. This logic ignores the importance of the ratios described in the rejected claims. Appellants demonstrated that even the standard-creating body of the refrigerant industry recognizes the properties of the refrigerant composition recited in the rejected claims as unexpected or unique by labeling the refrigerant composition encompassed by the rejected claims with its own unique standard designation. The Appellants' present claimed composition of a ratio of 58/42 HFC-125/HFC-134a has been given the designation R-421A by ASHRAE demonstrating its uniqueness (see ANSI/ASHRAE Addendum n to ANSI/ASHRAE Standard 34-2004, p. 13, Appellants Evidence Appendix, Exhibit C).

(c) Long felt but unresolved need.

At p. 3, the Declaration submitted September 18, 2008 (hereinafter "Ponder Declaration") states,

"Our R-421A refrigerant was developed as a replacement for R-22 refrigerant that consists of chlorodifluoromethane. R-22 refrigerant could cover a wide array of temperatures. The industry has not yet found a single refrigerant composition that could replace R-22 for use over the entire array of temperatures over which R-22 was used. As a result, the industry has had to come up with multiple refrigerant compositions covering different arrays of temperatures."

Such an admission would seem to negate a conclusion of obviousness. HFC-134a and HFC-125 are known within the refrigerant industry. The mere fact that the refrigerant industry was unable to develop an R-22 substitute negates obviousness. Moreover, Appellants solved the industry's need for an R-22 replacement by blending separately known refrigerants. Considering the need for an R-22 replacement capable of covering a wide array of temperatures, were the solution truly obvious, it would have been solved in the ten years between Takigawa and Appellants' application.

(d) Two skilled artisans reading Takigawa would not arrive at the composition as claimed.

It is noteworthy that Andy Gbur, with over 15 years in the industry and a position on the ASHRAE standard-designating committee, upon reviewing Takigawa and the rejected claims, states,

"While Takigawa makes mention of refrigerants containing HFC-134a (1,1,1,2-tetrafluoroethane) and/or HFC-125 (pentafluoroethane), Takigawa does not disclose a single example of a refrigerant gas composition or blend combining only tetrafluoroethane and pentafluoroethane to the exclusion of another refrigerant gas component." (pp. 2 and 3, Gbur Declaration).

It is precisely Takigawa's lack of guidance which prompts Mr. Gbur to state, .

"In my opinion, it would not be obvious to one skilled in the art of refrigerant gas compositions to produce a refrigerant gas composition containing only about 40% to about 45% by weight tetrafluoroethane and about 55% to about 60% by weight pentafluoroethane from the teachings in the Takigawa patent." p. 3, (Gbur Declaration).

Furthermore, Kenneth Ponder, also an expert in the refrigerant industry, states,

"I have read [Takigawa] and do not find any mention or suggestion in Takigawa of combining pentafluoroethane with tetrafluoroethane to create a composition including refrigerant gases consisting of pentafluoroethane and tetrafluoroethane to the exclusion of other refrigerant gases except for impurities ordinarily associated with those two gases having a temperature-pressure profile that provides superior properties for use in high and medium temperature applications as described above."

Neither of the two industry experts was able to logically derive the refrigerant composition recited in the rejected claims from the teachings of Takigawa. While these opinions are not dispositive, they do tend to negate a finding of obviousness.

In spite of the evidence presented by Appellants' Declarations demonstrating unexpected or superior properties of the claimed compositions, the Answer gives the Declarations no weight. Appellants respectfully point out MPEP §2145(VII) which states that

Office personnel should avoid giving evidence no weight, except in rare circumstances. *In re Alton*, 76 F.3d 1168, 1174-75, 37 USPQ2d 1578, 1582-83 (Fed. Cir. 1996). Furthermore, evidence that a composition possesses superior and unexpected properties in one of a spectrum of common properties can be sufficient to rebut a *prima facie* case of obviousness. *In re Chupp*, 816 F.2d 643, 646, 2 USPQ2d 1437, 1439 (Fed. Cir. 1987). Appellants submit that if *prima facie* obviousness has been established, in spite of the fact that Takigawa never teaches a refrigerant gas mixture “consisting of” about 40% to about 45% HFC-134a and about 60% to about 55% HFC-125, obviousness has been rebutted by the evidence presented in the Declarations demonstrating a superior property.

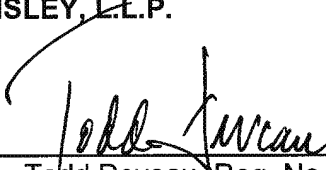
The Answer makes several noteworthy concessions in response to Appellants’ Appeal Brief. The Answer concedes the veracity of the Ponder Declaration and the expertise of Mr. Ponder. (p. 6, Examiner’s Answer). Despite this concession, the Answer ignores the merits of the Ponder Declaration and fails to give it any weight in rebutting the obviousness conclusion. Also, the Answer concedes, “that the behavior profiles of various refrigeration mixtures made according to [Takigawa] will be vastly different.” (p. 7, Examiner’s Answer). This concession, however, was deliberately marginalized by the Answer since “all such compositions [] successfully generate refrigeration.” (p. 7, Examiner’s Answer). Furthermore, the Answer even concedes that compositions with “different blends of pentafluoroethane and tetrafluoroethane will have very different properties and that one such composition would not render another such composition obvious.” This concession appears to be an admission that the claimed refrigerant composition is nonobvious over Takigawa or at least lays a logical foundation for such a conclusion. In spite of the aforementioned concessions, however, the Answer maintains its conclusion that the claims are obvious in light of Takigawa. This single-reference obviousness rejection necessarily implies that Takigawa fails to teach every limitation of the rejected claims. Nevertheless, the Office never provides an explanation of where these missing limitations are taught. Nor does the Answer explain why it dismisses the opinions of both Mr. Gbur and Mr. Ponder that the Takigawa reference does not teach or render obvious Appellants’ claimed refrigerant gas composition.

CONCLUSION

Based upon the foregoing discussion and that in Appellants' Appeal Brief, Appellants respectfully request that the final rejection of claims 1-10, 21-25, 27, 29-31, 33-35 and 37-40 be overruled and withdrawn by the Board and that the application be allowed to issue as a patent with depending claims.

Respectfully Submitted,

**THOMAS, KAYDEN, HORSTEMEYER
& RISLEY, L.L.P.**

By _____
Todd Deveau, Reg. No. 29,526

600 Galleria Parkway, Suite 1500
Atlanta, Georgia 30339
(770) 933-9500

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

REQUEST FOR ORAL HEARING BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES		Docket Number (Optional) 821920-1030	
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on <u>June 1, 2009</u>		In re Application of Ponder, K., et al.	
Signature <u><i>Virginia Keenan</i></u>		Application Number 10/937,736	Filed September 8, 2004
Typed or printed name <u>Virginia Keenan</u>		Refrigerant with Lubricating Oil for For Replacement of R-22 Refrigerant	
		Art Unit 1796	Examiner John R. Hardee

Applicant hereby requests an oral hearing before the Board of Patent Appeals and Interferences in the appeal of the above-identified application.

