

Title (en)  
Wing cell camshaft adjuster

Title (de)  
Flügelzellennockenwellenversteller

Title (fr)  
Régulateur d'arbres à cames de cellules d'ailerons

Publication  
**EP 2166199 B1 20101117 (DE)**

Application  
**EP 09009671 A 20090910**

Priority  
DE 102008048386 A 20080922

Abstract (en)  
[origin: EP2166199A1] The vane-type camshaft adjuster comprises a lateral plane, which is arranged vertical to its central axis (25), on which a spiral spring (12) rests, which holds a rotor opposite to a stator in certain angular position. The spiral spring has a right angle profile, where a spring section is bent through the lateral plane, such that the spiral spring is supported in torque proof manner against the stator or the rotor in form-fit manner.

IPC 8 full level  
**F01L 1/344** (2006.01)

CPC (source: EP KR US)  
**F01L 1/04** (2013.01 - KR); **F01L 1/34** (2013.01 - KR); **F01L 1/3442** (2013.01 - EP US); **F02D 13/02** (2013.01 - KR);  
**F01L 2001/34426** (2013.01 - EP US); **F01L 2001/34483** (2013.01 - EP US)

Cited by  
EP2604817A1; CN103161540A; CN103380270A; US8967107B2; WO2012107122A1; WO2012062495A1; US8925507B2; US9441506B2

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

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DE 102008048386 B4 20161201; DE 502009000184 D1 20101230; KR 101549463 B1 20150902; KR 20100033947 A 20100331;  
US 2010075765 A1 20100325; US 8230832 B2 20120731

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KR 20090089237 A 20090921; US 54907009 A 20090827