

Title (en)
Balance-spring for time measuring apparatus

Title (de)
Spiralfeder für Zeitmessgerät

Title (fr)
Ressort spiral pour appareil à mesurer le temps

Publication
EP 1302821 A2 20030416 (FR)

Application
EP 02022693 A 20021010

Priority
• CH 19042001 A 20011010
• JP 2003070725 A 20030314
• US 38303503 A 20030306

Abstract (en)
The spring (10) consists of a spiral plate (11) with terminating curve (13) which is made in one piece with a central collar (12). The central collar has an axial slot (14) which allows it to be press fitted on to a shaft and the terminating curve may be furnished with a fastening eye. The spring is fabricated by techniques such as galvanic micromoulding, metal projection and cutting by liquid under pressure.

Abstract (fr)
Ressort spiral pour instrument d'horlogerie réalisé d'une seule pièce sans discontinuité moléculaire avec sa virole.

IPC 1-7
G04B 17/06

IPC 8 full level
G04B 17/34 (2006.01); **G04B 17/06** (2006.01)

CPC (source: EP US)
G04B 17/063 (2013.01 - EP US)

Cited by
EP2003523A1; EP3623876A1; WO2011116486A1; EP1519250A1; EP1596259A1; EP1637940A3; EP1868045A1; EP1431844A1; EP1513029A1; EP1584994A1; US7503688B2; US7213966B2; WO2004063822A1; US7641381B2; US7726872B2; EP1886194A2; US9250610B2

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

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EP 1302821 A2 20030416; EP 1302821 A3 20100505; JP 2004279203 A 20041007; US 2004174775 A1 20040909; US 7018092 B2 20060328

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