The fee for this Request for Oral Hearing is (37 CFR 41.20(b)(3)) \$ 1080.00

☒ Applicant claims small entity status. See 37 CFR 1.27. Therefore, the fee shown above is reduced by half, and the resulting fee is: \$ 540.00

☐ A check in the amount of the fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director has already been authorized to charge fees in this application to a Deposit Account. I have enclosed a duplicate copy of this sheet.

☒ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 20-0778.

☐ A petition for an extension of time under 37 CFR 1.136(b) (PTO/SB/23) is enclosed. For extensions of time in reexamination proceedings, see 37 CFR 1.550.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

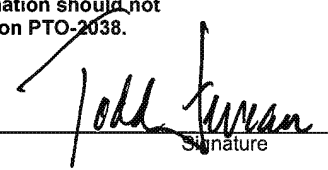
I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

☒ attorney or agent of record. Registration number 29526

☐ attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34. _____


 Signature

 Todd Deveau
 Typed or printed name

 June 1, 2009
 Date

 (770) 933-9500
 Telephone number

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____ forms are submitted.

This collection of information is required by 37 CFR 41.20(b)(3). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:	10937736			
Filing Date:	08-Sep-2004			
Title of Invention:	Refrigerant with lubricating oil for replacement of R22 refrigerant			
First Named Inventor/Applicant Name:	Kenneth M. Ponder			
Filer:	Todd Deveau./Virginia Keenan			
Attorney Docket Number:	821920-1030			
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Request for oral hearing	2403	1	540	540
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				540

Electronic Acknowledgement Receipt

EFS ID:	5430948
Application Number:	10937736
International Application Number:	
Confirmation Number:	1006
Title of Invention:	Refrigerant with lubricating oil for replacement of R22 refrigerant
First Named Inventor/Applicant Name:	Kenneth M. Ponder
Customer Number:	24504
Filer:	Todd Deveau./Virginia Keenan
Filer Authorized By:	Todd Deveau.
Attorney Docket Number:	821920-1030
Receipt Date:	01-JUN-2009
Filing Date:	08-SEP-2004
Time Stamp:	18:44:16
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 540
RAM confirmation Number	3599
Deposit Account	200778
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Reply Brief Filed	00920975.PDF	683139	no	13
			dc65384382ab0080b97f6fd4ec2ced486f488bc1		

Warnings:**Information:**

2	Request for Oral Hearing	00920976.PDF	131182	no	2
			ea40c4612bc7780500fcf349398c58e272eb28ce		

Warnings:**Information:**

3	Fee Worksheet (PTO-875)	fee-info.pdf	30128	no	2
			503fffd1ba2e505c763979dc248b6943254baf89		

Warnings:**Information:**

Total Files Size (in bytes):			844449
------------------------------	--	--	--------

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/937,736

09/08/2004

Kenneth M. Ponder

821920-1030

1006

24504

7590

06/22/2009

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
600 GALLERIA PARKWAY, S.E.
STE 1500
ATLANTA, GA 30339-5994

EXAMINER

HARDEE, JOHN R

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

06/22/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**UNITED STATES DEPARTMENT OF COMMERCE****U.S. Patent and Trademark Office**

Address : COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
10937736	9/8/2004	PONDER ET AL.	821920-1030

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
600 GALLERIA PARKWAY, S.E.
STE 1500
ATLANTA, GA 30339-5994

EXAMINER

JOHN R.. HARDEE

ART UNIT**PAPER**

1796

20090618

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

/John R. Hardee/
Primary Examiner, Art Unit 1796

1. The reply brief filed June 1, 2009 has been entered and considered. The application has been forwarded to the Board of Patent Appeals and Interferences for decision on the appeal.
2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to the examiner, Dr. John R. Hardee, whose telephone number is (571) 272-1318. The examiner can normally be reached on Monday through Friday from 8:00 until 4:30. In the event that the examiner is not available, his supervisor, Mr. Harold Pyon, may be reached at (571) 272-1498.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John R. Hardee/
Primary Examiner
June 18, 2009



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/937,736

09/08/2004

Kenneth M. Ponder

821920-1030

1006

24504

7590

06/30/2009

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP

600 GALLERIA PARKWAY, S.E.

STE 1500

ATLANTA, GA 30339-5994

EXAMINER

HARDEE, JOHN R

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

06/30/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



United States Patent and Trademark Office

**Under Secretary of Commerce for Intellectual Property and
Director of the United States Patent and Trademark Office**

**P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov**

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
600 GALLERIA PARKWAY, S.E.
STE 1500
ATLANTA, GA 30339-5994

Appeal No: 2009-012229
Application: 10/937,736
Appellant: Kenneth M. Ponder et al.

Board of Patent Appeals and Interferences Docketing Notice

Application 10/937,736 was received from the Technology Center at the Board on June 22, 2009 and has been assigned Appeal No: 2009-012229.

A review of the file indicates that the following documents have been filed by appellant:

Appeal Brief filed on: February 19, 2009
Reply Brief filed on: June 01, 2009
Request for Hearing filed on: June 01, 2009

In all future communications regarding this appeal, please include both the application number and the appeal number.

The mailing address for the Board is:

BOARD OF PATENT APPEALS AND INTERFERENCES
UNITED STATES PATENT AND TRADEMARK OFFICE
P.O. BOX 1450
ALEXANDRIA, VIRGINIA 22313-1450

The facsimile number of the Board is 571-273-0052. Because of the heightened security in the Washington D.C. area, facsimile communications are recommended. Telephone inquiries can be made by calling 571-272-9797 and should be directed to a Program and Resource Administrator.

By order of the Board of Patent Appeals and Interferences.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/937,736

09/08/2004

Kenneth M. Ponder

821920-1030

1006

24504 7590 12/18/2009
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
600 GALLERIA PARKWAY, S.E.
STE 1500
ATLANTA, GA 30339-5994

EXAMINER

HARDEE, JOHN R

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

12/18/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

Board of Patent Appeals and Interferences

THOMAS, KAYDEN,
HORSTEMEYER & RISLEY, LLP
600 GALLERIA PARKWAY, S.E.
STE 1500
ATLANTA, GA 30339-5994

Appeal No: 2009-012229
Appellant: Kenneth M. Ponder, Steffan Thomas et al.
Application No: 10/937,736
Hearing Room: B
Hearing Docket: A
Hearing Date: Wednesday, February 10, 2010
Hearing Time: 09:00 AM
Location: Madison Building - East Wing
600 Dulany Street, 9th Floor
Alexandria, Virginia 22313-1450

**NOTICE OF HEARING
CONFIRMATION REQUIRED WITHIN TWENTY-ONE DAYS**

Your attention is directed to 37 CFR § 41.47. The above identified appeal will be heard by the Board of Patent Appeals and Interferences on the date indicated. Hearings will commence at the time set and as soon as the argument in one appeal is concluded, the succeeding appeal will be taken up. The time allowed for argument is twenty minutes unless additional time is requested and permitted before the argument is commenced. If there are any inquires, please contact the Clerk of the Board at 571-272-9797.

The application involved in this appeal has been published. Accordingly, the hearing in this appeal is open to the public.

CONFIRMATION OR WAIVER OF THE HEARING IS REQUIRED. This form must be completed below and facsimile transmitted to both: (1) the USPTO Central fax number (official copy), and (2) the Board of Patent Appeals and Interferences fax number (courtesy copy) within TWENTY-ONE (21) DAYS from the mailing date of this notice indicating confirmation or waiver of the hearing. A copy of this notice may be alternately filed by mail if facsimile is not available.

