

Title (en)
TIMEPIECE RESONATOR COMPRISING AT LEAST ONE FLEXIBLE GUIDE

Title (de)
UHRRESONATOR, DER MINDESTENS EINE FLEXIBLE FÜHRUNG UMFASST

Title (fr)
RÉSONATEUR D'HORLOGERIE COMPORTANT AU MOINS UN GUIDAGE FLEXIBLE

Publication
EP 3667432 A1 20200617 (FR)

Application
EP 18212333 A 20181213

Priority
EP 18212333 A 20181213

Abstract (en)
[origin: JP2020095037A] To provide a flexure bearing for mechanical oscillators, which is subject to the least possible anticlastic curvature.SOLUTION: A timepiece resonator comprises an inertia element 4, 5 suspended from a flexible strip 2 deformable in a plane parallel to a longitudinal direction. A transverse extension of the flexible strip 2 along a transverse axis, in a projection onto the plane, is variable and of a positive value on at least one side of a neutral axis of the strip 2. The flexible strip 2 includes, at a distance from its embedments, at least one rib 3 extending substantially along an axis perpendicular to the plane, each having at least one generatrix which is farther from the neutral axis than external surfaces of sections 6 of the strip 2 located outside the ribs 3. A longitudinal extension of each rib 3 of the strip 2 along a longitudinal axis is less than one fifth of a length L of the strip 2 between its embedments.SELECTED DRAWING: Figure 5

Abstract (fr)
Résonateur d'horlogerie (100) comportant un élément inertiel (4 ; 5) suspendu à une lame flexible (2) déformable dans un plan XY parallèle à une direction longitudinale Y, et dont l'extension transversale selon un axe transversal X, en projection sur le plan XY, est variable et de valeur positive sur au moins un côté de la fibre neutre (FN) de ladite lame (2) laquelle comporte, à distance de ses encastrements, au moins une nervure (3) s'étendant sensiblement selon un axe Z perpendiculaire au plan XY, chacune comportant au moins une génératrice qui est plus éloignée de la fibre neutre (FN) que ne le sont les surfaces externes des tronçons (6) de la lame (2) situés en dehors des nervures (3), et l'extension longitudinale (LN) de chaque nervure (3) de la lame (2), selon l'axe Y longitudinal, est inférieure au cinquième de la longueur L de la lame (2) entre ses encastrements.

IPC 8 full level
G04B 17/04 (2006.01)

CPC (source: CN EP US)
G04B 17/04 (2013.01 - CN US); **G04B 17/045** (2013.01 - CN EP); **G04B 17/28** (2013.01 - CN); **G04B 17/32** (2013.01 - CN)

Citation (applicant)
• EP 3035126 A1 20160622 - SWATCH GROUP RES & DEV LTD [CH]
• EP 3206089 A1 20170816 - SWATCH GROUP RES & DEV LTD [CH]
• EP 18179623 A 20180625

Citation (search report)
• [XAYI] WO 2018100122 A1 20180607 - LVMH SWISS MFT SA [CH]
• [XY] EP 3001257 A1 20160330 - ETA SA MANUFACTURE HORLOGÈRE SUISSE [CH]
• [XAYI] CH 712068 A2 20170731 - ETA SA MFT HORLOGÈRE SUISSE [CH]
• [A] EP 2975470 A1 20160120 - NIVAROX SA [CH]
• [A] EP 3299905 A1 20180328 - CSEM CT SUISSE DELECTRONIQUE MICROTECHNIQUE SA RECH DEVELOPPEMENT [CH]

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WO2022106434A1; EP3982204A1

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

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DOCDB simple family (publication)
EP 3667432 A1 20200617; EP 3667432 B1 20220511; CN 111324027 A 20200623; CN 111324027 B 20210831; CN 111324028 A 20200623; CN 111324028 B 20210831; JP 2020095036 A 20200618; JP 2020095037 A 20200618; JP 6948375 B2 20211013; JP 6948376 B2 20211013; US 11520291 B2 20221206; US 11520292 B2 20221206; US 2020192290 A1 20200618; US 2020192291 A1 20200618

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