

Title (en)  
Watch movement with constant-force device

Title (de)  
Uhrwerk mit konstantkraftvorrichtung

Title (fr)  
Mouvement de montre comportant un dispositif à force constante

Publication  
**EP 1772783 B1 20100616 (FR)**

Application  
**EP 05022045 A 20051010**

Priority  
EP 05022045 A 20051010

Abstract (en)  
[origin: EP1772783A1] The watch has a movement (1) with a constant force device (14) comprising a mobile, a third wheel (20), a spiral spring (22) rotatively connecting the mobile to the wheel and a stop gear-train (30). The wheel (20) is integrated to a star (26) which frees the gear-train only once per minute so as to carry out a display at dead minute in order that a minute hand (7) effectuates a jump at each minute. The star acts as a locking unit for the gear-train that is driven by a third wheel (13).

IPC 8 full level  
**G04B 15/10** (2006.01); **G04B 17/28** (2006.01)

CPC (source: EP US)  
**G04B 1/225** (2013.01 - EP US); **G04B 15/10** (2013.01 - EP US); **G04B 17/285** (2013.01 - EP US)

Cited by  
EP2397920A1; EP2397921A1; WO2011157591A1; WO2011157797A1; EP3339974A1; CN104423241A; EP2034374A3; EP3032348A1; US9429914B2; US8550701B2; CN102269967A; EP3032349A1; WO2009059441A1; US8038340B2; EP2034374A2; US9058020B2; US9052692B2

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**EP 1772783 A1 20070411; EP 1772783 B1 20100616**; AT E471538 T1 20100715; CN 1949101 A 20070418; CN 1949101 B 20111012; DE 602005021883 D1 20100729; JP 2007108177 A 20070426; JP 5032086 B2 20120926; SG 131854 A1 20070528; US 2007127319 A1 20070607; US 7473027 B2 20090106

DOCDB simple family (application)  
**EP 05022045 A 20051010**; AT 05022045 T 20051010; CN 200610149536 A 20061009; DE 602005021883 T 20051010; JP 2006276132 A 20061010; SG 2006067300 A 20060927; US 54826106 A 20061010