

Title (en)  
Holorological hairspring

Title (de)  
Spiralfeder einer Uhr

Title (fr)  
Spiral d'horlogerie

Publication  
**EP 2690507 B1 20141231 (FR)**

Application  
**EP 12178020 A 20120726**

Priority  
EP 12178020 A 20120726

Abstract (en)  
[origin: EP2690507A1] The assembly (1) has a stud (3) that is fixed to a plate (2), and a hairspring (4) that is wound in turns between an interior end (7) that is fixed to a shroud (9). An exterior end (8) is arranged interdependent of the stud. The stud and the shroud comprise a braking unit (10) to collaborate with a turn (61) when the hairspring accelerates through contraction or extension at a rate higher than a set point rate. A resultant stiffness of the hairspring is altered upon local coupling of the turn with the braking unit. An independent claim is also included for a clock element.

IPC 8 full level  
**G04B 17/06** (2006.01); **G04B 17/26** (2006.01); **G04B 17/34** (2006.01)

CPC (source: EP KR RU US)  
**G04B 15/14** (2013.01 - KR US); **G04B 17/06** (2013.01 - EP KR US); **G04B 17/26** (2013.01 - EP KR US); **G04B 17/325** (2013.01 - KR US); **G04B 17/34** (2013.01 - US); **G04B 17/345** (2013.01 - EP KR US); **G04B 17/06** (2013.01 - RU)

Cited by  
EP2908185A1; CN104849993A; EP2908187A1; CN104850000A; US9201400B2; US9256206B2; US9354607B2; EP2908188A1; EP2908191A3; EP2908184A1; CN105659168A; JP2016536578A; RU2663089C1; WO2015121014A1; US10241473B2; US10324416B2

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**EP 2690507 A1 20140129; EP 2690507 B1 20141231**; CN 104487905 A 20150401; CN 104487905 B 20170915; HK 1208740 A1 20160311; JP 2015519581 A 20150709; JP 2016075696 A 20160512; JP 5938146 B2 20160622; JP 6085355 B2 20170222; KR 101545470 B1 20150825; KR 20150014536 A 20150206; RU 2015103386 A 20160820; RU 2618739 C2 20170511; US 2015153711 A1 20150604; US 9164484 B2 20151020; WO 2014016094 A1 20140130

DOCDB simple family (application)  
**EP 12178020 A 20120726**; CN 201380039611 A 20130704; EP 2013064108 W 20130704; HK 15109414 A 20150924; JP 2015237639 A 20151204; JP 2015516650 A 20130704; KR 20157001346 A 20130704; RU 2015103386 A 20130704; US 201314406772 A 20130704