

Title (en)

FLEXIBLY GUIDED ROTARY RESONATOR MAINTAINED BY A FREE ESCAPEMENT WITH PALLET

Title (de)

SICH DREHENDER RESONATOR MIT EINER FLEXIBLEN FÜHRUNG, DER VON EINER FREIEN ANKERHEMMUNG GEHALTEN WIRD

Title (fr)

RESONATEUR ROTATIF A GUIDAGE FLEXIBLE ENTRETENU PAR UN ECHAPPEMENT LIBRE A ANCRE

Publication

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Application

EP 16200152 A 20161123

Priority

EP 16200152 A 20161123

Abstract (en)

[origin: WO2018095592A1] Timepiece regulating member (300) comprising a detached escapement mechanism (200) with a lever (7), and a resonator (100) of quality factor Q, comprising an inertial element (2) with a pin (6) cooperating with a fork (8) of the lever (7), and subjected to the elastic return of two flexible blades (5), attached to the plate (1), which define together a virtual pivot with a main axis (DP), the lever (7) pivoting about a secondary axis (DS), wherein the resonator lift angle (β), when the pin (6) contacts the fork (8), is less than 10° and the ratio IB/IA between the inertia IB of the inertial element (2) relative to the main axis (DP), and the inertia IA of the lever (7) relative to the secondary axis (DS) is greater than $2Q \cdot \alpha^2 / (0.1 \cdot \tau \cdot \beta^2)$, α being the lift angle of the lever corresponding to the maximum angular stroke of the fork (8).

Abstract (fr)

Régulateur (300) d'horlogerie, comportant un mécanisme d'échappement (200) libre à ancre (7), et un résonateur (100) de facteur de qualité Q comportant un élément inertiel (2) comportant une cheville (6) coopérant avec une fourchette (8) de l'ancre (7), soumis au rappel de deux lames flexibles (5) fixées à la platine (1), définissant un pivot virtuel d'axe principal (DP), l'ancre (7) pivotant autour d'un axe secondaire (DS), et l'angle de levée de résonateur (β), pendant lequel la cheville (6) est en contact avec la fourchette (8), est inférieur à 10° , et le rapport IB/IA entre l'inertie IB de l'élément inertiel (2) par rapport à l'axe principal (DP), et l'inertie IA de l'ancre (7) par rapport à l'axe secondaire (DS), est supérieur à $2Q \cdot \alpha^2 / (0.1 \cdot A \cdot \tau^2)$, α étant l'angle de levée de l'ancre correspondant à la course angulaire maximale de la fourchette (8).

IPC 8 full level

G04B 15/08 (2006.01); **G04B 17/04** (2006.01); **G04B 17/28** (2006.01)

CPC (source: CH EP US)

G04B 15/08 (2013.01 - CH EP US); **G04B 15/14** (2013.01 - EP US); **G04B 17/045** (2013.01 - CH EP); **G04B 17/28** (2013.01 - EP US); **G04B 18/02** (2013.01 - EP US); **G04B 31/00** (2013.01 - EP); **G04B 17/045** (2013.01 - US); **G04B 17/26** (2013.01 - EP US)

Citation (applicant)

EP 3035126 A1 20160622 - SWATCH GROUP RES & DEV LTD [CH]

Citation (search report)

- [A] EP 3032352 A1 20160615 - LVMH SWISS MFT SA [CH]
- [A] EP 2990885 A1 20160302 - ETA SA MANUFACTURE HORLOGÈRE SUISSE [CH]
- [A] EP 2894520 A2 20150715 - NIVAROX SA [CH]

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BA ME

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