

Title (en)

Timepiece having an electrical energy generator

Title (de)

Zeitmessgerät mit Generator zur Erzeugung elektrischer Energie

Title (fr)

Pièce d'horlogerie comportant une génératrice d'énergie électrique

Publication

**EP 1014230 A1 20000628 (FR)**

Application

**EP 98123823 A 19981215**

Priority

EP 98123823 A 19981215

Abstract (en)

The time piece includes: - a mechanical energy source (2); - hour displays (6) mechanically linked to the mechanical energy source (2); - an electrical energy generator (3) also linked mechanically to the mechanical energy source (2) and arranged to produce at its two output terminals (3a,3b) an alternating voltage (Ug); - a rectifier circuit (5), connected to the output terminals of the electrical generator (3), which produces at its output terminals (5a,5b) a continuous voltage (Ua) from the alternating voltage (Ug), and; - a servo circuit (7), fed from the continuous voltage (Ua), which regulates the rotational speed of the electrical generator (3) to a speed (Vc) determined by precise indication of the current time. This servo circuit (7) has reference systems (71,72) driven by a quartz crystal (8). The time piece also includes a thermal compensation circuit (9) linked to the servo circuit (7) and fed from the continuous voltage source (Ua). This thermal compensation circuit is designed to adjust the reference systems (71,72) of the servo circuit (7) so as to compensate for the influence of temperature on the quartz crystal.

Abstract (fr)

La présente invention est relative à une pièce d'horlogerie mue par une source d'énergie mécanique (2) et, en particulier, à une telle pièce d'horlogerie dont la marche est régulée par un circuit d'asservissement électronique (7) comprenant un quartz (8) et alimenté par une génératrice électrique (3). La pièce d'horlogerie selon la présente invention comprend un circuit de compensation thermique (9) couplé au circuit d'asservissement (7) et destiné à ajuster des moyens de référence (71, 72) du circuit d'asservissement (7) de manière à compenser l'influence de la température sur le quartz (8). <IMAGE>

IPC 1-7

**G04G 1/00**

IPC 8 full level

**G04C 10/00** (2006.01); **G04G 3/04** (2006.01); **G04G 19/08** (2006.01)

CPC (source: EP)

**G04C 10/00** (2013.01); **G04G 19/08** (2013.01)

Citation (search report)

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- [A] CH 570651 A 19751215 - CENTRE ELECTRON HORLOGER
- [A] US 4448543 A 19840515 - VAIL DAVID K [US]
- [A] PATENT ABSTRACTS OF JAPAN vol. 002, no. 051 (E - 026) 12 April 1978 (1978-04-12)

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