

Title (en)
MECHANICAL TIMEPIECE COMPRISING AN ELECTRONIC DEVICE FOR REGULATING THE TIME KEEPING PRECISION OF THE TIMEPIECE

Title (de)
MECHANISCHE UHR UMFASSEND EINE ELEKTRONISCHE VORRICHTUNG ZUR REGULIERUNG DER GANGGENAUIGKEIT DER UHR

Title (fr)
PIECE D'HORLOGERIE MÉCANIQUE COMPORTANT UN DISPOSITIF ELECTRONIQUE DE REGULATION DE LA PRÉCISION DE MARCHE DE LA PIÈCE D'HORLOGERIE

Publication
EP 3629104 B1 20210512 (FR)

Application
EP 19193740 A 20190827

Priority
EP 18197282 A 20180927

Abstract (en)
[origin: JP2020052047A] To provide a timepiece assembly comprising a mechanical oscillator associated with an electronic device for controlling its mean frequency.SOLUTION: A timer (2)is provided with a mechanical movement (4), which includes a mechanical resonator (14), a sensor (24) detecting oscillation of the mechanical resonator, and a braking device (26) arranged to generate a braking pulse in response to a control signal (S) provided by a control circuit (22) associated with an auxiliary oscillator. The control circuit is arranged to be capable of detecting negative or positive temporal drift in the oscillation of the mechanical resonator and to generate, in a correction period, in association with the braking device, when the temporal drift corresponds to at least a certain loss, a series of braking pulses which are applied to the mechanical resonator at a frequency F, in a given range of values which is preferably higher than a frequency $F(N)=2 \cdot F_0/N$, F_0 being a set point frequency for the mechanical resonator and N a positive integer number.SELECTED DRAWING: Figure 1

IPC 8 full level
G04C 3/04 (2006.01); **G04C 10/00** (2006.01); **G04C 11/08** (2006.01)

CPC (source: CN EP US)
G04B 17/063 (2013.01 - US); **G04B 17/20** (2013.01 - CN); **G04B 17/32** (2013.01 - US); **G04C 3/04** (2013.01 - EP); **G04C 3/042** (2013.01 - US); **G04C 3/047** (2013.01 - US); **G04C 3/06** (2013.01 - CN); **G04C 10/00** (2013.01 - CN); **G04C 11/084** (2013.01 - EP); **G04C 10/00** (2013.01 - EP)

Cited by
CN116068872A; EP4174586A1

Designated contracting state (EPC)
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EP 19193740 A 20190827; CN 201910925772 A 20190927; JP 2019173713 A 20190925; US 201916573022 A 20190917