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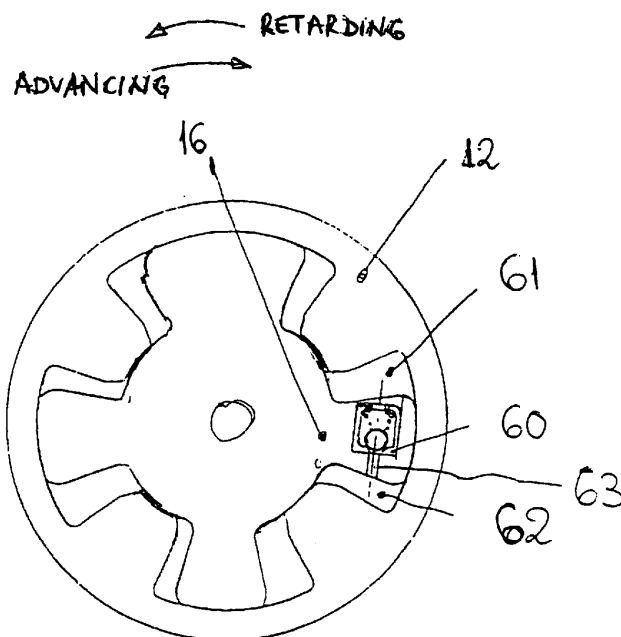
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(54) **Vane-Type Camshaft Phaser**

(57) The present invention is directed towards a vane-type camshaft phaser comprising a unitized housing including a lobed stator and a vaned rotor disposed within the housing, the lobed stator and the vaned rotor defining therebetween at least one advancing chamber

and at least one retarding chamber, at least one controllable fluid leakage means being provided between the at least one advancing chamber (61) and the at least one retarding chamber. The at least one controllable fluid leakage means is provided in a vane of the vaned rotor or in a lobe of the lobed stator.



**Fig. 4**



European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 03 10 3592

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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Place of search		Date of completion of the search	Examiner
The Hague		19 September 2007	Klinger, Thierry
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT  
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
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