BPAI HEARINGS FAX No: (571) 273-0299

USPTO Central Fax No: (571) 273-8300

BPAI Mailing Address: Board of Patent Appeals and Interferences
United States Patent and Trademark Office
P.O. BOX 1450
Alexandria, Virginia 22313-1450

In all communications relating to this appeal, please identify the appeal by its number.

CHECK ONE: () HEARING ATTENDANCE CONFIRMED () HEARING ATTENDANCE WAIVED

Signature of Attorney/Agent/Appellant

Date

Registration No.

Names of other visitors expected to accompany counsel: _____

For information on visitor access to hearing rooms and security procedures at the USPTO Alexandria Campus, see
http://www.uspto.gov/web/offices/dcom/gcounsel/contact.htm#bpai_contacts

Page 1

RECEIVED
CENTRAL FAX CENTER

JAN 07 2010



UNITED STATES PATENT AND TRADEMARK OFFICE

Board of Patent Appeals and Interferences

THOMAS, KAYDEN,
HORSTEMEYER & RISLEY, LLP
600 GALLERIA PARKWAY, S.E.
STE 1500
ATLANTA, GA 30339-5994

Appeal No: 2009-012229
Appellant: Kenneth M. Ponder, Steffan Thomas et al.
Application No: 10/937,736
Hearing Room: B
Hearing Docket: A
Hearing Date: Wednesday, February 10, 2010
Hearing Time: 09:00 AM
Location: Madison Building - East Wing
600 Dulany Street, 9th Floor
Alexandria, Virginia 22313-1450

**NOTICE OF HEARING
CONFIRMATION REQUIRED WITHIN TWENTY-ONE DAYS**

Your attention is directed to 37 CFR § 41.47. The above identified appeal will be heard by the Board of Patent Appeals and Interferences on the date indicated. Hearings will commence at the time set and as soon as the argument in one appeal is concluded, the succeeding appeal will be taken up. The time allowed for argument is twenty minutes unless additional time is requested and permitted before the argument is commenced. If there are any inquiries, please contact the Clerk of the Board at 571-272-9797.

The application involved in this appeal has been published. Accordingly, the hearing in this appeal is open to the public.

CONFIRMATION OR WAIVER OF THE HEARING IS REQUIRED. This form must be completed below and facsimile transmitted to both: (1) the USPTO Central fax number (official copy), and (2) the Board of Patent Appeals and Interferences fax number (courtesy copy) within TWENTY-ONE (21) DAYS from the mailing date of this notice indicating confirmation or waiver of the hearing. A copy of this notice may be alternately filed by mail if facsimile is not available.

BPAI HEARINGS FAX No: (571) 273-0299

USPTO Central Fax No: (571) 273-8300

BPAI Mailing Address:

Board of Patent Appeals and Interferences
United States Patent and Trademark Office
P.O. BOX 1450
Alexandria, Virginia 22313-1450

In all communications relating to this appeal, please identify the appeal by its number.

CHECK ONE: ☒ HEARING ATTENDANCE CONFIRMED☐ HEARING ATTENDANCE WAIVED

Signature of Attorney/Agent/Appellant

Date

Registration No.

Names of other visitors expected to accompany counsel:

Kenneth M. Ponder

For information on visitor access to hearing rooms and security procedures at the USPTO Alexandria Campus, see
http://www.uspto.gov/web/offices/dcom/patcounsel/contact.htm#bpa_contacts

**Thomas | Kayden**

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP

RECEIVED
CENTRAL FAX CENTER

JAN 07 2010

600 Galleria Parkway, N.W.
Suite 1500
Atlanta, GA 30339
tkhr.com

January 7, 2010

[Matter No.821920-1030]

TO:
United States Patent and Trademark Office
CentralFROM:
Todd Deveau

FAX: 571-273-8300

FAX: 770-951-0933

TEL: 770-933-9500

TEL:

EMAIL: todd.deveau@tkhr.com

RE: U.S. application serial no. 10/937,736

Number of Pages (Including This Cover Sheet): - 2 - Page(s)

PLEASE ACKNOWLEDGE SAFE AND CLEAR RECEIPT OF ALL PAGES.

CONFIDENTIALITY NOTICE

The information in this facsimile message is legally privileged and confidential information intended only for the use of the individual or entity named above. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution or reproduction of this communication is strictly prohibited. If you have received this facsimile in error, please notify us by telephone and return the original message to us at the address above via the United States Postal Service. Thank you.

INTELLECTUAL PROPERTY LAWYERSAtlanta, Georgia
Huntsville, Alabama
PAGE 1/2 * RCVD AT 1/7/2010 2:56:30 PM [Eastern Standard Time] * SVR:USPTO-EFAXF-5/27 * DHIS:2738300 * CSID:7709510933 * DURATION (mm-ss):00:38

Page 1
RECEIVED
CENTRAL FAX CENTER

JAN 07 2010



UNITED STATES PATENT AND TRADEMARK OFFICE

Board of Patent Appeals and Interferences

THOMAS, KAYDEN,
HORSTEMEYER & RISLEY, LLP
600 GALLERIA PARKWAY, S.E.
STE 1500
ATLANTA, GA 30339-5994Appeal No: 2009-012229
Appellant: Kenneth M. Ponder, Steffan Thomas et al.
Application No: 10/937,736
Hearing Room: B
Hearing Docket: A
Hearing Date: Wednesday, February 10, 2010
Hearing Time: 09:00 AM
Location: Madison Building - East Wing
600 Dulany Street, 9th Floor
Alexandria, Virginia 22313-1450NOTICE OF HEARING
CONFIRMATION REQUIRED WITHIN TWENTY-ONE DAYS

Your attention is directed to 37 CFR § 41.47. The above identified appeal will be heard by the Board of Patent Appeals and Interferences on the date indicated. Hearings will commence at the time set and as soon as the argument in one appeal is concluded, the succeeding appeal will be taken up. The time allowed for argument is twenty minutes unless additional time is requested and permitted before the argument is commenced. If there are any inquiries, please contact the Clerk of the Board at 571-272-9797.

The application involved in this appeal has been published. Accordingly, the hearing in this appeal is open to the public.

CONFIRMATION OR WAIVER OF THE HEARING IS REQUIRED. This form must be completed below and facsimile transmitted to both: (1) the USPTO Central fax number (official copy), and (2) the Board of Patent Appeals and Interferences fax number (courtesy copy) within TWENTY-ONE (21) DAYS from the mailing date of this notice indicating confirmation or waiver of the hearing. A copy of this notice may be alternately filed by mail if facsimile is not available.

BPAI HEARINGS FAX No: (571) 273-0299

USPTO Central Fax No: (571) 273-8300

BPAI Mailing Address:

Board of Patent Appeals and Interferences
United States Patent and Trademark Office
P.O. BOX 1450
Alexandria, Virginia 22313-1450

In all communications relating to this appeal, please identify the appeal by its number.

CHECK ONE: ☒ HEARING ATTENDANCE CONFIRMED☐ HEARING ATTENDANCE WAIVED

Signature of Attorney/Agent/Appellant

Date

Registration No.

