

Title (en)
Balance wheel - hairspring resonator for clock piece

Title (de)
Spiralunruh-Schwinger für eine Uhr

Title (fr)
Résonateur balancier - spiral pour une pièce d'horlogerie

Publication
EP 2322996 A1 20110518 (FR)

Application
EP 10187974 A 20101019

Priority
CH 17622009 A 20091113

Abstract (en)
The resonator (11) has a balance (13) and a hairspring mounted on a staff (17), where the hairspring comprises a hairspring part (12) formed as a single piece with a collet (14). The collet has a protuberance (16) forming a pin that co-operates with an escapement system, where the protuberance is mounted parallel to the staff. An assembly constituted of the hairspring and the protuberance is made of silicon such as single-crystal silicon. The protuberance is mounted through a recess of the balance. An independent claim is also included for a method for fabricating a hairspring.

Abstract (fr)
L'invention se rapporte à un résonateur (11) balancier (13) - spiral (15) comportant un balancier (13) monté sur un axe (17), un spiral (15) comprenant un ressort-spiral (12) venu de forme avec une virole (14) et monté sur ledit axe. Selon l'invention, la virole (14) comporte une excroissance (16) venue de forme formant une cheville agencée pour coopérer avec un système d'échappement. L'invention concerne le domaine des mouvements horlogers.

IPC 8 full level
G04B 17/06 (2006.01); **G04B 17/34** (2006.01)

CPC (source: EP KR US)
G04B 17/066 (2013.01 - EP KR US); **G04B 17/345** (2013.01 - EP KR US)

Citation (search report)
• [Y] EP 1857891 A1 20071121 - PATEK PHILIPPE SA [CH]
• [Y] DE 29502289 U1 19950330 - THIELEN FEINMECHANIK GMBH & CO [DE]
• [A] FR 2472218 A1 19810626 - PARRENIN SA [FR]
• [A] US 2009168611 A1 20090702 - GIGANDET CHRISTOPHE [CH], et al
• [A] EP 1655642 A2 20060510 - ETA SA MFT HORLOGERE SUISSE [CH]

Cited by
EP2579105A3; EP2570868A1

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 2322996 A1 20110518; EP 2322996 B1 20160629; CH 702156 A1 20110513; CH 702156 B1 20170831; CN 102063048 A 20110518; CN 102063048 B 20150708; HK 1157884 A1 20120706; JP 2011107133 A 20110602; JP 5280424 B2 20130904; KR 20110053205 A 20110519; RU 2010146178 A 20120520; RU 2545486 C2 20150410; TW 201140260 A 20111116; TW I501054 B 20150921; US 2011116347 A1 20110519; US 8491182 B2 20130723

DOCDB simple family (application)
EP 10187974 A 20101019; CH 17622009 A 20091113; CN 201010548563 A 20101112; HK 11112368 A 20111116; JP 2010252625 A 20101111; KR 20100113080 A 20101115; RU 2010146178 A 20101112; TW 99136541 A 20101026; US 94604210 A 20101115