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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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11/316,126

12/22/2005

Barnaby Law

AIRBUS 3.0-049

1744

530 7590 01/27/2009
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EXAMINER

DINH, TIEN QUANG

ART UNIT

PAPER NUMBER

3644

MAIL DATE

DELIVERY MODE

01/27/2009

PAPER

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

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

Office Action Summary	Application No. 11/316,126	Applicant(s) LAW, BARNABY	
	Examiner Tien Dinh	Art Unit 3644	

-- 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 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, 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 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ 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

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 12 and 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 14-22 is/are rejected.
- 7) ☒ Claim(s) 10 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ 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).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

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).
- a) ☒ All b) ☐ Some * c) ☐ None of:
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) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/06, 8/06</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of specie A in the reply filed on 10/17/08 is acknowledged. The traversal is on the ground(s) that species B and C build on specie A and that it is not a burden. This is not found persuasive because the applicant has not shown or disclose that they are obvious variants.

The requirement is still deemed proper and is therefore made FINAL.

Claims 12, and 13 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim.

Applicant timely traversed the restriction (election) requirement in the reply filed on 10/17/08.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 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.

Claims 3 and 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Re claim 3, what is a bending/torsion coupling? Is it a physical element?

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Re claim 22, what is a “bending/torsion coupling”? How does it work? Is it a mechanical part?

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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.

Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 20, the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 8, 14, 15, 21, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Nastasi et al 6138957.

Nastasi et al teaches a wing unit having an upper shell 22, a lower shell, actuating members 30, 28 to modify the surface geometry.

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Re claim 2, the control and regulation devices are noted in column 4, lines 53-56. The actuators are controlled via dependency on the loading states in the wing so that the aircraft can fly as desired. See also column 2, in the summary of the invention. Please also note that the actuator is capable of changing the surface geometry depending on the loading states prevailing in the wing unit. This is intended use.

Re claim 3, the bending and the torsion coupling of the wing unit is controlled by the control and regulation device. See claim 2 above. See figure 4a.

Re claim 4, the spars are shown in figures 4, 6, and 7. They are between the upper and lower shell.

Re claim 22, as best understood, the actuating members 28 and 38 bend the wing unit and hence there is a bending coupling.

Claim Rejections - 35 USC § 103

The following is a quotation of 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 5, 7, 9, and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nastasi et al 6138957 in view of PCT/DE01/04629.

Nastasi et al teaches all claimed parts except for the ribs being transverse force flexible. However, PCT/DE01/04629 discloses that ribs being transverse force flexible are well known.

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See figures 1B. It would have been obvious to one skilled in the art at the time the invention was made to have used ribs in Nastasi et al as taught by PCT/01/04629 to strengthen the wing.

Re claim 9, the ribs between the upper and lower shells are taught by PCT/DE01/04629 shown in figure 1b. The actuators 15a-c are between the ribs and parallel to the spar.

Re claim 10, the two actuators are 15a-15c shown in PCT/DE01/04629. The two spars are shown by Nastasi et al in figures 4, 4a, 6, and 7.

Re claims 16-18 and 20, the examiner takes official notice that piezoelectric elements as well as load sensors (made up of piezoelectric elements) are well known in this day and age and that one skilled in the art can simply substitute the actuators of Nastasi et al with piezoelectric elements and find it obvious to have used load sensors to know the state of the actuators.

Re claim 19, the examiner takes official notice that sensors to detect the loads of the wing spars are well known and that one skilled in the art would have used load sensors to know the conditions of the wings.

Claim 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nastasi et al 6138957 in view of Janker et al 6070834 or Appa 6375127.

Nastasi et al teaches all claimed parts except for the spar being shear flexible in the region of the actuators. However, Janker et al discloses that spars being shear flexible are well known. See figures 1B. See figures 4, 5, and 6 of Appa also. It would have been obvious to one skilled in the art at the time the invention was made to have used spars that are shear flexible in Nastasi et al as taught by Janker et al or Appa to allow the wings to be more flexible.

Allowable Subject Matter

Claims 10 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Grove and Arata disclose actuators to control the wings.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tien Dinh whose telephone number is 571-272-6899. The examiner can normally be reached on 12-8.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mansen can be reached on 571-272-6608. 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.

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/Tien Dinh/
Primary Examiner, Art Unit 3644