Names of other visitors expected to accompany counsel:

Kenneth M. Ponder
For information on visitor access to hearing rooms and security procedures at the USPTO Alexandria Campus, see
http://www.uspto.gov/web/offices/dcom/counsel/contact.htm#bpa_contacts



Thomas | Kayden

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP

RECEIVED
CENTRAL FAX CENTER

JAN 07 2010

600 Galleria Parkway, N.W.
Suite 1500
Atlanta, GA 30339
tkhr.com



FAXED

January 7, 2010

[Matter No.821920-1030]

TO:
United States Patent and Trademark Office
Central

FROM:
Todd Deveau

FAX: 571-273-8300

FAX: 770-951-0933

TEL: 770-933-9500

TEL:

EMAIL: todd.deveau@tkhr.com

RE: U.S. application serial no. 10/937,736

Number of Pages (Including This Cover Sheet): - 2 - Page(s)

PLEASE ACKNOWLEDGE SAFE AND CLEAR RECEIPT OF ALL PAGES.

CONFIDENTIALITY NOTICE

The information in this facsimile message is legally privileged and confidential information intended only for the use of the individual or entity named above. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution or reproduction of this communication is strictly prohibited. If you have received this facsimile in error, please notify us by telephone and return the original message to us at the address above via the United States Postal Service. Thank you.

INTELLECTUAL PROPERTY LAWYERS

PAGE 1/2 * RCVD AT 1/7/2010 2:59:51 PM [Eastern Standard Time] * SVR:USPTO-EFAX-5/38 * DNIS:2738300 * CSID:7709510933 * DURATION (mm-ss):00-58

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE COMMISSIONER OF PATENTS AND TRADEMARKS

In re Kenneth M. Ponder *et al.*

Application: 10/937,736

Filed: September 8, 2004

Appeal No. 2009-012229

HEARING POSTPONED DUE TO INCLEMENT WEATHER

An oral hearing before a merits panel of the Board of Patent Appeals and Interferences (Board) scheduled for Wednesday, February 10, 2010, was postponed due to inclement weather.

BY ORDER OF THE BOARD OF PATENT
APPEALS AND INTERFERENCES



ROGER L. WILLIAMS
Administrative Officer
571-272-9797

Scanned 2/19/10



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/937,736

09/08/2004

Kenneth M. Ponder

821920-1030

1006

24504 7590 02/23/2010
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
600 GALLERIA PARKWAY, S.E.
STE 1500
ATLANTA, GA 30339-5994

EXAMINER

HARDEE, JOHN R

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

02/23/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

Board of Patent Appeals and Interferences

THOMAS, KAYDEN,
HORSTEMEYER & RISLEY, LLP
600 GALLERIA PARKWAY, S.E.
STE 1500
ATLANTA, GA
30339-5994

Appeal No: 2009-012229
Appellant: Kenneth M. Ponder et al.
Application No: 10/937,736
Hearing Room: A
Hearing Docket: A
Hearing Date: Wednesday, April 14, 2010
Hearing Time: 01:00 PM
Location: Madison Building - East Wing
600 Dulany Street, 9th Floor
Alexandria, Virginia 22313-1450

NOTICE OF HEARING
CONFIRMATION REQUIRED WITHIN TWENTY-ONE DAYS

Your attention is directed to 37 CFR § 41.47. The above identified appeal will be heard by the Board of Patent Appeals and Interferences on the date indicated. Hearings will commence at the time set and as soon as the argument in one appeal is concluded, the succeeding appeal will be taken up. The time allowed for argument is twenty minutes unless additional time is requested and permitted before the argument is commenced. If there are any inquires, please contact the Clerk of the Board at 571-272-9797.

The application involved in this appeal has been published. Accordingly, the hearing in this appeal is open to the public.

CONFIRMATION OR WAIVER OF THE HEARING IS REQUIRED. This form must be completed below and facsimile transmitted to both: (1) the USPTO Central fax number (official copy), and (2) the Board of Patent Appeals and Interferences fax number (courtesy copy) within TWENTY-ONE (21) DAYS from the mailing date of this notice indicating confirmation or waiver of the hearing. A copy of this notice may be alternately filed by mail if facsimile is not available.

BPAI HEARINGS FAX No: (571) 273-0299

USPTO Central Fax No: (571) 273-8300

BPAI Mailing Address: Board of Patent Appeals and Interferences
United States Patent and Trademark Office
P.O. BOX 1450
Alexandria, Virginia 22313-1450

In all communications relating to this appeal, please identify the appeal by its number.

CHECK ONE: () HEARING ATTENDANCE CONFIRMED () HEARING ATTENDANCE WAIVED

Signature of Attorney/Agent/Appellant

Date

Registration No.

Names of other visitors expected to accompany counsel: _____

For information on visitor access to hearing rooms and security procedures at the USPTO Alexandria Campus, see
http://www.uspto.gov/web/offices/dcom/ecom/counsel/contact.htm#bpai_contacts

RECEIVED
CENTRAL FAX CENTER

MAR 15 2010



UNITED STATES PATENT AND TRADEMARK OFFICE

Board of Patent Appeals and Interferences

THOMAS, KAYDEN,
HORSTEMEYER & RISLEY, LLP
600 GALLERIA PARKWAY, S.E.
STE 1500
ATLANTA, GA
30339-5994

Appeal No: 2009-012229
Appellant: Kenneth M. Ponder et al.
Application No: 10/937,736
Hearing Room: A
Hearing Docket: A
Hearing Date: Wednesday, April 14, 2010
Hearing Time: 01:00 PM
Location: Madison Building - East Wing
600 Dulany Street, 9th Floor
Alexandria, Virginia 22313-1450

NOTICE OF HEARING
CONFIRMATION REQUIRED WITHIN TWENTY-ONE DAYS

Your attention is directed to 37 CFR § 41.47. The above identified appeal will be heard by the Board of Patent Appeals and Interferences on the date indicated. Hearings will commence at the time set and as soon as the argument in one appeal is concluded, the succeeding appeal will be taken up. The time allowed for argument is twenty minutes unless additional time is requested and permitted before the argument is commenced. If there are any inquiries, please contact the Clerk of the Board at 571-272-9797.

The application involved in this appeal has been published. Accordingly, the hearing in this appeal is open to the public.

CONFIRMATION OR WAIVER OF THE HEARING IS REQUIRED. This form must be completed below and facsimile transmitted to both: (1) the USPTO Central fax number (official copy), and (2) the Board of Patent Appeals and Interferences fax number (courtesy copy) within TWENTY-ONE (21) DAYS from the mailing date of this notice indicating confirmation or waiver of the hearing. A copy of this notice may be alternately filed by mail if facsimile is not available.

BPAI HEARINGS FAX No: (571) 273-0299

USPTO Central Fax No: (571) 273-8300

BPAI Mailing Address:

Board of Patent Appeals and Interferences
United States Patent and Trademark Office
P.O. BOX 1450
Alexandria, Virginia 22313-1450

In all communications relating to this appeal, please identify the appeal by its number.

CHECK ONE: ☒ HEARING ATTENDANCE CONFIRMED ☐ HEARING ATTENDANCE WAIVED

John A. Ponder
Signature of Attorney/Agent/Appellant

15 March 2010
Date

29,526
Registration No.

