

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
11 October 2007 (11.10.2007)

PCT

(10) International Publication Number
WO 2007/114877 A3

(51) International Patent Classification:
B64C 37/00 (2006.01)

(74) Agents: **STAMOS, Christopher, W.** et al.; Goodwin Procter LLP, Exchange Place, Boston, MA 02109 (US).

(21) International Application Number:
PCT/US2007/000256

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(22) International Filing Date: 5 January 2007 (05.01.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/756,719 6 January 2006 (06.01.2006) US
60/756,720 6 January 2006 (06.01.2006) US
60/756,721 6 January 2006 (06.01.2006) US
60/756,722 6 January 2006 (06.01.2006) US
60/832,552 21 July 2006 (21.07.2006) US

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

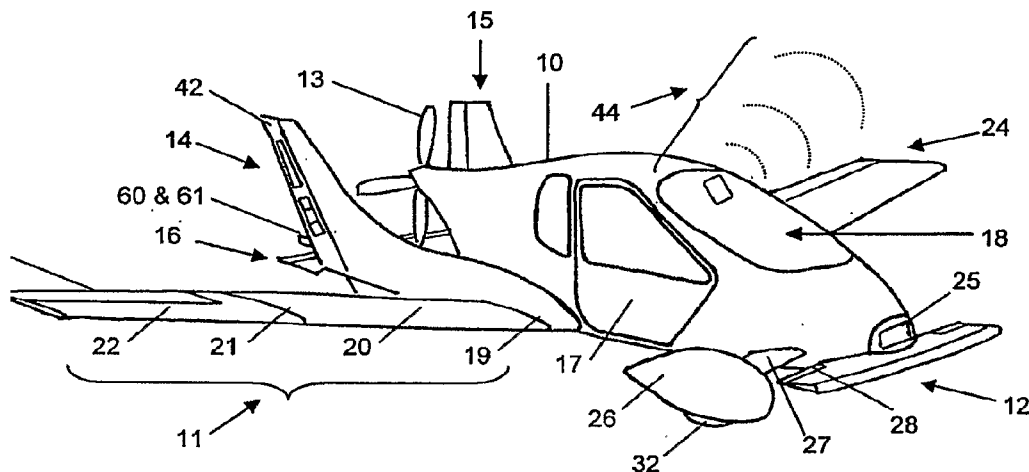
(71) Applicant (*for all designated States except US*): **TER-RAFUGIA, INC.** [US/US]; 25 Mason Street, Somerville, MA 02144 (US).

Published:
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(72) Inventors; and
(75) Inventors/Applicants (*for US only*): **DIETRICH, Carl, Curtis** [US/US]; 25 Mason Street, Somerville, MA 02144 (US). **SCHWEIGHART, Samuel, Adam** [US/US]; 31 Carver Road, Watertown, MA 02472 (US). **MRACEK, Anna, Marie** [US/US]; 25 Mason Street, Somerville, MA 02144 (US).

(88) Date of publication of the international search report:
29 May 2008

(54) Title: ROADABLE AIRCRAFT WITH FOLDING WINGS AND INTEGRATED BUMPERS AND LIGHTING



(57) Abstract: A low-wing, low-span canard aircraft with a protected pusher-style propeller is designed to transition simply between use in the air and use on the ground, without any mechanical effort on the part of the pilot. The vehicle may include deformable aerodynamic bumpers, embedded road-safety vehicle lighting and license plates, a protected propeller, and an integrated RFID airport access system. The vehicle may be designed for potential certification by the Federal Aviation Administration as a Light Sport Aircraft.

WO 2007/114877 A3

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/000256

A. CLASSIFICATION OF SUBJECT MATTER
INV. B64C37/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
B64C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2003/094536 A1 (LABICHE MITCHELL G [US]) 22 May 2003 (2003-05-22) paragraphs [0050], [0051], [0066] - [0068], [0094], [0097], [0098], [0126] - [0131]; figures	1, 3-5, 7, 15-18, 20, 21
A	US 3 371 886 A (SCHERTZ ROBERT O) 5 March 1968 (1968-03-05) figures	1-5, 7, 15, 16

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

11 September 2007

07/04/2008

Name and mailing address of the ISA/
European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Salentiny, Gérard

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2007/000256

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.
2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-21

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210 .

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-21

Flying and driving vehicle comprising a horizontal surface protecting the flight propulsion system from road debris when operated as a ground vehicle

2. claims: 22-38

Aerodynamic element for a flying and driving vehicle comprising an automotive indicator element

3. claims: 39-50

System and method for a flying and driving vehicle comprising an RFID airport access identification module

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/000256

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2003094536	A1	22-05-2003	NONE
US 3371886	A	05-03-1968	NONE