

Title (en)

CAMSHAFT ADJUSTING APPARATUS

Title (de)

NOCKENWELLEN-VERSTELLVORRICHTUNG

Title (fr)

DISPOSITIF DE RÉGLAGE D'UN ARBRE À CAMES

Publication

EP 2603675 A1 20130619 (DE)

Application

EP 11735792 A 20110706

Priority

- DE 102010033897 A 20100810
- EP 2011003363 W 20110706

Abstract (en)

[origin: WO2012019680A1] An adjusting apparatus for the relative adjustment of a camshaft with regard to a drive gear which drives the camshaft coaxially comprises an actuating mechanism which is active between the drive gear and the camshaft and can be driven by means of an electric motor in order to adjust the camshaft. The actuating mechanism has an internally toothed gearwheel and an externally toothed gearwheel which is in engagement with the former, wherein the internally toothed gearwheel can be rotated about a central axis of the adjusting apparatus, and the externally toothed gearwheel is arranged eccentrically with regard to the central axis and can be driven about the central axis to produce a circular movement. The externally toothed gearwheel is mounted eccentrically on at least two eccentric shafts, wherein each eccentric shaft can be driven about a respective eccentric axis to produce a rotational movement, wherein the eccentric axes are arranged eccentrically with regard to the central axis and can be rotated about the central axis.

IPC 8 full level

F01L 1/352 (2006.01)

CPC (source: EP KR US)

F01L 1/352 (2013.01 - EP KR US); **F01L 13/00** (2013.01 - KR)

Citation (search report)

See references of WO 2012019680A1

Designated contracting state (EPC)

AL 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 RS SE SI SK SM TR

DOCDB simple family (publication)

DE 102010033897 A1 20120216; DE 102010033897 B4 20170316; CN 103080486 A 20130501; CN 103080486 B 20150506;
EP 2603675 A1 20130619; EP 2603675 B1 20141126; JP 2013533431 A 20130822; JP 5646058 B2 20141224; KR 101510971 B1 20150410;
KR 20130038365 A 20130417; US 2013291815 A1 20131107; US 8881701 B2 20141111; WO 2012019680 A1 20120216

DOCDB simple family (application)

DE 102010033897 A 20100810; CN 201180038368 A 20110706; EP 11735792 A 20110706; EP 2011003363 W 20110706;
JP 2013523504 A 20110706; KR 20137003456 A 20110706; US 201113816281 A 20110706