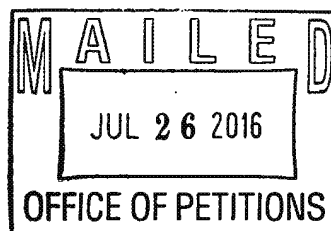




THOMAS | HORSTEMEYER, LLP
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ATLANTA GA 30339



In re Application of :
Kenneth M. Ponder, et al. :
Application No. 13/493491 : DECISION ON PETITION
Filed: June 11, 2012 :
Attorney Docket No. 821920-1032 :

This is a decision on the petition filed March 24, 2016, pursuant to 37 CFR 1.137(a).

The petition is **GRANTED**.

The above-identified application became abandoned for failure to file a timely and proper reply to the final Office action mailed September 9, 2013. This Office action set a shortened statutory period for reply of three months. Applicant filed a Request for Continued Examination (RCE) under 37 CFR 1.114 on Monday, March 10, 2014, made timely by a three month extension of time. However, by Notice of Improper RCE mailed on March 13, 2014 the Examiner of record informed Applicant that the RCE was filed timely but improper because Applicant failed to file the submission required under 37CFR 1.114 with the RCE. This Notice set no new time period for reply. As such, the application became abandoned by operation of law on March 10, 2014. The Office mailed a Notice of Abandonment on March 24, 2014.

With the instant petition, Applicant paid the petition fee, made the proper statement of unintentional delay, and submitted a reply in the form of an amendment satisfying the requirements of a submission under 37 CFR 1.114.

The above-identified application has been abandoned for an extended period of time. The Patent and Trademark Office is relying on petitioner's duty of candor and good faith and accepting the statement that the entire delay in filing the required reply from the due date for the reply until the filing of a grantable petition pursuant to 37 CFR 1.137(a) was unintentional.¹

¹ See Changes to Patent Practice and Procedure, 62 Fed. Reg. at 53160 and 53178, 1203 Off. Gaz. Pat. Office at 88 and 103 (responses to comments 64 and 109) (applicant obligated under 37 CFR 10.18 to inquire into the underlying facts and circumstances when providing the statement required by 37 CFR 1.137(b) to the Patent and Trademark Office).

The application is being forwarded to Group Art Unit 1761 for consideration of the Amendment under 37 CFR 1.114 filed on March 24, 2016 and the RCE under 37 CFR 1.114 previously filed on March 10, 2014.

Telephone inquiries specific to this matter should be directed to Jonya Smalls, Paralegal Specialist at (571) 272-1619.

/Christina Tartera Donnell/

Christina Tartera Donnell
Attorney Advisor
Office of Petitions

Enclosed: PTOL-303 Advisory Action

Advisory Action Before the Filing of an Appeal Brief	Application No. 13/493,491	Applicant(s) PONDER ET AL.	
	Examiner JOHN HARDEE	Art Unit 1761	ATA (First Inventor to File) Status No

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 24 March 2016 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

NO NOTICE OF APPEAL FILED

1. ☒ The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:

a) ☒ The period for reply expires 6 months from the mailing date of the final rejection.

b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action; or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

c) ☐ A prior Advisory Action was mailed more than 3 months after the mailing date of the final rejection in response to a first after-final reply filed within 2 months of the mailing date of the final rejection. The current period for reply expires _____ months from the mailing date of the prior Advisory Action or SIX MONTHS from the mailing date of the final rejection, whichever is earlier.

Examiner Note: If box 1 is checked, check either box (a), (b) or (c). ONLY CHECK BOX (b) WHEN THIS ADVISORY ACTION IS THE FIRST RESPONSE TO APPLICANT'S FIRST AFTER-FINAL REPLY WHICH WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. ONLY CHECK BOX (c) IN THE LIMITED SITUATION SET FORTH UNDER BOX (c). See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) or (c) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because

a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);

b) ☐ They raise the issue of new matter (see NOTE below);

c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. ☐ Applicant's reply has overcome the following rejection(s): _____.

6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. ☒ For purposes of appeal, the proposed amendment(s): (a) ☐ will not be entered, or (b) ☒ will be entered, and an explanation of how the new or amended claims would be rejected is provided below or appended.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ A declaration(s)/affidavit(s) under 37 CFR 1.130(b) was/were filed on _____.

9. ☐ The affidavit or other evidence filed after final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

10. ☐ The affidavit or other evidence filed after the date of filing the Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

11. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

12. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.

13. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____.

14. ☒ Other: See Continuation Sheet.

STATUS OF CLAIMS

15. The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____
 Claim(s) objected to: _____
 Claim(s) rejected: 30-49.
 Claim(s) withdrawn from consideration: _____

	/JOHN HARDEE/ Primary Examiner, Art Unit 1761
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Continuation of 14. Other: The claims remain rejected for the reasons of record. The newly added limitations narrow the percentages to a range made obvious by the reference..



UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/493,491	06/11/2012	Kenneth M. Ponder	821920-1032	1039
24504 7590 08/29/2016 THOMAS I HORSTEMEYER, LLP 400 INTERSTATE NORTH PARKWAY SE SUITE 1500 ATLANTA, GA 30339			EXAMINER HARDEE, JOHN R	
			ART UNIT 1761	PAPER NUMBER
			NOTIFICATION DATE 08/29/2016	DELIVERY MODE ELECTRONIC

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.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspatents@tkhr.com
ozzie.liggins@tkhr.com
docketing@thomashorstemeyer.com

Office Action Summary	Application No. 13/493,491	Applicant(s) PONDER ET AL.	
	Examiner JOHN HARDEE	Art Unit 1761	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 7/26/16.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☒ Claim(s) 30-49 is/are pending in the application.
5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☒ Claim(s) 30-49 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10) ☐ The specification is objected to by the Examiner.

11) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some** c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

4) ☐ Other: _____.

1. The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

2. Applicant's petition for revival, submitted March 24, 2016, was granted on July 26, 2016. *Ex parte* prosecution is resumed.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 30-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takigawa et al., US 6,207,071. The reference discloses lubricating oil compositions and their use in compositions comprising R134a and R125 (col. 1, lines 13+). The reference further discloses the use of hydrofluorocarbons as replacements for chlorofluorocarbons (col. 1, lines 20+). Suitable lubricants include the alkylbenzene oils described at col. 2, lines 30+. Refrigerants include alkane fluorides containing 40% or more of R134a in admixture with alkyl fluorides containing, most preferably, 40% or more of R125 (col. 8, lines 20+). The reference further discloses that there is "no restriction as to the kind of HFC to be mixed with" the disclosed refrigerants. The examiner takes the position that this can reasonably be construed to mean that no additional HFC need be added, and that the disclosure reads on refrigerant compositions *consisting of* 40-60% R134a and 60-40% of R125. Regarding language drawn to dew points and bubble points, such

can be realized by working within the teachings of the reference, as the recited percentages of the recited refrigerants are obvious over the claims. Conventional additives may be added, including those disclosed at the top of col. 8. The examiner takes the position that anticorrosion additives are conventional, and that their use would be obvious over this disclosure. Lubricant compositions comprising naphthenic mineral oil and polyol polyesters are disclosed in Table 1. Note the disclosure in Evaluation Tests 2 and 3 of refrigerant being premixed with lubricant prior to charging a compressor. The disclosed lubricating refrigerant compositions are useful in a variety of refrigeration apparatus, as disclosed at the top of col. 9. Determination of the lubrication-effective amount of a disclosed lubricant amounts to routine optimization. This reference differs from the claimed subject matter in that it does not disclose a composition which reads on appellant's claims with sufficient specificity to constitute anticipation.

It would have been obvious at the time the invention was made to make such a composition, because this reference teaches that all of the ingredients recited by appellants are suitable for inclusion in a refrigerant composition. The person of ordinary skill in the refrigeration art would expect the recited compositions to have properties similar to those compositions which are exemplified, absent a showing to the contrary.

In the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art, a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed Cir. 1990).

Response to Arguments

5. Applicant's arguments filed March 24, 2016 have been fully considered but they are not persuasive. Applicant argues that the Takigawa reference does not disclose dew points or bubble points. The examiner has acknowledged this. Nonetheless, the reference provides motivation to make compositions within a fairly narrow range of percentages which are suitable replacements for chlorofluorocarbon refrigerants. If optimizing a refrigerant composition to be as CFC-like as possible places it outside the recited ranges of dew point and bubble point, such should be demonstrated via timely filed declaration.

Applicant's arguments regarding R-421A are not persuasive, because the examiner has not rejected the claims over R-421A. If applicant believes that a 58:42 composition is significantly different from a 60:40 composition, such should be demonstrated via declaration. Attorney arguments cannot take the place of evidence. In addition, the ASHRAE standard has not been made of record.

The declaration of Kenneth Ponder, discussed previously, remains unpersuasive for the reasons of record. The declaration is drawn largely to the properties of R-421B refrigerant. R-421B is not the closest prior art. Regarding Mr. Ponder's opinions of the obviousness of the claims over the Takigawa reference, a declarant 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).

6. 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. Please note that examiners may not accept or enter faxed amendments.

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
August 23, 2016

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:	Confirmation No.: 1039
Ponder et al.	Group Art Unit: 1761
Serial No.: 13/493,491	Examiner: Hardee, John R.
Filed: June 11, 2012	Docket No. 821920-1032
For: REFRIGERANT WITH LUBRICATING OIL FOR REPLACEMENT OF R22 REFRIGERANT	

RESPONSE TO NON-FINAL OFFICE ACTION

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

The Non-final Office Action from Examiner John R. Hardee mailed on August 29, 2016(Paper No./Mail Date 20160823), has been received and reviewed. Applicants provide the following amendments and remarks in response.

AUTHORIZATION TO DEBIT ACCOUNT

A petition for a 3-month extension of time is herein submitted. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including, but not limited to, fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 20-0778.

IN THE CLAIMS:

Please amend the claims as indicated hereafter wherein the changes are shown by strikethrough or double brackets for deleted matter and underlining for added matter.

