

Title (en)  
Shockproof collet

Title (de)  
Stossfeste Spiralrolle

Title (fr)  
Virole anti-choc

Publication  
**EP 1818736 A1 20070815 (FR)**

Application  
**EP 06002642 A 20060209**

Priority  
EP 06002642 A 20060209

Abstract (en)  
The collet has a plate (1) comprising an opening (3) for the fixation on an axle (5) of a balance of a balance-hairspring adjusting system in a mechanical clock movement, where the collet is formed of glass, quartz or silicon. A securing unit secures a hairspring (7) at a determined junction point of the collet. The collet has an asymmetric contour (9), which follows, from a place to place at a constant distance, the contour of a turn (11) of the curve at the interior. Recesses (13) reposition the center of gravity of the collet or collet-hairspring assembly on the balance axle.

Abstract (fr)  
La virole, qui peut être réalisée en une seule pièce en même temps que le spiral, est formée par une plaque (1) qui comporte une ouverture (3) pour la fixation sur un axe (5) de balancier et a un contour (9) asymétrique qui suit à une distance d sensiblement constante le contour de la première spire (11) de la courbe à l'intérieur. La plaque peut en outre comporter des évidements (13) permettant de repositionner le centre de gravité g sur l'axe de balancier (5).

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

CPC (source: EP KR US)  
**G04B 17/06** (2013.01 - EP KR US); **G04B 17/345** (2013.01 - EP KR US)

Citation (applicant)  
EP 1445670 A1 20040811 - ETA SA MFT HORLOGERE SUISSE [CH]

Citation (search report)  
• [XY] GB 1080068 A 19670823 - VIROLA SA  
• [X] FR 1271100 A 19610908 - ETABLISSEMENTS PARRENIN SOC D  
• [XY] CH 1249166 D  
• [X] FR 1546209 A 19681115 - HOLDING FAVRE LEUBA S A  
• [Y] EP 1445670 A1 20040811 - ETA SA MFT HORLOGERE SUISSE [CH]  
• [Y] EP 1431844 A1 20040623 - SFT SERVICES SA [CH]  
• [Y] EP 1422436 A1 20040526 - CSEMCT SUISSE D ELECTRONIQUE E [CH]

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WO2014016094A1; EP2607971A1; EP4224257A1; EP2690507A1; RU2618739C2; EP2184652A1; EP2184653A1; EP2607974A1; US9880522B2; WO2013092924A1; WO2013045706A3; WO2013092920A3; US9411314B2; US8322914B2; US9164484B2; US7950847B2; US8215828B2; US9755612B2; EP2018601B1

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Designated extension state (EPC)  
AL BA HR MK YU

DOCDB simple family (publication)  
**EP 1818736 A1 20070815**; AT E445177 T1 20091015; CN 101379445 A 20090304; CN 101379445 B 20100929; DE 602007002695 D1 20091119; EP 1984794 A1 20081029; EP 1984794 B1 20091007; HK 1129468 A1 20091127; JP 2009526215 A 20090716; JP 5243272 B2 20130724; KR 20080092921 A 20081016; TW 200801868 A 20080101; TW I374344 B 20121011; US 2010061192 A1 20100311; US 8047705 B2 20111101; WO 2007090806 A1 20070816

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**EP 06002642 A 20060209**; AT 07704349 T 20070205; CN 200780004833 A 20070205; DE 602007002695 T 20070205; EP 07704349 A 20070205; EP 2007051065 W 20070205; HK 09107343 A 20090810; JP 2008553738 A 20070205; KR 20087017306 A 20080716; TW 96103411 A 20070130; US 27902107 A 20070205