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HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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Declarations under Rule 4.17:

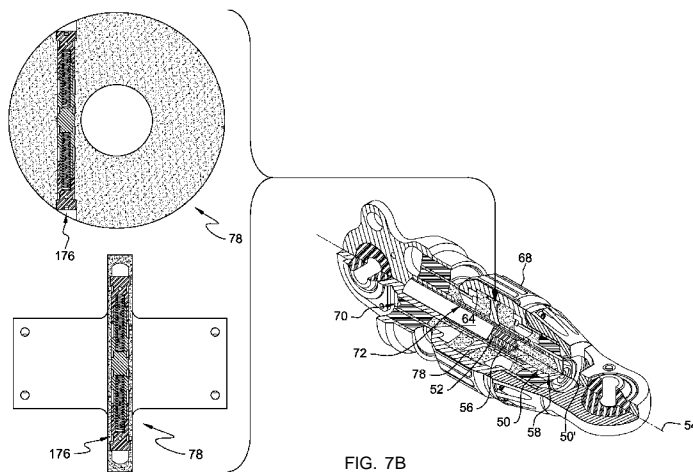
— of inventorship (Rule 4.17(iv))

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(88) Date of publication of the international search report:
22 March 2012

(54) Title: FLUID ELASTOMERIC DAMPER ASSEMBLY INCLUDING INTERNAL PUMPING MECHANISM AND CONTROL VALVE



(57) Abstract: A rotary wing system with a rotating blade and a fluid damper with a damper fluid in a first variable volume chamber and a second variable volume chamber, with a fluid damping flow valve controlled conduit and a fluid flow pressure sensing control valve assembly between the first variable volume chamber and the second variable volume chamber. The fluid flow pressure sensing control valve assembly has a fluid flow pressure sensing control valve assembly control valve for obstructing a damper fluid flow through the fluid damping flow valve controlled conduit. A working of the first variable volume chamber and the second variable volume chamber by rotary wing motions actuates the opening of the fluid flow pressure sensing control valve assembly control valve that obstructs the damper fluid flow through the fluid damping flow valve controlled conduit.

WO 2012/019117 A3

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2011/046782

A. CLASSIFICATION OF SUBJECT MATTER
 INV. B64C27/51
 ADD.

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 F16F

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 447 307 A1 (AEROSPATIALE [FR]) 18 September 1991 (1991-09-18)	1-4, 13-19, 21-24, 33-39, 41-45, 54-60, 62-65, 74-80, 82-86, 95-101, 105-107
Y	column 10, line 8 - column 19, line 44; figures 1-4,7,8 ----- -/--	20,40, 61,81, 102

Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents :

<p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"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)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"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</p> <p>"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</p> <p>"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.</p> <p>"&" document member of the same patent family</p>
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Date of the actual completion of the international search 31 January 2012	Date of mailing of the international search report 07/02/2012
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Hillebrand, Sabine
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INTERNATIONAL SEARCH REPORT

International application No PCT/US2011/046782

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2010/062937 A1 (LORD CORP [US]; RUSSELL DONALD D [US]) 3 June 2010 (2010-06-03)	105,107
Y	the whole document	20,40, 61,81, 102
A	-----	1-19, 21-39, 41-60, 62-80, 82-101, 106

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2011/046782

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.: 103, 104
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:
see FURTHER INFORMATION sheet PCT/ISA/2 10

- 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:

- 1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable 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.:

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

Continuation of Box 11.2

Claims Nos. : 103, 104

Claims 103 and 104 do not specify a single technical feature of the apparatus claimed.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.2), should the problems which led to the Article 17(2) declaration be overcome.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2011/046782

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0447307	AI	18-09-1991	
		DE 69101942 DI	16-06-1994
		DE 69101942 T2	22-12-1994
		EP 0447307 AI	18-09-1991
		FR 2659710 AI	20-09-1991
		US 5178241 A	12-01-1993
Wo 2010062937	AI	03-06-2010	
		EP 2349835 AI	03-08-2011
		US 2010247288 AI	30-09-2010
		WO 2010062937 AI	03-06-2010