1 – 29. (Cancelled)

30. (Currently Amended) In an apparatus designed for use with chlorodifluoromethane refrigerant, the improvement comprising substituting the chlorodifluoromethane with a refrigerant composition designed to achieve a phase change, the refrigerant composition comprising a combination of refrigerant gases, said refrigerant gases consisting of a blend of tetrafluoroethane and pentafluoroethane, the ratio of the tetrafluoroethane to the pentafluoroethane being selected such that the blend exhibits a dew point at about -32°F or a bubble point at about -41.5°F at about one standard atmosphere of pressure, wherein in the substitute refrigerant said pentafluoroethane is present in an amount ~~less than 60%~~of 59% to 57% by weight and said tetrafluoroethane is present in an amount ~~greater than 40%~~of 41% to 43% by weight of the combined weight of the pentafluoroethane and tetrafluoroethane on the basis of the combined weights of said pentafluoroethane and said tetrafluoroethane totaling 100%, and wherein the refrigerant composition further comprises non-refrigerant gas components, said non-refrigerant gas components including a lubricating oil, wherein the lubricating oil is present up to about 20% by weight of the refrigerant gases and is soluble in chlorodifluoromethane, tetrafluoroethane and pentafluoroethanes wherein the lubricating oil is selected from the group consisting of mineral oil, synthetic alkyl aromatic lubricants, and mixtures thereof.

31. (Previously Presented) In the apparatus of claim 30, wherein the blend exhibits a dew point at about -32°F and a bubble point at about -41.5°F at about one standard atmosphere of pressure.

32. (Concurrently Amended) A method for refilling an apparatus designed for use with a chlorodifluoromethane refrigerant, the method comprising:

(1) selecting a substitute refrigerant composition designed to achieve a phase change and comprising a combination of refrigerant gases, the refrigerant gases consisting of a blend of tetrafluoroethane and pentafluoroethane, the ratio of the tetrafluoroethane to the pentafluoroethane being selected such that the blend exhibits a dew point at about -32°F or a bubble point at about -41.5°F at about one standard atmosphere of pressure, wherein in the substitute refrigerant said pentafluoroethane is present in an amount ~~less than 60%~~ of 59% to 57% by weight and said tetrafluoroethane is present in an amount ~~greater than 40%~~ of 41% to 43% by weight of the combined weight of the pentafluoroethane and tetrafluoroethane on the basis of the combined weights of said pentafluoroethane and said tetrafluoroethane totaling 100%,

(2) supplying the substitute refrigerant composition under pressure, in a cylinder can fitted with an outlet compatible with a chlorodifluoromethane recharging manifold of the apparatus; and

(3) adding to said apparatus via the manifold the substitute refrigerant composition for chlorodifluoromethane, wherein the refrigerant composition further comprises non-refrigerant gas components, said non-refrigerant gas components including a lubricating oil, wherein the lubricating oil is present up to about 20% by weight of the refrigerant gases and is soluble in chlorodifluoromethane, tetrafluoroethane and pentafluoroethane, wherein the lubricating oil is selected from the group consisting of mineral oil, synthetic alkyl aromatic lubricants, and mixtures thereof.

33. (Previously Presented) The method of claim 32, wherein the blend exhibits a dew point at about -32°F and a bubble point at about -41.5°F at about one standard atmosphere of pressure.

34. (Currently Amended) A refrigerant composition comprising a combination of refrigerant gases, the refrigerant gases consisting of a blend of tetrafluoroethane and pentafluoroethane, the ratio of the tetrafluoroethane to the pentafluoroethane being selected such that the blend exhibits a dew point at about -32°F or a bubble point at about -41.5°F at about one standard atmosphere of pressure,
wherein in the substitute refrigerant said pentafluoroethane is present in an amount ~~less than 60%~~of 59% to 57% by weight and said tetrafluoroethane is present in an amount ~~greater than 40%~~of 41% to 43% by weight of the combined weight of the pentafluoroethane and tetrafluoroethane on the basis of the combined weights of said pentafluoroethane and said tetrafluoroethane totaling 100%, and
wherein the refrigerant composition further comprises non-refrigerant gas components, said non-refrigerant gas components including a lubricating oil, wherein the lubricating oil is present up to about 20% by weight of the refrigerant gases and is soluble in chlorodifluoromethane, tetrafluoroethane and pentafluoroethane, wherein the lubricating oil is selected from the group consisting of mineral oil, synthetic alkyl aromatic lubricants, and mixtures thereof.

35. (Previously Presented) The refrigerant composition of claim 34, wherein the blend exhibits a dew point at about -32°F and a bubble point at about -41.5°F at about one standard atmosphere of pressure.

36. (Previously Presented) The refrigerant composition according to claim 34, wherein the lubricating oil includes an additive selected from the group consisting of further includes an acrylic polymer, a corrosion inhibitor, a surfactant, a foaming agent, and mixtures thereof.

37. (Previously Presented) In the apparatus of claim 30, wherein the apparatus is selected from the group consisting of refrigeration equipment, air-conditioning equipment, and HVAC equipment.

