

Title (en)

SHOCK PROTECTION OF A RESONATOR MECHANISM WITH ROTATABLE FLEXIBLE GUIDING

Title (de)

STOSSDÄMPFUNGSSCHUTZ EINES RESONATORMECHANISMUS MIT FLEXIBLER DREHFÜHRUNG

Title (fr)

PROTECTION ANTICHOCH D'UN MECANISME RÉSONATEUR A GUIDAGE FLEXIBLE ROTATIF

Publication

EP 3561609 B1 20220323 (FR)

Application

EP 18168765 A 20180423

Priority

EP 18168765 A 20180423

Abstract (en)

[origin: US2019324401A1] A timepiece resonator mechanism including a structure carrying, via a flexible suspension system, an anchor unit to which is suspended an inertia element oscillating with a first rotational degree of freedom RZ, under the action of return forces exerted by a flexure pivot including first elastic strips each fixed to the inertia element and to the anchor unit, the flexible suspension system being arranged to allow the anchor unit some mobility in every degree of freedom except the first rotational degree of freedom RZ wherein only the inertia element can move to avoid any disturbance to its oscillation, and the stiffness of the suspension system in the first rotational degree of freedom RZ is very considerably higher than the stiffness of the flexure pivot in this same rotational degree of freedom RZ.

IPC 8 full level

G04B 43/00 (2006.01); **G04B 17/04** (2006.01); **G04B 31/00** (2006.01); **G04B 31/02** (2006.01)

CPC (source: CH CN EP US)

G04B 17/00 (2013.01 - CN); **G04B 17/04** (2013.01 - EP US); **G04B 17/045** (2013.01 - CH EP); **G04B 17/28** (2013.01 - US);
G04B 31/00 (2013.01 - EP); **G04B 31/02** (2013.01 - EP US); **G04B 43/002** (2013.01 - CH EP); **G04C 3/04** (2013.01 - US)

Citation (examination)

- EP 3327515 A1 20180530 - ETA SA MFT HORLOGERE SUISSE [CH]
- EP 3324247 A1 20180523 - SWATCH GROUP RES & DEV LTD [CH]

Cited by

EP3971655A1; CN114721243A; WO2020016131A1; EP4343450A1; EP4141580A1; EP3561607A1; EP3971656A1; EP4191346A1

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 3561609 A1 20191030; EP 3561609 B1 20220323; CH 714922 A2 20191031; CN 110389519 A 20191029; CN 110389519 B 20210903;
JP 2019191159 A 20191031; JP 2020076770 A 20200521; JP 6763991 B2 20200930; JP 6828117 B2 20210210; US 11175630 B2 20211116;
US 2019324401 A1 20191024

DOCDB simple family (application)

EP 18168765 A 20180423; CH 5182018 A 20180423; CN 201910328567 A 20190423; JP 2019056018 A 20190325; JP 2019195910 A 20191029;
US 201916392057 A 20190423