Names of other visitors expected to accompany counsel: _____

For information on visitor access to hearing rooms and security procedures at the USPTO Alexandria Campus, see
http://www.uspto.gov/web/offices/dcom/escoste/1/contact.htm#bpa_contacts

**Thomas | Kayden**

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP

RECEIVED
CENTRAL FAX CENTER

MAR 15 2010

600 Galleria Parkway, N.W.
Suite 1500
Atlanta, GA 30339
tkhr.com

March 15, 2010

[Matter No.821920-1030]

TO:
Board of Patent Appeals and Interferences
United States Patent and Trademark OfficeFROM:
Todd Deveau

FAX: 571-273-8300

FAX: 770-951-0933

TEL: 770-933-9500

TEL: 571-272-9797

EMAIL: todd.deveau@tkhr.comRE: Confirmation of Attendance of Hearing
U.S. Application Serial No. 10/937,736
"Refrigerant with Lubricating Oil for Replacement of R-22 Refrigerant"

Number of Pages (Including This Cover Sheet): - 2 - Page(s)

PLEASE ACKNOWLEDGE SAFE AND CLEAR RECEIPT OF ALL PAGES.

CONFIDENTIALITY NOTICE

The information in this facsimile message is legally privileged and confidential information intended only for the use of the individual or entity named above. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution or reproduction of this communication is strictly prohibited. If you have received this facsimile in error, please notify us by telephone and return the original message to us at the address above via the United States Postal Service. Thank you.

INTELLECTUAL PROPERTY LAWYERS

Atlanta, Georgia

Huntsville, Alabama

PAGE 1/2 * RCVD AT 3/15/2010 1:36:54 PM [Eastern Daylight Time] * SVR:USPTO-EFAX-6/42 * DNIS:2738300 * CSID:7709510933 * DURATION (mm-ss):01:40



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/937,736

09/08/2004

Kenneth M. Ponder

821920-1030

1006

24504 7590 04/29/2010
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
600 GALLERIA PARKWAY, S.E.
STE 1500
ATLANTA, GA 30339-5994

EXAMINER

HARDEE, JOHN R

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

04/29/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KENNETH M. PONDER
and STEFFAN THOMAS, JR.

Appeal 2009-012229¹
Application 10/937,736
Technology Center 1700

Decided: April 29, 2010

Before MICHAEL P. COLAIANNI, LINDA M. GAUDETTE, and
JEFFREY B. ROBERTSON, *Administrative Patent Judges*.

COLAIANNI, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 the final rejection of claims 1-10, 21-25, 27, 29-31, 33-35, and 37-40. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b).

¹ Oral arguments were heard in the appeal on April 14, 2010.

We AFFIRM.

Appellants disclose a refrigerant replacement for refrigerant R-22 (chlorodifluoromethane) composed of a blend of refrigerant that is less damaging to the ozone layer and a method and apparatus for refrigeration (Spec. 1: 10-22).

Claim 21 is illustrative:

21. A refrigerant composition comprising a combination of refrigerant gases and non-refrigerant gas components,

(a) the refrigerant gases consisting of:

about 40% to about 45% by weight tetrafluoroethane; and

about 55% to about 60% by weight pentafluoroethane; and

(b) the non-refrigerant gas components including about 0.5% up to about 20% by weight of the refrigerant gases of a lubricating oil, wherein the lubricating oil is selected from the group consisting of naphthenic based lubricants, paraffinic based lubricants, and mixtures thereof, mineral oil, polyol ester, synthetic alkyl aromatic lubricants, synthetic alkyl aromatic lubricants mixed with mineral oil, and synthetic alkyl aromatic lubricants mixed with polyol ester.

Appellants appeal the following rejection:

Claims 1-10, 21-25, 27, 29-31, 33-35, and 37-40 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Takigawa (U.S. Patent 6,207,071 B1, March 27, 2001).

Appellants argue the claims as a group (App. Br. 5). Appellants' mere statement of the subject matter of dependent claims 4, 9, and 25 (App. Br. 10) do not amount to a separate argument of those claims. 37 C.F.R.

§ 41.37(c)(1)(vii). Therefore, we select claim 21, the broadest independent claim on appeal, as representative of the group. *Id.*

ISSUE

Did the Examiner err in concluding that Takigawa would have suggested the subject matter of claim 21? We decide this issue in the negative.

PRINCIPLES OF LAW

Applicants' reason for making the modification does not control the obviousness analysis; rather, “any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 420 (2007).

A compound and all of its properties are inseparable. *In re Papesch*, 315 F.2d 381, 391 (CCPA 1963).

A declarant’s or affiant’s opinion evidence as to an ultimate legal conclusion is afforded no weight, though the underlying reasons for the opinion may be considered. *In re Lindell*, 385 F.2d 453, 456 (CCPA 1967).

FACTUAL FINDINGS (FF)

We adopt the Examiner’s findings in the Answer and Final Office Action as our own, except as to those findings that we expressly overturn or set aside in the Analysis that follows. We add the following factual findings:

1. Takigawa discloses a refrigerant oil and a fluid composition for a refrigerator containing the oil and an HFC (hydrofluorocarbon)

- refrigerant blend containing 1,1,1,2-tetrafluoroethane (HFC-134a) and/or pentafluoroethane (HFC-125) (col. 1, ll. 13-19).
2. Takigawa discloses that the HFC refrigerant contains HFC-134a and/or HFC-125 (col. 2, ll. 15-17; 23-24; 40-41).
 3. Takigawa discloses that the HFC-134a and/or HFC-125 blend may include additional HFC refrigerants such as alkane fluorides having 1 to 3 carbon atoms (col. 8, ll. 20-28). Takigawa places “no restriction” on the kind of HFC to be mixed with HFC- 134a and/or HFC-125 and exemplifies various suitable HFC combinations (col. 8, ll. 29-55).
 4. Takigawa claims that the HFC refrigerant used in the fluid composition contains “at least one of HFC-134a and/or HFC-125” (claim 1).
 5. Takigawa discloses that HFC-134a is present in the refrigerant composition in an amount of 40 weight percent or greater and that HFC-125 is present in a most preferable amount of 40 weight percent or greater (col. 8, ll. 20-28).

Additional findings of fact may appear in the Analysis that follows.

ANALYSIS

Appellants argue that Takigawa fails to teach or suggest a refrigerant composition “consisting of” about 40% to about 45% HFC-134a (i.e., tetrafluoroethane) and about 55% to about 60% HFC-125 (i.e., pentafluoroethane) (App. Br. 8). Appellants contend that the claim phrase “consisting of” excludes additional HFC refrigerants from the blend, which

Takigawa teaches to mix with the HFC-134a and HFC-125 blend (App. Br. 9). Appellants argue that the Examiner has not provided a reason to select the claimed narrower range (i.e., 40-45% HFC-134a and 55-60% HFC-125) from Takigawa's broader ranges (i.e., 40-100% HFC-134a and 20-100% HFC-125) (App. Br. 9). Appellants contend that the Examiner's stated case lacks articulated reasoning for modifying Takigawa's teachings to arrive at the claimed invention (App. Br. 6-7).

