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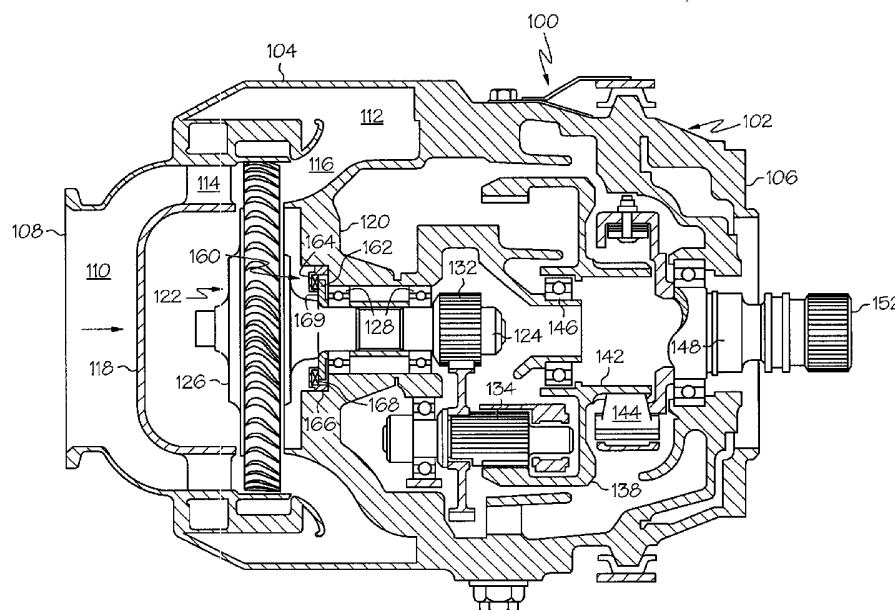
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(54) Title: INCREASED WEAR-LIFE MECHANICAL FACE SEAL ANTI-ROTATION SYSTEM



(57) Abstract: One or more stator seal assemblies are mounted in the housing of a rotating machine such as, for example, an air turbine starter for a gas turbine engine, and surround a rotating shaft. The seal assemblies each include a seal case and a seal. The seal has a face that engages an axial face of a face seal rotor to form a seal. One or more anti-rotation tabs in the seal case engage anti-rotation notches formed in the peripheral surface of the seal. The anti-rotation notches each include substantially arcuate sections formed in notch end surfaces. The arcuate sections increase the amount of wear in the notches that can be tolerated before a potential seal lock-up, thus increasing seal assembly lifetime.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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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)

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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)

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 420 160 A (LAHAM HERMAN C) 13 December 1983 (1983-12-13) the whole document ---	1-9
X	US 4 451 048 A (PICK STEVE J) 29 May 1984 (1984-05-29) column 5 -column 6; figures 2,5,6 ---	1-9
X	US 5 004 402 A (BURCHETTE HERBERT L ET AL) 2 April 1991 (1991-04-02) column 1 -column 2; figures 4-6 ---	1-3
A	US 3 796 507 A (SMYKAL R ET AL) 12 March 1974 (1974-03-12) column 4; figures 1-4 --- -/--	1-9



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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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