

Title (en)

Assembly of a part not comprising a plastic range

Title (de)

Zusammenbau eines Teils, das keinen Plastikbereich enthält

Title (fr)

Assemblage d'une pièce ne comportant pas de domaine plastique

Publication

**EP 2469353 A1 20120627 (FR)**

Application

**EP 10196597 A 20101222**

Priority

EP 10196597 A 20101222

Abstract (en)

The assembly has a plasticless component including perforations (26) forming elastic deformation units distributed around a circular opening of the component. A metal or metal alloy based axially extending unit e.g. steel pivot pin (27), has a radially flared and elastically and plastically deformed part (24) that clamps a plasticless component's wall surrounding the opening, in a radial direction (B) by stressing the elastic deformation unit to join the component and the extending unit in a non-destructive manner. An independent claim is also included for a method for assembling a metal or metal alloy based unit in a silicon based component.

Abstract (fr)

L'invention se rapporte à un assemblage (2, 12, 22, 62) d'un organe (7, 17, 27, 67) s'étendant axialement en un premier matériau dans l'ouverture (8, 18, 28, 68) d'une pièce (1, 3, 61) en un deuxième matériau ne comportant pas de domaine plastique. Selon l'invention, la pièce (1, 3, 61) comporte des ajourages (6, 16, 26, 26', 26'', 26''', 46, 46', 66) formant des moyens de déformations élastiques distribués autour de son ouverture (8, 18, 28, 68). De plus, ledit organe (7, 17, 27, 67) comporte une partie (4, 14, 24, 64) déformée élastiquement et plastiquement qui serre radialement (B) la paroi de ladite pièce entourant l'ouverture (8, 18, 28, 68) en sollicitant lesdits moyens de déformation élastique pour solidariser l'assemblage (2, 12, 22, 62) de manière non destructive pour ladite pièce. L'invention concerne notamment le domaine des pièces d'horlogerie.

IPC 8 full level

**G04B 13/02** (2006.01); **B81C 3/00** (2006.01); **G04B 15/14** (2006.01); **G04B 17/32** (2006.01); **G04B 17/34** (2006.01); **G04D 1/00** (2006.01); **G04D 3/04** (2006.01)

CPC (source: EP US)

**G04B 1/145** (2013.01 - US); **G04B 13/02** (2013.01 - US); **G04B 13/021** (2013.01 - EP US); **G04B 13/022** (2013.01 - EP US); **G04B 15/14** (2013.01 - EP US); **G04B 17/32** (2013.01 - US); **G04B 17/325** (2013.01 - EP US); **G04B 17/345** (2013.01 - EP US); **G04D 1/0042** (2013.01 - EP US); **G04D 3/04** (2013.01 - EP US); **Y10T 29/49581** (2015.01 - EP US)

Citation (applicant)

WO 2009115463 A1 20090924 - NIVAROX SA [CH], et al

Citation (search report)

- [XAI] CH 700260 A2 20100730 - CARTIER CREATION STUDIO SA [CH]
- [A] EP 1850193 A1 20071031 - PATEK PHILIPPE SA [CH]

Cited by

EP3786721A1; CN112445116A

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 2469353 A1 20120627**; CN 103299245 A 20130911; CN 103299245 B 20160615; EP 2656150 A2 20131030; EP 2656150 B1 20170104; HK 1189281 A1 20140530; JP 2014501923 A 20140123; JP 5671155 B2 20150218; TW 201240763 A 20121016; TW I564107 B 20170101; US 2013286795 A1 20131031; US 9128463 B2 20150908; WO 2012084384 A2 20120628; WO 2012084384 A3 20120816

DOCDB simple family (application)

**EP 10196597 A 20101222**; CN 201180062121 A 20111122; EP 11787857 A 20111122; EP 2011070693 W 20111122; HK 14102273 A 20140306; JP 2013545143 A 20111122; TW 100143940 A 20111130; US 201113995052 A 20111122