

Title (en)
OSCILLATOR FOR TIMEPIECE MOVEMENT

Title (de)
OSZILLATOR FÜR UHRWERK

Title (fr)
OSCILLATEUR POUR MOUVEMENT HORLOGER

Publication
EP 3234701 A1 20171025 (FR)

Application
EP 15817822 A 20151218

Priority
• EP 14199074 A 20141218
• EP 2015080679 W 20151218

Abstract (en)
[origin: WO2016097384A1] The invention concerns an oscillator (1) for a timepiece movement, comprising a staff (12) rigidly connected to a balance (4) carrying first and second bipolar magnets (20, 40) spaced apart from the staff (12) and capable, depending on the angular position of the balance (4), of being positioned alternately within range of a magnetic field produced by a fixed bipolar magnet (28), the latter being located on the trajectory of the first and second bipolar magnets (20, 40) and being arranged in such a way that, when one of the bipolar magnets (20, 40) approaches the fixed bipolar magnet (28), identical polarities are located opposite each other in order to produce a repulsive force. The oscillator further comprises a pallet assembly (32) and an escape wheel (30) for establishing a kinematic connection between a source of energy of the timepiece movement and the balance staff (12), and arranged in such a way that the balance (4) is capable of having a sustained periodic oscillating movement of an amplitude greater than 90 degrees.

IPC 8 full level
G04B 17/06 (2006.01); **G04B 17/22** (2006.01); **G04C 3/04** (2006.01); **G04C 5/00** (2006.01)

CPC (source: CN EP US)
G04B 15/00 (2013.01 - US); **G04B 17/063** (2013.01 - CN EP US); **G04B 17/22** (2013.01 - EP US); **G04B 17/222** (2013.01 - CN);
G04B 17/32 (2013.01 - US); **G04C 3/047** (2013.01 - CN EP US); **G04C 5/005** (2013.01 - CN EP US)

Citation (search report)
See references of WO 2016097384A1

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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3035131 A1 20160622; CN 107111277 A 20170829; CN 107111277 B 20200821; EP 3234701 A1 20171025; EP 3234701 B1 20210505; JP 2017538124 A 20171221; JP 6770518 B2 20201014; US 10133240 B2 20181120; US 2018004164 A1 20180104; WO 2016097384 A1 20160623

DOCDB simple family (application)
EP 14199074 A 20141218; CN 201580067532 A 20151218; EP 15817822 A 20151218; EP 2015080679 W 20151218; JP 2017532007 A 20151218; US 201515536063 A 20151218