

Title (en)
ADJUSTABLE CAMSHAFT ARRANGEMENT

Title (de)
VERSTELLBARE NOCKENWELLENANORDNUNG

Title (fr)
SYSTÈME D'ARBRE À CAMES AJUSTABLE

Publication
EP 2286067 B1 20111012 (DE)

Application
EP 09753605 A 20090504

Priority
• EP 2009003173 W 20090504
• DE 102008025781 A 20080529

Abstract (en)
[origin: WO2009143950A1] The invention relates to a camshaft arrangement for a drive, in particular for a motor vehicle engine, comprising two shafts (20; 30) which are arranged coaxially one inside the other, in which a hollow outer shaft (20) and an inner shaft (30) are arranged so as to be rotatable relative to one another, and both shafts (20; 30) support in each case a plurality of cams (21; 22; 31). Here, the outer shaft cams (21; 22) supported by the outer shaft (20) are rotationally fixedly attached to the outer shaft (20), while the inner shaft cams (31) supported by the inner shaft (30) are rotationally fixedly attached to the inner shaft (30) by means of in each case at least one connecting element (40; 40'). The connecting element (40; 40') projects with play through a recess (50; 50') in the outer shaft (20) and is fastened to the respective inner shaft cam (31) which is rotatably mounted on the outer shaft (20). The invention is characterized in that the respective connecting element (40; 40') is inserted into a receptacle (37) in the inner shaft (30) in such a way that a part (42) of the connecting element (40; 40') projects out of the receptacle (37), and in that that part (42) which projects out is inserted at least partially into a cutout (32) located on the join diameter of the respective inner shaft cam (31), wherein said cutout (32) is formed so as to be open at least toward one end side of the inner shaft cam (31), and in that that part (42) which projects out has at least two opposite side surfaces (43; 44) which bear with an interference fit against two corresponding inner surfaces (34; 35) of the cutout (32) of the respective inner shaft cam (31).

IPC 8 full level
F01L 1/047 (2006.01); **F01L 1/344** (2006.01); **F01L 13/00** (2006.01)

CPC (source: EP US)
F01L 1/047 (2013.01 - EP US); **F01L 1/344** (2013.01 - EP US); **F01L 13/0036** (2013.01 - EP US); **F01L 2001/0473** (2013.01 - EP US)

Cited by
CN104405463A

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 TR

DOCDB simple family (publication)
WO 2009143950 A1 20091203; AT E528486 T1 20111015; CN 102046930 A 20110504; CN 102046930 B 20130717; DE 102008025781 A1 20091210; EP 2286067 A1 20110223; EP 2286067 B1 20111012; US 2011120401 A1 20110526; US 8495980 B2 20130730

DOCDB simple family (application)
EP 2009003173 W 20090504; AT 09753605 T 20090504; CN 200980119728 A 20090504; DE 102008025781 A 20080529; EP 09753605 A 20090504; US 99465109 A 20090504