

Title (en)
DEVICE FOR ADJUSTING THE ANGLE OF ROTATION OF A CAMSHAFT OF AN INTERNAL COMBUSTION ENGINE WITH REGARD TO A DRIVE GEAR

Title (de)
VORRICHTUNG ZUR RELATIVEN DREHWINKELVERSTELLUNG EINER NOCKENWELLE EINER BRENNKRAFTMASCHINE ZU EINEM ANTRIEBSRAD

Title (fr)
DISPOSITIF PERMETTANT DE REGLER L'ANGLE DE ROTATION RELATIF D'UN ARBRE A CAMES D'UN MOTEUR A COMBUSTION INTERNE PAR RAPPORT A UNE ROUE MOTRICE

Publication
EP 1370749 A1 20031217 (DE)

Application
EP 02710050 A 20020130

Priority
• DE 10112206 A 20010314
• EP 0200927 W 20020130

Abstract (en)
[origin: WO02073008A1] The invention relates to a device for adjusting the angle of rotation of a camshaft of an internal combustion engine with regard to a drive gear. Said device is provided with an inner part (4), which is connected in a rotationally fixed manner to the camshaft (2) and which has connecting elements or vanes (6a to 6e) that run in an at least approximately radial manner, and with a driven cell wheel (10). The cell wheel has a number of cells, which are distributed over the circumference and delimited by connecting elements (12a to 12e). In addition, the cells are respectively subdivided into two pressure spaces (22a to 22e and 24a to 24e) by the connecting elements or vanes (6a to 6e) of the inner part (4), which are guided inside the cells while executing angular movements. When the pressure spaces are hydraulically pressurized or relieved from pressure via control lines, the camshaft can be rotated in relation to the cell wheel (10) between two end positions via the connecting elements or vanes. The inner part (4) is laterally delimited by two cover elements (14, 16) that are joined to the cell wheel. The aim of the invention is to reduce the friction between the blades (6a to 6b) of the inner part (4) and the cover elements (14, 16) in the lateral walls (38, 38) of the blades (6a to 6e), said lateral walls pointing toward the cover elements (14, 16). To this end, recesses (40, 42) that form spaces are provided, which are at least partially subjected to the action of hydraulic fluid when the internal combustion engine is in operation.

IPC 1-7
F01L 1/344

IPC 8 full level
F01L 1/34 (2006.01); **F01L 1/344** (2006.01)

CPC (source: EP US)
F01L 1/3442 (2013.01 - EP US)

Citation (search report)
See references of WO 02073008A1

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)
WO 02073008 A1 20020919; DE 10112206 A1 20020926; DE 50211670 D1 20080327; EP 1370749 A1 20031217; EP 1370749 B1 20080213; JP 2004518868 A 20040624; US 2003106512 A1 20030612; US 6668777 B2 20031230

DOCDB simple family (application)
EP 0200927 W 20020130; DE 10112206 A 20010314; DE 50211670 T 20020130; EP 02710050 A 20020130; JP 2002572242 A 20020130; US 22195002 A 20020918