

Title (en)  
CONTACTLESS CYLINDER ESCAPEMENT

Title (de)  
KONTAKTLOSE ZYLINDRISCHE UHRHEMMUNG

Title (fr)  
ECHAPPEMENT A CYLINDRE SANS CONTACT

Publication  
**EP 3179316 B1 20210915 (FR)**

Application  
**EP 15199338 A 20151210**

Priority  
EP 15199338 A 20151210

Abstract (en)  
[origin: JP2017106901A] PROBLEM TO BE SOLVED: To provide a magnetic cylinder escapement that reduces sensitivity to external magnetic fields.SOLUTION: A magnetic cylinder escapement comprises a regulating wheel set 5 and an escape wheel 3 comprising actuators 6 at the periphery of a first disc. The actuators 6 each comprises a first impulse part 61 and a second stop part 62, generating or guiding magnetic fields parallel to the pivot axes, and arranged to work in attraction, via the first disc 30, with a second non-magnetically charged, soft ferromagnetic disc 7 integral with the regulating wheel set 5. The mechanism comprises a conductive ferromagnetic plate 8, underneath the first disc 30 but not in contact with the first disc 30, comprising a cutout 80 surrounding, in a contactless manner, the periphery 70 of the second disc 7, with a variable air-gap E; the plate 8 closing a magnetic circuit comprising an actuator 6, the first disc 30, the second disc 7, and a structure in which the escape wheel 3 pivots and which carries the plate 8.SELECTED DRAWING: Figure 6

IPC 8 full level  
**G04B 15/14** (2006.01); **G04C 3/10** (2006.01); **G04C 5/00** (2006.01)

CPC (source: CN EP KR US)  
**G04B 15/04** (2013.01 - CN US); **G04B 15/12** (2013.01 - KR); **G04B 15/14** (2013.01 - CN EP KR US); **G04C 3/10** (2013.01 - EP US); **G04C 3/105** (2013.01 - EP US); **G04C 5/00** (2013.01 - EP US); **G04C 5/005** (2013.01 - EP KR US)

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)  
**EP 3179316 A1 20170614; EP 3179316 B1 20210915**; CN 106919035 A 20170704; CN 106919035 B 20190607; JP 2017106901 A 20170615; JP 6236133 B2 20171122; KR 101892823 B1 20181004; KR 20170069159 A 20170620; TW 201727402 A 20170801; TW I691819 B 20200421; US 2017168454 A1 20170615; US 9915922 B2 20180313

DOCDB simple family (application)  
**EP 15199338 A 20151210**; CN 201611127522 A 20161209; JP 2016216229 A 20161104; KR 20160166769 A 20161208; TW 105131378 A 20160929; US 201615286022 A 20161005