

Title (en)  
MECHANICAL TIMEPIECE WITH REGULATOR ACTUATING MECHANISM

Title (de)  
MECHANISCHE UHR MIT EINEM REGLERBETÄTIGUNGSMECHANISMUS

Title (fr)  
HORLOGE MECANIQUE COMPORTANT UN MECANISME D'ACTIONNEMENT DE REGULATEUR

Publication  
**EP 1158373 A1 20011128 (EN)**

Application  
**EP 00902140 A 20000208**

Priority  
• JP 0000677 W 20000208  
• JP 9907290 W 19991224  
• JP 0000283 W 20000121

Abstract (en)  
A mechanical timepiece of the present invention has a movement structured having a mainspring constituting a power source for the mechanical timepiece, a train wheel rotating due to a rotation force of the mainspring upon being rewound, an escape/speed-control device for controlling rotation of the train wheel, the escape/speed-control device including a balance with hairspring alternately repeating right and left rotation, an escape wheel and pinion rotating based on rotation of the train wheel and a pallet fork controlling rotation of the escape wheel and pinion based on operation of the balance with hairspring. The balance with hairspring includes a stud mainspring, a stud stem and a stud wheel. The mechanical timepiece of the invention further comprises a time count section to count time having a quartz oscillator constituting source oscillation, an IC including a frequency-dividing section to input an output signal outputted due to oscillation of said quartz oscillator and output a signal concerning a time by frequency-dividing the signal, and a power source to operate said IC; a watch error section for detecting a watch error of said mechanical timepiece; and a watch-error adjusting section including a regulator operating based on a count signal counted by said time count section and an operation state signal representative of a watch error detected by said watch-error detecting section. The regulator is rotated by the motor based on a operation state signal. With this structure, the vibration period of the balance with hairspring can be varied making possible to accurately adjust the watch error of the mechanical timepiece. <IMAGE>

IPC 1-7  
**G04B 17/20**; **G04B 18/02**; **G04C 3/04**

IPC 8 full level  
**G04C 3/04** (2006.01); **G04C 3/08** (2006.01); **G04C 3/14** (2006.01); **G04C 11/00** (2006.01); **G04C 11/08** (2006.01)

CPC (source: EP)  
**G04C 3/04** (2013.01); **G04C 3/047** (2013.01); **G04C 3/08** (2013.01); **G04C 3/146** (2013.01); **G04C 11/00** (2013.01); **G04C 11/088** (2013.01)

Cited by  
US7891862B2; US11599065B2; WO2008011738A3

Designated contracting state (EPC)  
CH DE GB LI

DOCDB simple family (publication)  
**EP 1158373 A1 20011128**; **EP 1158373 A4 20050615**; HK 1046039 A1 20021220; WO 0148566 A1 20010705

DOCDB simple family (application)  
**EP 00902140 A 20000208**; HK 02107307 A 20021004; JP 0000677 W 20000208