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*[Continued on next page]*

(54) Title: IMPROVED COOLING FOR A TURBINE AIRFOIL TRAILING EDGE

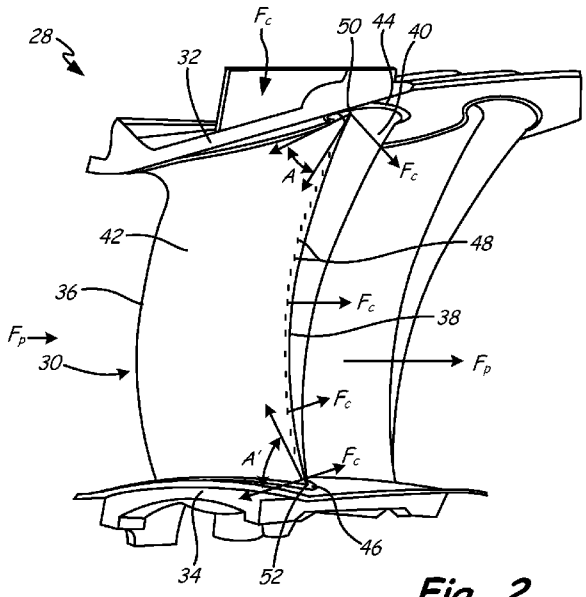



Fig. 2

(57) Abstract: An assembly for a gas turbine engine includes a first platform and an airfoil extending from the first platform. The airfoil includes a first fillet, pressure side biased discharge openings, and a first center cooling discharge opening. A pressure side wall of the airfoil and the first platform form an acute angle at the trailing edge. The first fillet is formed around a perimeter of the airfoil where the airfoil extends from the first platform. The pressure side biased cooling discharge openings are along the trailing edge outside of the first fillet. Each pressure side biased cooling discharge opening extends from the trailing edge along the pressure side wall. The first center cooling discharge opening extends along the trailing edge into the first fillet and is centrally located between the pressure side wall and the suction side wall.

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**A. CLASSIFICATION OF SUBJECT MATTER**

**F01D 5/18(2006.01)i, F02C 7/12(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)
F01D 5/18; F01D 5/08; B63H 1/16; F02C 7/12

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
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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKOMPASS(KIPO internal) & keywords: airfoil, rotor, vane, fillet, platform, root, cooling, passage, opening, orifice, and hole

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|---|---|---|
| Y | US 2005-0095129 A1 (BENJAMIN et al.) 05 May 2005<br>See abstract; paragraphs [0015],[0018],[0019],[0021]; figures 1,2. | 1-17 |
| Y | US 8,047,787 B1 (LIANG, GEORGE) 01 November 2011<br>See abstract; column 2, line 66 - column 3, line 15; figure 4. | 1-17 |
| A | US 7,775,769 B1 (LIANG, GEORGE) 17 August 2010<br>See abstract; column 2, lines 36-56; figures 3-5. | 1-17 |
| A | US 6,174,135 B1 (LEE, CHING-PANG) 16 January 2001<br>See abstract; column 3, lines 3-23; figure 2. | 1-17 |
| A | US 2009-0068021 A1 (LIANG, GEORGE) 12 March 2009<br>See abstract; paragraphs [0017],[0024]; figure 1. | 1-17 |
| A | US 2003-0223870 A1 (KEITH et al.) 04 December 2003<br>See abstract; paragraphs [0016],[0017]; figure 3. | 1-17 |

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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Information on patent family members

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