38. (Previously Presented) In the apparatus of claim 30, wherein the lubricating oil includes an additive selected from the group consisting of an acrylic polymer, a corrosion inhibitor, a surfactant, a foaming agent, and mixtures thereof.

39. (Previously Presented) The method according to claim 32, wherein the apparatus is selected from the group consisting of refrigeration equipment, air-conditioning equipment, and HVAC equipment.

40. (Previously Presented) The method according to claim 32, wherein the lubricating oil includes an additive selected from the group consisting of an acrylic polymer, a corrosion inhibitor, a surfactant, a foaming agent, and mixtures thereof.

41. (Previously Presented) In the apparatus of claim 30, wherein the tetrafluoroethane is 1,1,1,2-tetrafluoroethane.

42. (Previously Presented) The method of claim 32, wherein the tetrafluoroethane is 1,1,1,2-tetrafluoroethane.

43. (Previously Presented) The refrigerant composition of claim 34, wherein the tetrafluoroethane is 1,1,1,2-tetrafluoroethane.
44. (Previously Presented) In the apparatus of claim 41, wherein in the substitute refrigerant said pentafluoroethane is present in the ratio of about 58% by weight to said tetrafluoroethane present in an amount of about 42% by weight.
45. (Previously Presented) The method according to claim 42, wherein in the substitute refrigerant said pentafluoroethane is present in the ratio of about 58% by weight to said tetrafluoroethane present in an amount of about 42% by weight.
46. (Previously Presented) The refrigerant composition according to claim 43, wherein said pentafluoroethane is present in the ratio of about 58% by weight to said tetrafluoroethane present in an amount of about 42% by weight.
47. (Previously Presented) In the apparatus of claim 30, wherein the blend exhibits a glide at about 9.5°F.
48. (Previously Presented) The method of claim 32, wherein the blend exhibits a glide at about 9.5°F.
49. (Previously Presented) The refrigerant composition of claim 34, wherein the blend exhibits a glide at about 9.5°F.

REMARKS

The Office Action presents following single point, namely: claims 30-49 stand rejected under 35 USC 103(a) as obvious in view of US 6,207,071 (Takigawa et al.).

Claims 30-49 are pending. Claims 30, 32 and 34 are amended herein. Applicants respectfully request reconsideration and withdrawal of the rejection based upon the amendments and remarks presented herein.

The Examiner's Response to Arguments at page 4 of the Non-final Office Action demonstrates a multiple fundamental misconceptions of the present invention. First, Applicants note the statement: "If optimizing a refrigerant composition to be as CFC-like as possible places it outside the recited ranges of dew point and bubble point, such should be demonstrated via timely filed declaration. This statement demonstrates a misunderstanding of the present invention. The present invention is not a CFC refrigerant substitute. It is intended as a substitute chlorodifluoromethane which is not a CFC refrigerant. And –in fact- as shown below, the refrigerant of the present claims is not accepted by the EPA as a substitute or a replacement for CFC-11.

In fact, the cited reference, Takigawa, provides no teaching that any of its thousands, if not millions, of possible combinations of refrigerants described therein are suitable as a replacement for any particular CFC refrigerant. Submitted herewith is a List of Refrigerants printed from Wikipedia (see the Supplemental Information Statement (IDS) submitted herewith).

The List includes, among others, the following CFC refrigerants:

CFC R-11	Trichlorofluoromethane
CFC R-12	Dichlorodifluoromethane
CFC R-13	Chlorotrifluoromethane
CFC R-111	Pentachlorofluoroethane
CFC R-112	1,1,2,2-Tetrachloro-1,2-difluoroethane
CFC R-112a	1,1,1,2-Tetrachloro-2,2-difluoroethane
CFC R-113	1,1,2-Trichloro-1,2,2-trifluoroethane
CFC R-113a	1,1,1-Trichloro-2,2,2-trifluoroethane
CFC R-114	1,2-Dichlorotetrafluoroethane
CFC R-114a	1,1-Dichlorotetrafluoroethane
CFC R-115	Chloropentafluoroethane

CFC R-211	1,1,1,2,2,3,3-Heptachloro-3-fluoropropane
CFC R-212	Hexachlorodifluoropropane
CFC R-213	1,1,1,3,3-Pentachloro-2,2,3-trifluoropropane
CFC R-214	1,2,2,3-Tetrachloro-1,1,3,3-tetrafluoropropane
CFC R-215	1,1,1-Trichloro-2,2,3,3,3-pentafluoropropane
CFC R-216	1,2-Dichloro-1,1,2,3,3,3-hexafluoropropane
CFC R-216ca	1,3-Dichloro-1,1,2,2,3,3-hexafluoropropane
CFC R-217	1-Chloro-1,1,2,2,3,3,3-heptafluoropropane
CFC R-217ba	2-Chloro-1,1,1,2,3,3,3-heptafluoropropane

There is no teaching whatsoever in Takigawa of a substitute refrigerant for any of these CFC refrigerants let alone which of the large member of possible refrigerants in Takigawa could be used as a substitute for which ones of these CFC's.

