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3624	7590	03/21/2014	EXAMINER	
VOLPE AND KOENIG, P.C. UNITED PLAZA 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103			ROY, SIKHA	
			ART UNIT	PAPER NUMBER
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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):

eoffice@volpe-koenig.com

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

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 7, 2014 has been entered.

Claims 1, 3-6, 8-14 and 21-26 are pending in the instant application.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, **'the first zoom element**, the first projected shape , the first external plane, the first distance and **the second zoom element**, the second projected shape, the second external plane and second distance' as claimed in claims 9 and 21 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure

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number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112(a):

(a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

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

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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Claim 1 is rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor or a joint inventor, or for pre-AIA the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation reciting 'external object has an **uneven surface** and the light passingonto the **uneven surface** and maintains the light shape on **the uneven surface**' was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor or a joint inventor, or for pre-AIA the inventor(s), had possession, at the time the application was filed. The specification only discloses ([0004], Fig. 3) light emitted from light source illuminates object 4, but nowhere does it disclose the object having uneven surface and hence considered as new matter.

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

(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

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

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9-14 and 21-26 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.

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Regarding claim 9, the limitation reciting 'first light unit emits a first light for projecting a first shape and passing through the first zoom element , projected along a light axis onto first external plane forms a first projected shape' is not clear. The Examiner is not sure what is meant by first shape or first projected shape. Furthermore the limitation reciting 'second projected shape on the second external plane' and 'the second zoom element and the second external plane are separated by a second distance different from the first distance' are not clear. The specification (both disclosure and drawings) fails to provide metes and bounds of these limitations. The specification does not disclose the first distance, the second distance and how the first and second zoom elements are positioned with respect to the first and second light emission units. Hence these limitations render the claim indefinite.

Claims 10-14 are rejected because of their dependence from claim 9.

In claim 21, regarding the limitation reciting 'the first lens and the first portion are separated by a first distance, the second lens and the second portion are separated by a second distance', and 'first/second initial projected light shape and a first/second final projected light shape' it is not clear what the applicant refers to as 'first distance' 'second distance', 'first or second initial projected shape' and 'first or second final projected shape' and hence fails to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention and renders the claim indefinite.

Claims 22-26 are rejected because of their dependency status from claim 21.

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Claim Rejections - 35 USC § 103

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

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-6 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over USPN 7,207,677 to Takeda et al., and further in view of US 2008/0100905 to Kato et al .

Regarding claim 1 Takeda discloses (Fig. 9 col. 17 lines 34-52) an apparatus for controlling an optical field comprising a light emission device 110 emitting light, a set of zoom elements 120 disposed in front of the light emission device and passing there through to project the light onto the external object /screen 160, wherein the light emission device has a plurality of portions 110R, 110G each of which corresponds to a single one set of zoom element 120, the set of zoom element comprises a plurality of first zoom elements, the external object 160 has a surface (can be uneven surface) and the light passing through set of zoom elements is projected onto the surface.

Takeda does not expressly disclose each of the set of zoom elements includes a liquid lens.

Kato in same field of endeavor of zoom lens and light modulating discloses (Figs. 7, 8 [0118], [0119], [0122]) an array of zoom lens comprising varifocal liquid lens 10a1,10a2 ...used to project light. Kato discloses these liquid lens can be driven at low

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voltage and can have their focal lengths changed by changing the voltage applied and thus may be used for a display device that may display three dimensional image by voltage control.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to substitute the zoom elements of Takeda by liquid lens array as suggested by Kato for projecting light on the object and providing three dimensional image by voltage control.

Regarding claim 3 Kato discloses the device further comprises a plurality of second zoom elements 10b1, 10b2... respectively disposed in front of the plurality of first zoom elements.

Regarding claims 4 and 5 Takeda discloses the light emission device is a set of light emission units comprising LED.

Regarding claim 6 Takeda discloses the set of the zoom elements have a portion corresponding to a single one of the set of the light emission unit 110R, 110G.

Claim 8 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over USPN 7,207,677 to Takeda et al., US 2008/0100905 to Kato et al and further in view of US 2005/0174775 to Conner.

Regarding claim 8 Takeda as modified by Kato does not expressly disclose each of the set of zoom elements further includes a solid lens.

Conner in analogous art of light collecting illumination system discloses (Fig. 5 [0054]) each set of zoom elements includes a solid lens 36 for collimating optics.

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Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to include solid lens with each set of zoom elements of Takeda and Kato as suggested by Conner for collimating optics.

Response to Arguments

Applicant's arguments with respect to claim 1 have been considered but are moot because the arguments do not apply to any of the references being used in the current rejection.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (571) 272-2463. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization 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.

/Sikha Roy/
Primary Examiner, Art Unit 2879

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