Appellants' argument that "consisting of" excludes additional HFC refrigerants fails to address the Examiner's position that Takigawa's unrestricted disclosure of HFCs that may be mixed with the refrigerant means that no additional HFC need be added to the HFC-134a and HFC-125 blend (Ans. 3, 5). In other words, Takigawa's alkane fluoride that is to be mixed with the HFC-134a and HFC-125 blend may be an additional amount of HFC-134a or HFC-125, rather than a different HFC. Though Takigawa exemplifies different HFCs being mixed with the HFC-134a and HFC-125 blend, Takigawa's claim 1 recites that the refrigerant includes "at least one of HFC-134a and HFC-125", which underscores that the simplest refrigerant composition mixture claimed by Takigawa includes the binary mixture of HFC-134a and HFC-125.

Similarly, Appellants' argument regarding the claimed percentages of the refrigerant gases is not persuasive because it fails to address the Examiner's finding that Takigawa's simplest binary refrigerant composition is HFC-134a and HFC-125. As the simplest binary mixture, the Examiner correctly determines, based on Takigawa's disclosure (FF 5), that HFC-134a would have been present in an amount of 40 to 60% by weight and HFC-125 correspondingly would be present in a range of 60 to 40% by weight (Ans.

3, 5). Therefore, Takigawa's disclosure would have suggested that at least two of the end points of Appellants' claimed ranges (i.e., 40% HFC-134a and 60% HFC-125) and thus further narrowed Takigawa's range.

Accordingly, we agree with the Examiner that given the guidance provided by Takigawa, determining acceptable refrigerant gas concentration ranges would have been a matter of routine experimentation.

We are unpersuaded by Appellants' argument that there is no rationale provided that Takigawa would have led one of ordinary skill the art to the claimed refrigerant composition. In light of the reasons noted above, the Examiner correctly determined that Takigawa would have suggested Appellants' claimed refrigerant composition.

Appellants further argue that Takigawa is directed to solving a different problem (i.e., finding a suitable lubricant) than Appellants' claimed invention such that there would be no reasonable expectation of successfully solving Appellants' problems (i.e., high temperature application refrigerant for replacing R-22 refrigerant) (App. Br. 11).

However, this argument is unpersuasive because the Examiner's reason for modifying the prior art to arrive at the claimed invention need not be the same as Appellants' reason for making the claimed invention. *KSR*, 550 U.S. at 420. Instead, any need or problem in the field of endeavor may provide the reason for modifying the prior art. *Id.* Accordingly, Takigawa's disclosure of solving a different problem than Appellants' problem is not determinative.

As noted by the Examiner (Ans. 3, 5-6), Takigawa would have suggested the claimed refrigerant composition, such that there is a reasonable expectation of successfully achieving the claimed refrigerant

composition, which would necessarily have the same properties as Appellants' claimed composition. *Papesch*, 315 F.2d at 391.

Appellants contend that the claimed composition possesses a superior high temperature property not possessed or taught by Takigawa (App. Br. 12-14).² Appellants rely on the Ponder and Gbur Declarations as evidence that refrigerant gas compositions with different gas proportions have different properties (App. Br. 12-14). Declarants Gbur and Ponder opine that the claimed invention would not have been obvious from Takigawa (App. Br. 13; Reply Br. 11).

Appellants' evidence of unexpected results is not persuasive because it fails to compare the claimed invention to the closest prior art (i.e., Takigawa) as noted by the Examiner (Ans. 7). Instead, the Ponder and Gbur Declarations compare the claimed invention to the refrigerant R421B (85% pentafluoroethane and 15% tetrafluoroethane), a refrigerant composition not disclosed by Takigawa. Though the declarations may establish that different combinations of refrigerant gases produce refrigerant compositions with different properties, the comparison of R421A to R421B fails to account for Takigawa's disclosure of a binary refrigerant composition having 40% or greater tetrafluoroethane content (i.e., HFC-134a) and preferably 40% or greater pentafluoroethane content (i.e., HFC-125).

While Declarants Ponder's and Gbur's views that the claimed invention would not have been obvious over Takigawa are not afforded any

² Appellants argue long-felt need for the first time on pages 10-11 of the Reply Brief. Because this argument is being raised for the first time in the Reply Brief and there is no reason provided why this argument was not raised in the Appeal Brief, we shall not consider the argument. *Ex parte Nakashima*, 2010 WL 191183 *3-*5 (BPAI 2010).

consideration as they are directed to the ultimate legal conclusion, the underlying analyses that led to their conclusions in the declarations have been considered. *Lindell*, 385 F.2d at 456. Specifically, the Ponder Declaration merely states that the declarant found no teaching or suggestion in Takigawa to make a refrigerant composition consisting of tetrafluoroethane and pentafluoroethane as claimed (Ponder Dec. 8). The Gbur Declaration filed October 30, 2007 does not address Takigawa but rather discusses errors and analysis of Appellants' Specification data. The Gbur Declaration filed May 16, 2008, like the Ponder Declaration, rests its conclusion of non-obviousness on Takigawa's failure to exemplify a blend of only HFC-134a and HFC-125 (Gbur Dec. 2).

However, the Ponder and Gbur Declarations analyses are not persuasive in view of Takigawa's disclosures and our analysis of these disclosures *supra* which determine that Takigawa would have suggested the claimed refrigerant composition.

For the above reasons, we affirm the Examiner's § 103 rejection of claims 1-10, 21-25, 27, 29-31, 33-35, and 37-40 over Takigawa.

DECISION

The Examiner's decision 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)(1).

AFFIRMED

cam

Appeal 2009-012229
Application 10/937,736

THOMAS, KEYDEN, HORSTEMEYER &
RISLEY, LLP
600 GALLERIA PARKWAY, SE
SUITE 1500
ATLANTA, GA 30339-5994



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/937,736

09/08/2004

Kenneth M. Ponder

821920-1030

1006

24504

7590

05/10/2010

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP

600 GALLERIA PARKWAY, S.E.

STE 1500

ATLANTA, GA 30339-5994

EXAMINER

HARDEE, JOHN R

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

05/10/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36

RECORD OF ORAL HEARING
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KENNETH M. PONDER and
STEFFAN THOMAS, JR.

Appeal No. 2009-012229
Application No. 10/937,736
Technology Center 1700

Oral Hearing Held: April 14, 2010

Before MICHAEL COLAIANNI, LINDA M. GAUDETTE, and
JEFFREY B. ROBERTSON, *Administrative Patent Judges*.

APPEARANCES:

ON BEHALF OF THE APPELLANT:

TODD DEVEAU, ESQUIRE
Thomas, Kayden, Horstemeyer & Risley, LLP
600 Galleria Parkway, S.E.
Suite 1500
Atlanta, Georgia 30339

1 THE USHER: Good afternoon. Calendar Number 29, Appeal Number
2 2009-012229. Mr. Deveau.

3 JUDGE COLAIANNI: Good afternoon, Mr. Deveau.

4 MR. DEVEAU: Good afternoon.

5 JUDGE COLAIANNI: Welcome to the Board.

6 MR. DEVEAU: Thank you.

7 JUDGE COLAIANNI: We have a court reporter that will be transcribing
8 today's proceedings. If you have a business card for her, she would
9 appreciate it.

