

Title (en)  
Barrel spring of a timepiece

Title (de)  
Schließzylinderfeder für eine Uhr

Title (fr)  
Ressort de barillet de pièce d'horlogerie

Publication  
**EP 2447387 A1 20120502 (FR)**

Application  
**EP 11186578 A 20111025**

Priority  
• CH 17992010 A 20101028  
• CH 2632011 A 20110215

Abstract (en)  
The spring barrel for a timepiece, is claimed. The spring is made of a metal alloy including nitrogen in a proportion of 0.75-1 wt.%, and iron. A ratio of an interior diameter of eye and a thickness of plate is less than 12. An independent claim is included for a timepiece.

Abstract (fr)  
La présente invention concerne un ressort de barillet de pièce d'horlogerie caractérisé en ce qu'il est réalisé en un alliage métallique comportant de l'azote dans une proportion comprise entre 0.1% massique et la limite de sa solubilité dans l'alliage métallique, et du fer.

IPC 8 full level  
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CPC (source: EP)  
**C22C 38/001** (2013.01); **C22C 38/22** (2013.01); **C22C 38/38** (2013.01); **G04B 1/145** (2013.01)

Citation (search report)  
• [A] WO 2010055943 A1 20100520 - FOUNDATION THE RES INST FOR ELE [JP], et al & EP 2351864 A1 20110803 - FOUNDATION THE RES INST OF ELECTRIC AND MAGNETIC MATERIALS [JP], et al  
• [A] CH 551492 A 19740715 - STRAUMANN REINHARD INST DR ING  
• [A] JP 2004308827 A 20041104 - SII MICRO PARTS LTD  
• [A] EP 0945717 A1 19990929 - METTLER TOLEDO GMBH [CH]

Cited by  
DE102015002430A1; EP3176653A1; JP2016528377A; CN106811670A

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