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(71) Applicant: UNITED TECHNOLOGIES CORPORATION [US/US]; One Financial Plaza, Hartford, CT 06101 (US).

(72) Inventors: HUSBAND, Jason; 31 Toll Gate Road, South Glastonbury, CT 06073 (US). LANCASTER, Drew, W.; 266 Pearl St. Apt. 402, Hartford, CT 06103 (US).

(74) Agents: GOTTSCHALK, William, S. et al.; Carlson, Gaskey & Olds, P.C./Pratt & Whitney, 400 W. Maple, Suite 350, Birmingham, MI 48009 (US).

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(54) Title: THERMALLY CONFORMABLE LINER FOR REDUCING SYSTEM LEVEL FAN BLADE OUT LOADS

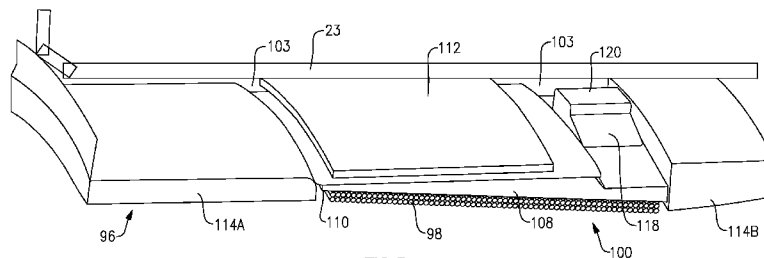


FIG. 5

(57) Abstract: A fan case for a gas turbine engine includes a fan case surrounding a fan with fan blades. A liner is disposed between the fan case and the fan and is spaced a radial distance from the fan case. A torque stop is arranged between the fan case and the liner. A method for reducing fan case liner loads is also disclosed.

A. CLASSIFICATION OF SUBJECT MATTER**F02C 7/24(2006.01)i, F01D 25/08(2006.01)i, F04D 29/58(2006.01)i**

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)

F02C 7/24; F01D 25/24; F02C 7/00; F02K 3/04; F02C 7/05; F02K 3/02; F01D 25/08; F04D 29/58

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: gas turbine engine, fan, liner, blade out, load, stop, and absorb

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| X | US 2010-0028129 A1 (REED, JULIAN M) 04 February 2010 See paragraphs [0017],[0024]-[0030]; and figures 1,4. | 1,2,5,6,11-14 |
| Y | | 7,10,15 |
| A | | 3,4,8,9,16-20 |
| Y | WO 2012-065155 A1 (WINTEC PROTECTIVE SYSTEMS, INC.) 18 May 2012 See paragraphs [0032],[0034],[0039]; and figures 2,4,6. | 7 |
| Y | US 2009-0269197 A1 (EVANS, DALE E.) 29 October 2009 See paragraphs [0019]-[0023],[0031],[0032]; and figure 1. | 10,15 |
| A | US 6637186 B1 (VAN DUYN, KEVEN G.) 28 October 2003 See column 4, lines 45-49; and figures 3,4. | 1-20 |
| A | US 2008-0016844 A1 (SHUTRUMP, JEFFREY D.) 24 January 2008 See abstract; paragraphs [0016]-[0018]; and figures 3-5. | 1-20 |

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

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International Application Division
Korean Intellectual Property Office
189 Cheongsu-ro, Seo-gu, Daejeon Metropolitan City, 302-701,
Republic of Korea

Facsimile No. +82-42-472-7140

Authorized officer

BAE, Geun Tae

Telephone No. +82-42-481-5580



INTERNATIONAL SEARCH REPORT

Information on patent family members

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| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
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