Also submitted with the Supplemental IDS herewith are copies of the EPA's listing of Substitute Refrigerants Under SNAP as of October 4, 2011 that provides a list of acceptable substitutes for Class I (CFCs) under the SNAP program as of October 4, 2011 and the EPA's Summary of Substitute Refrigerants Listed in SNAP Notice 25 providing a listing of refrigerant substitutes for HCFC-22 (chlorodifluoromethane). Comparing the two lists one finds the following comparison of many refrigerants that are listed as a suitable replacement for one but not the other. Examples are provided in Tables 1 and 2 below.

Table 1
In Air Conditioning

	CFC	HCFC-22
HCFC 123	Yes	No
HCFC 125	Yes	No
HFC 236	Yes	No
R-290	No	Yes
R401A,B	Yes	No
R404A	No	Yes
R-406A	Yes	No
R407A	No	Yes
R409A	Yes	No
R410A,B	No	Yes
R416A	No	No
R417A	No	Yes
R421A	No	Yes
R422B	No	Yes
R424A	No	Yes

Table 2
In Commercial Refrigeration

	CFC	HCFC-22
HCFC 22	Yes	No
HCFC 152B	No	Yes
HFC 236	Yes	No
R290	No	Yes
R401A,B	Yes	No
R402A,B	Yes	No
R406A	Yes	No
R408A	Yes	No
R409	Yes	No
R410A,B	No	Yes
R411A,B	Yes	No
R416A	No	No
R417A	No	Yes
R421A	No	Yes
R422B	No	Yes
R424A	No	Yes

Thus, just because a refrigerant may be suitable or acceptable as a replacement for some CFC refrigerant, that either Takigawa nor the Examiner identifies, does not automatically render it suitable for replacement of an HCFC refrigerant, and vice versa. In fact R416A (134a/125/600 in the ratio 59.0 (+0.5, -1.0)/39.5 (+1.0,-0.5)/1.5 (+1.0,-0.5) is not listed as a suitable replacement for either CFC-11 or HCFC-22. Further, there is simply no teaching or suggestion for such in Takigawa.

Applicants further note the statement at page 4 of the Office Action “the reference [Takigawa] provides motivation to make compositions to within a fairly narrow range of percentages which are suitable replacements for chlorofluorocarbon [(CFC)] refrigerants”. The Examiner, is however, is being inconsistent. The Examiner is relying on Takigawa as teaching a range or variance of over 20% by weight for the various refrigerant ingredients. As previously demonstrated in Applicants’ last Response, the ASHRAE refrigerant Standard shows that a 20% variance in the amount of a refrigerant ingredient in refrigerant composition is unacceptable. In the context of the actual refrigerant world, Takigawa provides no such teaching of a “narrow range of percentages which are suitable replacements for chlorofluorocarbon refrigerants” when according to the Examiner’s characterization of Takigawa the ranges can vary 20%.

In this regard, Applicants note the further statement at page 4: “In addition, the ASHRAE standard has not been made of record.” Applicants respectfully disagree as the applicable ASHRAE Standard has previously been submitted and is of record in the parent case of which the present case is a continuation and therefore part of the present record. Nevertheless, Applicants submit herewith (see Supplemental IDS) a copy of the ANSI/ASHRAE. Addenda a, b, c, e, f, k, n, o, p, q, r, s, and u to ANSI/ASHRAE Standard 34-2004. Reference to this document shows that a variation of 20% of a refrigerant gas in a refrigerant composition is unacceptable and, in fact, would cover multiple distinctly different refrigerant compositions.

A further misconception of the present invention is demonstrated by the following additional statement at page 4: “Applicant’s arguments regarding R-421A are not persuasive, because the Examiner has not rejected the claims over R-421A.” This statement is nonsensical as R-421A is Applicants’ invention, as recited in the present claims. Applicants previously presented data showing for example, significant differences from a 60:40 composition as compared to Applicants’ R-421A composition of 58% $\pm$ 1% and 42% $\pm$ 1% (see p. 13 of the ANSI/ASHRAE Addenda).

Moreover referring again to the “Summary of Substitute Refrigerants Listed in SNAP Notice 25,” Applicants previously noted to the Office that their present invention has received SNAP approval as a replacement for HCFC-22, but not CFC-11. The Summary includes a Table of SNAP approved refrigerant substitutes for HCFC-22 (chlorodifluoromethane) that lists approximately 45 to 50 differing refrigerant blends that are all approved substitutes for HCFC-22, including Applicants’ present invention. This SNAP listing refutes the Examiner’s reliance on the present invention being a “mere” optimization of the teachings of Takigawa, or stated in another way that it is simply “obvious to try” the teachings of Takigawa to arrive at the present invention. In view of the number of refrigerants listed as acceptable substitutes it appears the odds would be extremely low that one would arrive at Applicants’ refrigerant based on Takigawa.