10 MR. DEVEAU: Would you like that now or later?

11 JUDGE COLAIANNI: You can do that at the end. That is fine. You have
12 20 minutes. You may begin when you're ready.

13 MR. DEVEAU: Very good. I have and would like to introduce as well with
14 me this afternoon Ken Ponder. He is one of the co-inventors on the
15 application. Mr. Ponder is right there.

16 The appeal in this case involves a refrigerant composition, and I'll briefly go
17 over the claim language that I think is at issue so that we can have that in
18 front of us.

19 All the independent claims in effect refer to a refrigerant composition
20 comprising a combination of refrigerant gases and non-refrigerant gas
21 components. The refrigerant gases consisting of about 40 to 45 percent by
22 weight tetrafluoroethane and about 55 to about 60 percent by weight
23 pentafluoroethane. Then we have a claim where refrigerant gases consist of
24 only two gases to the exclusion of others and very specific weight ranges of
25 only 5 percent.

1 The rejection is based only on one reference, Takigawa, and only on 103
2 obviousness. There is no 102 anticipation rejection. Thus acknowledging
3 that Takigawa does not teach every feature of any one of the pending claims.
4 The Examiner, of course, has the burden of establishing a prima facie case of
5 obviousness to support the rejection. This requires something more than
6 conclusory statements referring to routine optimization. Under KSR, this
7 requires articulated reasoning. This is to prevent application of unpermitted
8 hindsight.

9 Thus here the Examiner has the burden of showing how and where
10 Takigawa teaches under the recited claims refrigerant gases consisting of
11 tetrafluoroethane and pentafluoroethane to the exclusion of any other
12 refrigerant gas. And further, the Examiner has the burden of showing where
13 and how Takigawa teaches the specific weight ranges recited in the claims.
14 We submit the Examiner has failed to meet this burden and the rejection is
15 erroneous and should be reversed as to all the pending claims. We submit
16 there is no teaching in Takigawa of a refrigerant gas composition consisting
17 of only pentafluoroethane and tetrafluoroethane.

18 The Examiner in arguing this point relies on the reference and the statement
19 -- particular statement in the reference that there is no restriction as to the
20 kind of HFC to be mixed with the disclosed refrigerants at Column 8. This
21 statement, however, contravenes the ordinary meaning of the phrase "to be
22 mixed with." "To be mixed with" is an expressed positive statement. It is a
23 statement that states to somebody of ordinary skill that something else is to
24 be mixed in. It cannot be fairly interpreted to mean the opposite, namely
25 nothing is to be mixed in.

1 The reliance on the statement in Takigawa also takes this statement out of
2 context with the rest of the reference. For example, if you consider the
3 following two immediately following paragraphs from this citation, we see,
4 for example, in the first immediately-following paragraph the statement,
5 Examples of the HFC refrigerant containing tetrafluoroethane and/or
6 pentafluoroethane that are useful in this invention are HFC-134a, which is
7 tetrafluoroethane, alone; HFC-125, which is pentafluoroethane, alone; a
8 mixture of HFC-134a and HFC-32, which is a refrigerant gas that is not
9 recited in the claims; a mixture of HFC-134a, HFC-32 and HFC-125, and it
10 continues.

11 Nowhere do we see in Takigawa a teaching or suggestion of selecting only
12 pentafluoroethane and tetrafluoroethane as a refrigerant gas composition.

13 The fact that Takigawa may teach each of the refrigerants alone or in
14 combination with some other third refrigerant, such as R-32, does not
15 amount to teaching to select only pentafluoroethane and tetrafluoroethane
16 together to the exclusion of any other refrigerant gas.

17 JUDGE COLAIANNI: Let me ask you a question, Mr. Deveau.

18 MR. DEVEAU: Yes?

19 JUDGE COLAIANNI: That portion of the reference, Column 8 that you're
20 referring to that the Examiner relied on, it has in there starting about Line
21 20, it talks about the refrigerants used for the refrigerating machine together,
22 with refrigerating oil of Takigawa's invention, and they include this alkane
23 fluoride that is mixed in, I guess, with HFC-134a and/or HFC-125.

24 MR. DEVEAU: Yes.

1 JUDGE COLAIANNI: Why can't that alkane fluoride that the refrigerants
2 have that is one to three carbon atoms, why can't that be HFC-134a or
3 HFC-125?

4 MR. DEVEAU: The way the sentence reads is refrigerants used include an
5 alkane fluoride having one to three carbons and preferably one to two
6 carbons. And it says, "And containing tetrafluoroethane and/or alkane
7 fluoride having one to three carbons." I think a more appropriate
8 interpretation of that sentence would be to say that HFC-134, the
9 tetrafluoroethane, is added to the alkane fluoride having one to three
10 carbons.

11 JUDGE GAUDETTE: Correct. But why can't that alkane fluoride be
12 HFC-125?

13 MR. DEVEAU: Well then, that would render meaningless the and/or
14 statement following that where it continues to say that it could also contain
15 tetrafluoroethane in combination with that.

16 JUDGE GAUDETTE: Well, no because it says or an alkane fluoride
17 contains -- well, it says, "and/or an alkane fluoride which would contain
18 HFC-125." So in that instance, why couldn't the alkane fluoride be
19 HFC-134?

20 MR. DEVEAU: Well, in that case, you have got a reference to the alkane
21 fluoride having one to three atoms, a second reference to the
22 tetrafluoroethane, and a third reference to pentafluoroethane.
23 So if you interpret the first reference to alkane fluoride as being either the
24 tetrafluoroethane or the pentafluoroethane, that would render meaningless
25 the subsequent reference to those, would it not? The sentence would be

1 worded differently if it were intended to be interpreted the way that you
2 described.

3 And if you look at the following paragraph where it says "examples," I think
4 that puts it into context what they're talking about.

5 JUDGE GAUDETTE: Would you say that HFC-125 is an alkane fluoride
6 having one to three carbon atoms?

7 MR. DEVEAU: Yes.

8 JUDGE GAUDETTE: And the same would apply to HFC-134a?

9 MR. DEVEAU: Correct. The end result, however, is you're talking about
10 an alkane fluoride having one to three carbon atoms, which is hundreds of
11 thousands of possible compounds. And so the question then is, where is the
12 teaching out of all those hundreds of thousands of compounds to select only
13 pentafluoroethane and tetrafluoroethane to the exclusion of anything else?
14 So you have to get over that hurdle to meet the consisting of part of the
15 limitation. And even if you get over that hurdle, you have the problem of,
16 where is the teaching for the specific ranges?

17 JUDGE GAUDETTE: Did you make that argument in your Appeal Brief
18 that you would have to select from numerous --

19 MR. DEVEAU: Yes, yes. The number of combinations in Takigawa of
20 HFC's is one to three carbons is enormous. So from that -- and we also
21 make the argument in our Appeal Brief of the genus species argument. We
22 have a genus that is that large. The genus does not necessarily teach a
23 specific species that may be encompassed by that genus.
24 The effect basically is the Examiner has a two-prong hurdle to overcome.
25 The Examiner has to overcome the consisting-of feature of the claim that we

1 select only pentafluoroethane and tetrafluoroethane to the exclusion of any
2 other refrigerant gas.

