

Title (en)
Composite balance

Title (de)
Unruh von Kompositmaterialien

Title (fr)
Balancier composite

Publication
EP 2485095 A1 20120808 (FR)

Application
EP 12164386 A 20090313

Priority
• EP 09721945 A 20090313
• EP 08153093 A 20080320
• EP 12164386 A 20090313

Abstract (en)
The balance (45) has a hub (39) connected to a fellow (37) by arms (40-43), where the balance is formed in a silicon-based material layer. The fellow includes an additional part approximately in shape of a notched ring (23) with higher density than that of the silicon-based material to increase inertia of the balance, where the additional part is formed from a metal material. The part is mounted in a recess formed in a main face of the fellow. The ring has a series of studs spaced at regular intervals to compensate for thermal expansion in the additional part.

Abstract (fr)
L'invention se rapporte à un balancier composite (45, 45') formé dans une couche (21) en un matériau à base de silicium et comportant un moyeu (39, 39') relié à une serge (37, 37') par au moins un bras (40, 41, 42, 43). Selon l'invention, la serge (37,37') comporte au moins une partie supplémentaire sensiblement en forme d'anneau crénelé (23, 23') de plus grande densité que ledit matériau à base de silicium permettant d'augmenter l'inertie dudit balancier. L'invention se rapporte également à un procédé 1 de fabrication d'un tel balancier. L'invention concerne le domaine des mouvements horlogers.

IPC 8 full level
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CPC (source: EP KR US)
G04B 17/063 (2013.01 - EP KR US); **G04D 3/0038** (2013.01 - EP KR US); **G04D 3/0069** (2013.01 - EP KR US)

Citation (applicant)
• EP 1655642 A2 20060510 - ETA SA MFT HORLOGERE SUISSE [CH]
• EP 1584994 A1 20051012 - NIVAROX SA [CH]

Citation (search report)
• [A] GB 2416408 A 20060125 - LEVINGSTON GIDEON R [FR]
• [A] GB 1083209 A 19670913 - TISSOT HORLOGERIE
• [A] FR 1301938 A 19620824 - LIP SA
• [A] EP 0732635 A1 19960918 - SUISSE ELECTRONIQUE MICROTECH [CH]

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