

Title (en)
Lightened and reinforced timepiece element

Title (de)
Leichter gemachte und verstärkte Uhrenkomponente

Title (fr)
Composant d'une pièce d'horlogerie allégé et renforcé

Publication
EP 2230570 A2 20100922 (FR)

Application
EP 10001836 A 20100223

Priority
CH 4272009 A 20090319

Abstract (en)
The component e.g. escape wheel (1a) and pallet (1c), has an open-work skeletal structure with recesses (2) distributed through the structure such that each recess is separated from an adjacent recess (2') by a rigidifier (3), where the component is made of steel, synthetic material such as ruby, or silicon having a coating in hard material such as diamond. Widths of the rigidifiers are identical, where a ratio between a thickness (E) of the skeletal structure and the width of each rigidifier is comprised between 0.2 to 1. Two arms are constituted by the skeletal structure. Independent claims are also included for the following: (1) a method for fabricating a component of a timepiece (2) a method for assembling a component of a timepiece.

Abstract (fr)
L'invention porte sur un composant d'une pièce d'horlogerie choisi parmi une roue d'échappement (1a), un balancier (1b), une ancre (1c), une roue d'un train de rouages, et une masse oscillante (1d). Le composant comporte une structure ajourée d'une épaisseur E. Cette structure, plus communément appelée structure squelettique, est pourvue de plusieurs évidements (2) repartis au travers de ladite structure de manière à ce que chaque évidement (2) soit séparé d'un évidement adjacent (2') par une paroi dite rigidificateur (3). La largeur de chaque rigidificateur (3) de la structure squelettique est sensiblement identique et le rapport entre l'épaisseur E de ladite structure et la largeur (l) de chaque rigidificateur est compris entre ¼ et 1.

IPC 8 full level
G04B 5/16 (2006.01); **G04B 13/02** (2006.01); **G04B 15/14** (2006.01); **G04B 17/06** (2006.01)

CPC (source: EP)
G04B 5/16 (2013.01); **G04B 13/021** (2013.01); **G04B 13/022** (2013.01); **G04B 15/14** (2013.01); **G04B 17/063** (2013.01)

Citation (applicant)
WO 2004029733 A2 20040408 - FORE EAGLE CO LTD [CN], et al

Cited by
WO2013104732A1; CH716153A1; CH707797A1; EP2466396A1; CN109983409A; CN108803297A; CH703577A3; EP4180879A1; CH706000A1; USD982468S; US8562206B2; WO2012080021A1; US9104179B2; US11467537B2; US11487245B2; US8500323B2; US9494921B2; US9256205B2; WO2018099616A3; WO2018095593A3; EP2363762B1; EP2363762A1

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