Included in this SNAP listing are numerous blends of refrigerants that comprise pentafluoroethane (R-125) and tetrafluoroethane (R-134A). Further, many of such refrigerants include pentafluoroethane in a range between 60 to 40% and tetrafluoroethane in a range of 40 to 60% such as: 1) R125/R290/R134A/R600A in a ratio of 55.01/1/42.5/1.5% by weight; 2) R32/R125/R134A in a ratio of 20/40/40% by weight (known as R407A); 3) R125/R134A/R600A in a ratio of 46.6/50.0/3.4% by weight (R417A); 4) R125/R134A/R600A in a ratio of 55.0/42.0/3.0 (R422B); 5) R125/R134A/R600A/R600/R601A in a ratio of 50.5/47.0/0.9/1.0/0.6% by weight (R424A); and 6) R125/R134A in a ratio of 50/50% by weight (R507A). As seen by the ASHRAE “R” designations, each of these refrigerant blends or compositions is considered by ASHRAE to be a different refrigerant offering properties different from those of the other ASHRAE designated refrigerants.

Thus, as shown herein, the Examiner’s reliance on the statement: “The person of ordinary skill in the refrigeration art would expect the recited compositions to have properties similar to those compositions which are exemplified” in Takigawa is not correct. As shown,

Applicants' recited composition does not have properties similar to those compositions which according to the Examiner would also be exemplified in *Takigawa et al.*

CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed and that all pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephone conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,

THOMAS | HORSTEMEYER, LLP

By: /Todd Deveau/

Todd Deveau

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Electronic Patent Application Fee Transmittal				
Application Number:		13493491		
Filing Date:		11-Jun-2012		
Title of Invention:		REFRIGERANT WITH LUBRICATING OIL FOR REPLACEMENT OF R22 REFRIGERANT		
First Named Inventor/Applicant Name:		Kenneth M. Ponder		
Filer:		Todd Deveau.		
Attorney Docket Number:		821920-1032		
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension - 3 months with \$0 paid	2253	1	700	700
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	2806	1	90	90
Total in USD (\$)				790

Electronic Acknowledgement Receipt

EFS ID:	28491802
Application Number:	13493491
International Application Number:	
Confirmation Number:	1039
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.
Filer Authorized By:	
Attorney Docket Number:	821920-1032
Receipt Date:	28-FEB-2017
Filing Date:	11-JUN-2012
Time Stamp:	17:23:39
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 790
RAM confirmation Number	030117INTEFSW17241900
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Warnings:					
Information:					
2	Transmittal Letter	IDS.pdf	98478	no	2
			8a7f227addcbba2a944f558168256bd4780414c5		
Warnings:					
Information:					
3	Information Disclosure Statement (IDS) Form (SB08)	IDS_Form_1449.pdf	614976	no	4
			de8fd76d01a5591ab948879f1e8bd645009ff561		
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4	Non Patent Literature	Ref1.pdf	1579294	no	13
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7	Non Patent Literature	Ref4.pdf	2513008	no	35
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Warnings:					
Information:					
8	Amendment/Req. Reconsideration-After Non-Final Reject	Response_to_Nonfinal_OA.pdf	125862	no	13
			04273d87257b941979b0eda44a76c036aaa762bd8		
Warnings:					
Information:					
9	Fee Worksheet (SB06)	fee-info.pdf	32557	no	2
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Warnings:					
Information:					
Total Files Size (in bytes):			6929415		
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. <u>New Applications Under 35 U.S.C. 111</u> 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. <u>National Stage of an International Application under 35 U.S.C. 371</u> 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. <u>New International Application Filed with the USPTO as a Receiving Office</u> 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.					

