

Title (en)
PROTECTION OF A TIMEPIECE COMPONENT WITH MICRO-MACHINABLE MATERIAL

Title (de)
SCHUTZ EINER UHRKOMPONENTE AUS MIKRO-BEARBEITBAREM MATERIAL

Title (fr)
PROTECTION D'UN COMPOSANT D'HORLOGERIE EN MATERIAU MICRO-USINABLE

Publication
EP 3176650 A1 20170607 (FR)

Application
EP 15197589 A 20151202

Priority
EP 15197589 A 20151202

Abstract (en)
[origin: JP2017102108A] PROBLEM TO BE SOLVED: To correctly assemble a component which can be subjected to fine machine work to a prior machine component reliably. SOLUTION: A timepiece sub assembly 10 comprises a component 1 formed of material which can be subjected to fine machine work and includes an attachment area 2 having a peripheral contact surface 3, and a shell element 20 which can be deformed between a shrinkage state and an expansion state in at least one freedom degree, for holding the attachment area 2 in a housing 5. The shell element 20 has a complementary contact surface 30, the complementary contact surface 30 is arranged so as to apply clamp force to the peripheral contact surface 3 and firmly fix the attachment area 2 in an omnidirectional state, in the shrinkage state of the shell element. The shell element 20 has a first element 21 and a second element 22, both the elements can move to the other element each other, in the expansion state of the shell element 20, and respectively comprise complementary contact surfaces 30, 31 and 32. The shell element 20 comprises clamp means for holding the first element 21 and the second element 22 in an integrated and clamped state, in the shrinkage state of the shell element. SELECTED DRAWING: Figure 1

Abstract (fr)
Sous-ensemble (10) d'horlogerie comportant, d'une part un composant (1) en matériau micro-usinable lequel comporte un zone de fixation (2) comportant lui-même au moins une surface de contact (3) périphérique, et d'autre part une coque (20) déformable à géométrie variable entre une forme rétreinte et une forme expansée, cette coque (20) étant agencée pour maintenir cette zone de fixation (2) dans un logement (5) que comporte la coque (20) selon au moins un degré de liberté, et la coque (20) comporte au moins une surface complémentaire de contact (30) agencée pour, dans la forme rétreinte de ladite coque (20), exercer un appui de serrage sur la surface de contact (3) périphérique et immobiliser fermement le zone de fixation (2) dans la coque (20) dans toutes les directions.

IPC 8 full level
G04B 13/02 (2006.01); **G04B 17/06** (2006.01); **G04B 17/08** (2006.01); **G04B 17/10** (2006.01); **G04B 31/004** (2006.01); **G04B 31/06** (2006.01)

CPC (source: CN EP KR US)
G04B 13/02 (2013.01 - EP US); **G04B 15/14** (2013.01 - KR); **G04B 17/00** (2013.01 - KR); **G04B 17/06** (2013.01 - EP US); **G04B 17/10** (2013.01 - EP US); **G04B 17/32** (2013.01 - CN); **G04B 19/00** (2013.01 - KR); **G04B 29/04** (2013.01 - US); **G04B 31/004** (2013.01 - EP US); **G04B 31/06** (2013.01 - EP US); **G04B 43/00** (2013.01 - CN); **G04D 1/0092** (2013.01 - EP US)

Citation (search report)
• [XA] EP 2755093 A2 20140716 - MASTER DYNAMIC LTD [CN]
• [IA] EP 2743782 A1 20140618 - NIVAROX SA [CH]
• [A] WO 2011116486 A1 20110929 - ROLEX SA [CH], et al

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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3176650 A1 20170607; **EP 3176650 B1 20190206**; CN 106814585 A 20170609; CN 106814585 B 20190514; JP 2017102108 A 20170608; JP 6416847 B2 20181031; KR 101946120 B1 20190611; KR 20170064998 A 20170612; TW 201727405 A 20170801; TW I698725 B 20200711; US 10496038 B2 20191203; US 2017160701 A1 20170608

DOCDB simple family (application)
EP 15197589 A 20151202; CN 201611089169 A 20161201; JP 2016214887 A 20161102; KR 20160158018 A 20161125; TW 105131377 A 20160929; US 201615299033 A 20161020