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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/908,227	02/28/2018	Suguru MURAYAMA	511671US	5141

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EXAMINER
BOLDEN, ELIZABETH A

ART UNIT	PAPER NUMBER
1731	

NOTIFICATION DATE	DELIVERY MODE
11/09/2018	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):

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Office Action Summary	Application No. 15/908,227	Applicant(s) MURAYAMA et al.	
	Examiner Elizabeth A Bolden	Art Unit 1731	AIA Status Yes

-- 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 17 August 2018.

☐ 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) 1-2,4-5 and 8-15 is/are pending in the application.

5a) Of the above claim(s) 10-15 is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 1-2,4-5 and 8-9 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: _____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 112, 102, and 103 (or as subject to pre-AIA 35 U.S.C. 112, 102, and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

Status of the Claims

Any rejections and or objections, made in the previous Office Action, and not repeated below, are hereby withdrawn.

Claims 1, 2, 4, 5, and 8-15 are currently pending.

Claims 3, 6, and 7 were previously presented and have been cancelled

Claims 10-15 have been withdrawn.

Claims 1, 2, 4, 5, 8, and 9 are currently rejected.

Claim 8 is rejected under 35 U.S.C. 112(d) or pre-AIA 35 U.S.C. 112, 4th paragraph.

Claims 1, 2, 4, 5, 8, and 9 are rejected under 35 U.S.C. 103 as being unpatentable over DeMartino et al., U.S. Patent Application Publication US 2017/0022092 A1.

Claims 8-15 have an objection.

Priority

Receipt is acknowledged of certified copies of papers required by 37 CFR 1.55. The Examiner acknowledges the perfection of the foreign priority application JP 2016-010002.

Information Disclosure Statement

The Information Disclosure Statements (IDS) submitted 17 July 2018, 17 August 2018, and 1 November 2018 have been considered by the Examiner.

Drawings

The original drawings received on 28 February 2018 are accepted by the Examiner.

Election/Restrictions

Newly submitted claims 10-15 (See Objection below) directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claims 10-15 are directed to a chemically strengthened glass which is classified separately.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 11-16 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Objections

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

The claim listing states claim 8 was cancelled, however there was no claim 8 previously. Therefore the new claims should start as claim 8 not claim 9.

The misnumbered claims have been renumbered as shown in the table below.

As listed in amendment filed 17 August 2018	Claims renumbered as	Current Status
9	8	Pending
10	9	Pending
11	10	Withdrawn
12	11	Withdrawn
13	12	Withdrawn
14	13	Withdrawn
15	14	Withdrawn
16	15	Withdrawn

Claim Rejections - 35 USC § 112(d) or fourth paragraph

The following is a quotation of 35 U.S.C. 112(d):

(d) REFERENCE IN DEPENDENT FORMS.—Subject to subsection (e), a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

The following is a quotation of pre-AIA 35 U.S.C. 112, fourth paragraph:

Subject to the following paragraph [i.e., the fifth paragraph of pre-AIA 35 U.S.C. 112], a claim in dependent form shall contain a reference to a claim previously set forth and then specify a

> further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

Claim 8 is rejected under 35 U.S.C. 112(d) or pre-AIA 35 U.S.C. 112, 4th paragraph, as being of improper dependent form for failing to further limit the subject matter of the claim upon which it depends, or for failing to include all the limitations of the claim upon which it depends. Claim 8 depends from claim 1. Claim 8 recites that the Li_2O content is from 0-10 mole percent, however claim 1 recites that the Li_2O content is 4-13 mole percent, thus claim 8 fails to further limit claim 1. Applicant may cancel the claim(s), amend the claim(s) to place the claim(s) in proper dependent form, rewrite the claim(s) in independent form, or present a sufficient showing that the dependent claim(s) complies with the statutory requirements.

Claim Comment

Claim 9 depends from claim 1 and claim 9 recites that the ZnO content is 0.25% or more. Therefore, the ZnO content is read in combination with the limitations of claim 1. Claim 9 limits the amount of ZnO to 0.25-10 mole percent.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103 are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 2, 4, 5, 8, and 9 are r rejected under 35 U.S.C. 103 as being unpatentable over DeMartino et al., U.S. Patent Application Publication US 2017/0022092 A1.

US 2017/0022092 A1 claims priority back to 2 provisional applications 62/343,320 filed 31 May 2016 (Perfected the priority document to overcome) and 62/194,984 filed 21 July 2015. Therefore, this reference qualifies as prior art under 35 U.S.C. § 102(a)(2). Please note there is a typographical error on US 2017/0022092 A1 which claims priority to 62/194,994, the correct priority document is 62/194,984. The instant application has perfected the priority documents JP 2016-010002.

DeMartino et al. teach a glass having the following composition in terms of mole percentages: SiO_2 40-80, Al_2O_3 10-30, B_2O_3 0-10, R_2O 0-20, RO 0-15, ZrO_2 0-5, P_2O_5 0-15, and TiO_2 0-2. See Abstract and the entire specification, specifically, Paragraph [0145].

DeMartino et al. fail to teach any examples or compositional ranges in terms of molar percentages that are sufficiently specific to anticipate the compositional limitations of claims 1, 2, 4, 5, 8, and 9, when looking at the disclosure of the 62/194,984 provisional application of DeMartino et al. However, the ranges taught by DeMartino et al. have overlapping compositional ranges with instant claims 1, 2, 4, 5, 8, and 9. Overlapping ranges have been held to establish prima facie obviousness. See MPEP 2144.05.

It would have been obvious to one of ordinary skill in the art at the time the invention was filed to have selected from the overlapping portion of the ranges disclosed by the reference because overlapping ranges have been held to establish prima facie obviousness. See MPEP 2144.05.

One of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the compositional ranges taught by DeMartino et al. overlap the instantly claimed ranges and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

> "The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages", In re Peterson 65 USPQ2d 1379 (CAFC 2003).

Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

Response to Arguments

Applicant's arguments, see pages 8-9, filed 17 August 2018, with respect to the rejection(s) of claim(s) 1, 2, 4, 5, 8, and 9 under 35 U.S.C. 102(a)(2) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of 35 U.S.C. 103 as being unpatentable in view of DeMartino et al.

The Applicants argue that the glass of DeMartino et al. does not anticipate nor render obvious the instant claims since the provisional application of DeMartino et al. Application Number 62/194,984 does not teach any examples that anticipate the instant claims. This is not deemed persuasive since the reference is not limited to the examples alone for disclosure. See MPEP 2123. DeMartino et al. compositional ranges which overlap the instant claims. Overlapping ranges have been held to establish prima facie obviousness. See MPEP 2144.05.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth A. Bolden whose telephone number is (571)272-1363. The examiner can normally be reached on 10:00 am to 6:30 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kaj Olsen can be reached on 571-272-1344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Elizabeth A. Bolden/
Primary Examiner, Art Unit 1731

EAB
5 November 2018