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PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)		Docket Number (Optional) 821920-1032																															
Application Number 13/493,491		Filed June 11, 2012																															
For REFRIGERANT WITH LUBRICATING OIL FOR REPLACEMENT OF R22 REFRIGERANT																																	
Art Unit 1761		Examiner Hardee, John R.																															
This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application. The requested extension and fee are as follows (check time period desired and enter the appropriate fee below): <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%; text-align: center;"><u>Fee</u></th> <th style="width: 15%; text-align: center;"><u>Small Entity Fee</u></th> <th style="width: 15%; text-align: center;"><u>Micro Entity Fee</u></th> <th style="width: 15%;"></th> </tr> </thead> <tbody> <tr> <td>☐ One month (37 CFR 1.17(a)(1))</td> <td style="text-align: center;">\$200</td> <td style="text-align: center;">\$100</td> <td style="text-align: center;">\$50</td> <td style="text-align: right;">\$ _____</td> </tr> <tr> <td>☐ Two months (37 CFR 1.17(a)(2))</td> <td style="text-align: center;">\$600</td> <td style="text-align: center;">\$300</td> <td style="text-align: center;">\$150</td> <td style="text-align: right;">\$ _____</td> </tr> <tr> <td>☒ Three months (37 CFR 1.17(a)(3))</td> <td style="text-align: center;">\$1,400</td> <td style="text-align: center;">\$700</td> <td style="text-align: center;">\$350</td> <td style="text-align: right;">\$ <u>700</u></td> </tr> <tr> <td>☐ Four months (37 CFR 1.17(a)(4))</td> <td style="text-align: center;">\$2,200</td> <td style="text-align: center;">\$1,100</td> <td style="text-align: center;">\$550</td> <td style="text-align: right;">\$ _____</td> </tr> <tr> <td>☐ Five months (37 CFR 1.17(a)(5))</td> <td style="text-align: center;">\$3,000</td> <td style="text-align: center;">\$1,500</td> <td style="text-align: center;">\$750</td> <td style="text-align: right;">\$ _____</td> </tr> </tbody> </table> ☐ Applicant asserts small entity status. See 37 CFR 1.27. ☐ Applicant certifies micro entity status. See 37 CFR 1.29. Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously. ☐ 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. ☒ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number <u>20-0778</u>. ☒ Payment made via EFS-Web. 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. ☒ attorney or agent of record. Registration number <u>29,526</u>. ☐ attorney or agent acting under 37 CFR 1.34. Registration number _____. <u>/Todd Deveau/</u> Signature <u>Todd Deveau</u> Typed or printed name <u>February 28, 2017</u> Date <u>770-933-9500</u> Telephone Number NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.					<u>Fee</u>	<u>Small Entity Fee</u>	<u>Micro Entity Fee</u>		☐ One month (37 CFR 1.17(a)(1))	\$200	\$100	\$50	\$ _____	☐ Two months (37 CFR 1.17(a)(2))	\$600	\$300	\$150	\$ _____	☒ Three months (37 CFR 1.17(a)(3))	\$1,400	\$700	\$350	\$ <u>700</u>	☐ Four months (37 CFR 1.17(a)(4))	\$2,200	\$1,100	\$550	\$ _____	☐ Five months (37 CFR 1.17(a)(5))	\$3,000	\$1,500	\$750	\$ _____
	<u>Fee</u>	<u>Small Entity Fee</u>	<u>Micro Entity Fee</u>																														
☐ One month (37 CFR 1.17(a)(1))	\$200	\$100	\$50	\$ _____																													
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☒ Three months (37 CFR 1.17(a)(3))	\$1,400	\$700	\$350	\$ <u>700</u>																													
☐ Four months (37 CFR 1.17(a)(4))	\$2,200	\$1,100	\$550	\$ _____																													
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☐ * Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.136(a). 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 and 1.14. This collection is estimated to take 6 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: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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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.
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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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Confirmation No.: 1039

Ponder et al.

Group Art Unit: 1761

Serial No.: 13/493,491

Examiner: Hardee, John R.

Filed: June 11, 2012

Docket No. 821920-1032

For: REFRIGERANT WITH LUBRICATING OIL FOR REPLACEMENT OF R22 REFRIGERANT

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

This information disclosure statement is filed in accordance with 37 C.F.R. §§ 1.56, 1.97, and 1.98, and specifically:

☐ under 37 CFR 1.97(b), or
(within Three months of filing national application; or date of entry of international application;
or before mailing date of first office action on the merits; whichever occurs last)

☒ under 37 CFR 1.97(c) together with either a:
☐ Statement Under 37 C.F.R. 1.97(e), or
☒ a \$90 fee under 37 CFR 1.17(p).
(After the CFR 1.97(b) time period, but before the final office action or notice of allowance, whichever occurs first)

☐ under 37 CFR 1.97(d) together with a:
☐ Statement under 37 CFR 1.97(e), and
☐ a \$____ petition fee set forth in 37 CFR 1.17(p).
(Filed after final office action or notice of allowance, whichever occurs first, but before payment of the issue fee)

☐ Enclosed is a check in the amount of \$_____.

☐ Payment by credit card.

☐ Please charge \$_____ to deposit account 20-0778.

☒ At any time during the pendency of this application, please charge any fees required to Deposit Account 20-0778 pursuant to 37 CFR 1.25. The Commissioner is hereby requested to credit any overpayment to Deposit Account No. 20-0778.

- ☒ Applicant(s) submit herewith *Form PTO SB/08A-08B-08a - Information Disclosure Statement by Applicant* together with copies (where required) of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may or may not be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56. As required by 37 C.F.R. §1.98(a), a legible copy of each document is provided.
- ☐ A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO Form SB/08A-08B-08a, as presently understood by the individual(s) designated in 37 CFR 1.56(c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on the form PTO SB/08A-08B-08a and is enclosed herewith.

The following rights are reserved by the Applicant(s): the right to establish the patentability of the claimed invention over any of the listed documents should they be applied as reference, and/or the right to prove that some of these documents may not be prior art, and/or the right to prove that some of these documents may not be enabling for the teachings they purport to offer.

This statement should not be construed as a representation that an exhaustive search has been made, or that information more material to the examination of the present application does not exist. Any statements or identifications regarding the relevance of any portion(s) of cited references should not be construed as a representation that the most relevant portion(s) have been identified, and the absence of such statements or identifications should not be construed as representations that there are no relevant portion(s). The Examiner is specifically requested not to rely solely on the materials submitted herewith. The Examiner is requested to conduct an independent and thorough review of the documents, and to form independent opinions as to their significance.

