

Title (en)
DEVELOPMENT OF A SWITCHING ROLLER FINGER FOLLOWER FOR CYLINDER DEACTIVATION IN INTERNAL COMBUSTION ENGINES

Title (de)
ENTWICKLUNG EINES SCHALTROLLENSCHLEPPHEBELS ZUR ZYLINDERABSCHALTUNG IN VERBRENNUNGSMOTOREN

Title (fr)
DÉVELOPPEMENT D'UN SUIVEUR DE DOIGT À GALET DE COMMUTATION POUR LA DÉSACTIVATION DE CYLINDRES DANS DES MOTEURS À COMBUSTION INTERNE

Publication
EP 4219914 A1 20230802 (EN)

Application
EP 23164324 A 20131105

Priority

- US 201261722765 P 20121105
- US 201361771769 P 20130301
- US 201313868025 A 20130422
- US 201313868035 A 20130422
- US 201313868045 A 20130422
- US 201313868054 A 20130422
- US 201313868061 A 20130422
- US 201313868067 A 20130422
- US 201313868068 A 20130422
- US 201313873774 A 20130430
- US 201313873797 A 20130430
- EP 13851457 A 20131105
- US 2013037667 W 20130422
- US 2013037665 W 20130422
- US 2013038896 W 20130430
- US 2013068503 W 20131105

Abstract (en)
A system for selectively deactivating engine valves of a cylinder of an internal combustion engine is disclosed. It employs switching rocker assemblies between the engine valves and rotating cam lobes. The current design is able to operate using a single cam lobe per valve. The rocker assembly employs first arm pivotally attached to a second arm at one end. The first arm engages the valve and the second arm has a roller bearing that engages the cam lobe. A latch causes the first and second arm to move in unison following the cam surface, when latched. When unlatched, the second arm follows and moves according to the rotating cam surface, but the first arm does not follow and does not actuate the valve, thereby deactivating the cylinder.

IPC 8 full level
F01L 1/18 (2006.01); **F01L 1/12** (2006.01); **F01L 1/16** (2006.01); **F01L 1/24** (2006.01); **F01L 1/46** (2006.01); **F01L 13/00** (2006.01); **F02D 13/00** (2006.01); **F02D 17/02** (2006.01)

CPC (source: EP)
F01L 1/185 (2013.01); **F01L 1/2405** (2013.01); **F01L 1/46** (2013.01); **F01L 13/0005** (2013.01); **F02D 17/02** (2013.01); **F01L 13/0015** (2013.01); **F01L 13/0036** (2013.01); **F01L 2001/186** (2013.01); **F01L 2305/00** (2020.05); **F01L 2820/04** (2013.01); **F01L 2820/045** (2013.01)

Citation (applicant)

- US 201213532777 A 20120625
- US 2010089347 A1 20100415 - KELLER ROBERT D [US], et al
- US 2010018482 A1 20100128 - KELLER ROBERT D [US], et al

Citation (search report)

- [YA] DE 102009056367 A1 20110601 - SCHAEFFLER TECHNOLOGIES GMBH [DE]
- [Y] US 2008035085 A1 20080214 - HENDRIKSMA NICK J [US]
- [YA] US 2012037107 A1 20120216 - CHURCH KYNAN L [US]
- [Y] JP 2012184463 A 20120927 - NHK SPRING CO LTD

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)
WO 2014071373 A1 20140508; CN 104903553 A 20150909; CN 104903553 B 20190419; CN 109915224 A 20190621; CN 109915224 B 20210831; EP 2914820 A1 20150909; EP 2914820 A4 20161005; EP 4219914 A1 20230802; JP 2015534005 A 20151126; KR 20150079975 A 20150708

DOCDB simple family (application)
US 2013068503 W 20131105; CN 201380069236 A 20131105; CN 201910238910 A 20131105; EP 13851457 A 20131105; EP 23164324 A 20131105; JP 2015541853 A 20131105; KR 20157014991 A 20131105