3 And further, the Examiner must show how Takigawa teaches the specific
4 ranges. They're only in 5-percent range. And that Takigawa may, just like
5 any reference, the fact that various elements of a reference may be
6 individually known does not necessarily render their particular combination
7 obvious.

8 The Examiner to support the argument that the specific ranges are taught by
9 Takigawa makes a conclusory statement that optimizing the ranges amounts
10 to routine experimentation with no support or explanation for that statement.
11 This statement is contradicted in a number of ways.

12 The Examiner himself contradicts a statement by his concession at Page 7 of
13 the Answer that different blends of pentafluoroethane and tetrafluoroethane
14 will have very different properties and that one such composition would not
15 render another such composition obvious.

16 The Examiner's position about routine experimentation is also contradicted
17 by this Office's issuance of Applicant's own U.S. Patent 7,320,763, which is
18 directed to a refrigerant blend consisting of pentafluoroethane and
19 tetrafluoroethane in a ratio of about 85 percent to 15 percent. And that has
20 that limitation as consisting of.

21 If the Examiner's position about routine experimentation were true, then that
22 patent would not have issued. And in this case, we have the very same
23 Examiner, Mr. Hardee, who examined the application that issued as a '763
24 patent as we have here.

25 The Examiner's position on routine optimization is also contradicted by the

1 ASHRAE evidence in several ways. ASHRAE is the industry standards
2 organization. It is the organization that determines when a refrigerant is
3 considered new and when a new and different refrigerant is given a specific
4 refrigerant designation, such as the 125 or 134a.

5 ASHRAE here has awarded the composition of this application -- for
6 example, on a 58- to 42-percent blend with a designation R421a. This
7 shows that ASHRAE considers the composition of this application to be new
8 and different than other compositions -- refrigerant compositions that had
9 gone before.

10 ASHRAE has also awarded the composition of Applicant's '763 patent with
11 a different designation though. That designation is R421b showing, again,
12 that ASHRAE considers even the 85/15 blend of pentafluoroethane to
13 tetrafluoroethane to be something new and different from, for example, a 58-
14 to 42-percent blend of the same two refrigerants to the exclusion of other
15 refrigerants.

16 The designation number 421 simply means that both compositions have the
17 same two refrigerant gases. It is the a and b that follow the 421a and b that
18 represent the different designations and shows that ASHRAE considers them
19 to be different refrigerants.

20 The Examiner's position on routine optimization is also contradicted by the
21 evidence in the Ponder Declaration that R421a of the present application and
22 claims and R421b of the '763 patent are SNAP approved by the EPA for
23 different uses, which tells us that one cannot necessarily be substituted for
24 another in refrigerant equipment.

25 The Examiner's position is also contradicted by the ASHRAE evidence in

1 general of Exhibit C in our exhibit appendix and Gabor's declaration
2 showing there are a large number of refrigerant gases that have been given
3 ASHRAE designations all showing that ASHRAE considers these all to be
4 different and cannot necessarily be substituted one for another.

5 For example, refrigeration equipment is typically designated to use a
6 particular refrigerant gas, such as R32. This specific designation basically
7 means that only R32 or accepted substitutes for R32 can be used, not any
8 and all refrigerants.

9 The Examiner further attempts to support the rejection based on a
10 conclusory statement that the determination of a best application within the
11 field of refrigeration for any refrigerant gas which can be made according to
12 Takigawa amounts to routine experimentation. Again, he does not explain
13 this statement, does not provide support for this statement.

14 If this statement were true, no refrigerant composition involving a
15 combination of two or more individually known HFC's would be patentable,
16 which, of course, is contradicted by the number of refrigerant gas
17 composition patents that have been issued by the Office and also particular
18 Applicant's '763 patent. Also we would not have so many different
19 ASHRAE designations as we have.

20 The reason -- part of the reason why Takigawa does not teach either a
21 refrigerant gas composition consisting of only tetrafluoroethane and
22 pentafluoroethane together to the exclusion of other refrigerant gases or the
23 specific ranges is that Takigawa is only interested in selecting a lubricant for
24 use with an HFC.

25 Takigawa has no interest in what HFC should be used other than it is an

1 alkane fluoride of one to three carbons. Basically, Takigawa could care less
2 what HFC is to be selected for the refrigerant gas that is the subject of
3 Takigawa.

4 And naturally, then, Takigawa provides no teaching or suggestion how one
5 would go about selecting what HFC gas to use for what application or what
6 combination of gases or even of the gases that you select what percentages
7 should be applied. And the Examiner provides no other basis and no other
8 reasoning where one would get this teaching other than routine optimization.
9 The Examiner's reliance on these conclusory statements suggest an improper
10 use of hindsight. Otherwise, how do you interpret "to be mixed with" as
11 meaning nothing is mixed? Otherwise, how do you explain that Takigawa
12 teaches -- the lack of explanation of how Takigawa teaches specific ranges
13 while the Examiner concedes that different blends will have very different
14 properties?

15 And further, while the Examiner concedes that one such composition of
16 pentafluoroethane and tetrafluoroethane would not render another such
17 composition obvious.

18 JUDGE COLAIANNI: Just a question, Mr. Deveau. You have mentioned
19 about the Examiner's construction of that phrase in Takigawa that there is no
20 restriction as to the kind of HFC that is to be mixed. Looking at the
21 Examiner's Answer on Page 5, I see there it says the Examiner construes
22 this, that particular phrase, to mean that no other alkyl fluoride at all need be
23 mixed with tetrafluoroethane and/or pentafluoroethane.

24 I'm understanding that to mean that the Examiner seems to be interpreting
25 that phrase to mean that the alkane fluoride that Takigawa is referring to

1 could be, as Judge Gaudette was referring to, could be HFC-134a or
2 HFC-125 as also being included as to the kind of HFC's that can be mixed
3 with the HFC-134a blend with HFC-125.

4 MR. DEVEAU: Well, if we look at the sentence the Examiner relies on it
5 reads, "There is no restriction as to the kind of HFC hydrocarbon to be
6 mixed with HFC-134 and/or HFC-125." So if it is interpreted that way, then
7 that would make that sentence meaningless because the statement says -- it
8 expressly states and infers that something is to be mixed with HFC-134
9 and/or 125. So if that HFC that is to be mixed is one or the other, then the
10 sentence would not read correctly.

11 JUDGE COLAIANNI: If you have a blend, let's say you have HFC-134a
12 and HFC-125, why would that not include mixing additional HFC-134a into
13 that blend or additional HFC-125 into the HFC-134a/125 blend? Why does
14 it have to be some additional alkane fluoride, some different alkane fluoride?

15 MR. DEVEAU: That, I think, would misread the phrase "to be mixed." "To
16 be mixed" basically states that something else is to be included. If you're
17 including more of the same thing, that is not something else.

18 If you were to interpret that sentence the way you suggest the sentence
19 should have been written that the HFC can be 134a or 134b -- or 125, I'm
20 sorry -- or a combination or it can include anything else, it doesn't state that
21 it is optional to include something in addition to 134a and/or 125. It doesn't
22 say that nothing can be mixed with. It says -- it infers something is to be
23 mixed with.

24 JUDGE COLAIANNI: But it places no restriction, though, on what may be
25 mixed with that blend.