It is requested that the information disclosed herein be made of record in this application and that the Examiner initial and return a copy of the enclosed PTO SB/08A-08B-08a to indicate the documents have been considered.

Respectfully submitted,

Thomas|Horstemeyer, LLP

By: /Todd Deveau/
Todd Deveau
Registration No. 29,526

400 Interstate North Parkway SE
Suite 1500
Atlanta, Georgia 30339
Phone: 770.933.9500

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	13493491
	Filing Date	2012-06-11
	First Named Inventor	Kenneth M. Ponder
	Art Unit	1761
	Examiner Name	Hardee, John R.
	Attorney Docket Number	821920-1032

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	13493491
Filing Date	2012-06-11
First Named Inventor	Kenneth M. Ponder
Art Unit	1761
Examiner Name	Hardee, John R.
Attorney Docket Number	821920-1032

1	List of refrigerants from Wikipedia, https://en.wikipedia.org/wiki/List_of_refrigerants , last modified on 19 January 2017, 13 pages
2	Environmental Protection Agency (EPA), Air and Radiation Stratospheric Protection Division 6205J, "Substitute Refrigerants Under SNAP as of October 4, 2011", SNAP Information: http://www.epa.gov/ozone/snap , 18 pages
3	Summary of Substitute Refrigerants Listed in SNAP Notice 25, 10 pages
4	ANSI/ASHRAE Addenda a, b, c, e, f, k, n, o, p, q, r, s, and u to ANSI/ASHRAE Standard 34-2004, "Designation and Safety Classification of Refrigerants", 2006 Supplement, ISSN 1041-2336, 35 pages

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	13493491
Filing Date	2012-06-11
First Named Inventor	Kenneth M. Ponder
Art Unit	1761
Examiner Name	Hardee, John R.
Attorney Docket Number	821920-1032

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

☒ Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

None

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Todd Deveau/	Date (YYYY-MM-DD)	2017-02-28
Name/Print	Todd Deveau	Registration Number	29526

This collection of information is required by 37 CFR 1.97 and 1.98. 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 1.14. This collection is estimated to take 1 hour 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.**

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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 the Freedom of Information Act requires disclosure of these records.
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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.
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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 inspections 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.

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/493,491	Filing Date 06/11/2012	☐ To be Mailed
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ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

(Column 1) (Column 2)

FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X \$ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

(Column 1) (Column 2) (Column 3)

AMENDMENT	02/28/2017	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0	X \$40 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0	X \$210 =	0
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
TOTAL ADD'L FEE						0	

(Column 1) (Column 2) (Column 3)

AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =	
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
TOTAL ADD'L FEE							

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
SHARAIN MORELAND

This collection of information is required by 37 CFR 1.16. 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 1.14. 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.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/493,491	06/11/2012	Kenneth M. Ponder	821920-1032	1039
24504 7590 03/28/2017 THOMAS I HORSTEMEYER, LLP 400 INTERSTATE NORTH PARKWAY SE SUITE 1500 ATLANTA, GA 30339			EXAMINER HARDEE, JOHN R	
			ART UNIT 1761	PAPER NUMBER
			NOTIFICATION DATE 03/28/2017	DELIVERY MODE ELECTRONIC

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.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspatents@tkhr.com
ozzie.liggins@tkhr.com
docketing@thomashorstemeyer.com

Office Action Summary	Application No. 13/493,491	Applicant(s) PONDER ET AL.	
	Examiner JOHN HARDEE	Art Unit 1761	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 2/28/17.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☒ Claim(s) 30-49 is/are pending in the application.
5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☒ Claim(s) 30-49 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10) ☐ The specification is objected to by the Examiner.

11) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some** c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date 02282017.

3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

4) ☐ Other: _____.

1. The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

2. Claims 30-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takigawa et al., US 6,207,071. The reference discloses lubricating oil compositions and their use in compositions comprising R134a and R125 (col. 1, lines 13+). The reference further discloses the use of hydrofluorocarbons as replacements for hydrochlorofluorocarbons (col. 1, lines 20+). Suitable lubricants include the alkylbenzene oils described at col. 2, lines 30+. Refrigerants include alkane fluorides containing 40% or more of R134a in admixture with alkyl fluorides containing, most preferably, 40% or more of R125 (col. 8, lines 20+). The reference further discloses that there is "no restriction as to the kind of HFC to be mixed with" the disclosed refrigerants. The examiner takes the position that this can reasonably be construed to mean that no additional HFC need be added, and that the disclosure reads on refrigerant compositions *consisting of* 40-60% R134a and 60-40% of R125. Regarding language drawn to dew points and bubble points, such can be realized by working within the teachings of the reference, as the recited percentages of the recited refrigerants are obvious over the claims. Conventional additives may be added, including those disclosed at the top of col. 8. The examiner takes the position that anticorrosion additives are conventional, and that their use would be obvious over this disclosure. Lubricant compositions comprising naphthenic mineral oil and polyol polyesters are disclosed in Table 1. Note the disclosure in Evaluation Tests 2 and 3 of refrigerant being premixed with lubricant prior to charging a