

Title (en)
HAIRSPRING FOR CLOCK MOVEMENT

Title (de)
SPIRALFEDER FÜR UHRWERK

Title (fr)
RESSORT SPIRAL POUR MOUVEMENT D'HORLOGERIE

Publication
EP 3796101 A1 20210324 (FR)

Application
EP 19198759 A 20190920

Priority
EP 19198759 A 20190920

Abstract (en)
[origin: CN112538587A] Disclosed is hairspring for clock movement. A balance spring (1) intended to equip a balance of a horological movement, wherein the balance spring (1) is made of a niobium and titanium alloy containing: niobium: the remainder to 100 wt %; titanium with a weight percentage that is greater than or equal to 1 wt % and less than 40 wt %; traces of other elements chosen from among O, H, C, Fe, Ta, N, Ni, Si, Cu and Al, each of said elements being in the range 0 to 1,600 ppm of the total weight, and the sum of said trace elements being less than or equal to 0.3 wt %.

IPC 8 full level
G04B 17/06 (2006.01)

CPC (source: CN EP US)
C22C 27/02 (2013.01 - CN); **C22F 1/002** (2013.01 - CN); **C22F 1/02** (2013.01 - CN); **C22F 1/18** (2013.01 - CN); **G04B 17/06** (2013.01 - CN); **G04B 17/063** (2013.01 - US); **G04B 17/066** (2013.01 - EP US)

Citation (search report)

- [XAI] US 2007133355 A1 20070614 - HARA TATSUO [JP], et al
- [A] CN 107710081 A 20180216 - ETA SA MFT HORLOGERE SUISSE

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 3796101 A1 20210324; CN 112538587 A 20210323; CN 112538587 B 20220816; CN 114990402 A 20220902; JP 2021051065 A 20210401; JP 7148577 B2 20221005; US 2021088971 A1 20210325

DOCDB simple family (application)
EP 19198759 A 20190920; CN 202010985588 A 20200918; CN 202210710467 A 20200918; JP 2020136578 A 20200813; US 202016936682 A 20200723