Title (en)

VARIABLE GEOMETRY TIMEPIECE DISPLAY MECHANISM WITH ELASTIC NEEDLE

Title (de)

UHR-ANZEIGEMECHANISMUS MIT VARIABLER GEOMETRIE UND ELASTISCHEM ZEIGER

Title (fr)

MECANISME D'AFFICHAGE D'HORLOGERIE A GEOMETRIE VARIABLE AVEC AIGUILLE ELASTIQUE

Publication

EP 3605243 A1 20200205 (FR)

Application

EP 18186552 A 20180731

Priority

EP 18186552 A 20180731

Abstract (en)

[origin: WO2020025423A1] Disclosed is a variable timepiece display mechanism (10) comprising an elastic hand (1) with a drive barrel (2) secured to a single-piece flexible blade (3) comprising flexible segments (5; 5A; 5B) adjoining at apexes (6), a first (5A) of said segments extending between the first barrel (2) and a first apex (6), the mechanism (10) further comprising drive means (11) for pivoting the barrel (2), and means (12) for stressing the first flexible segment (5) in order to vary the position of the first apex (6) relative to the output pin (D) according to the forces applied to the flexible blade (3), said drive means (11) and/or said stressing means (12) comprising a first gear train (111) having a particular shape and/or a second gear train (131) having a particular shape for accelerating, stabilizing the speed of, or decelerating at least the barrel (2) over part of its angular travel.

Abstract (fr)

Mécanisme d'affichage (10) variable d'horlogerie, comportant une aiguille élastique (1) avec un canon d'entraînement (2) solidaire d'une lame flexible (3) monobloc comportant des segments flexibles (5 ; 5A ; 5B) jointifs au niveau de sommets (6), dont un premier (5A) s'étend entre le premier canon (2) et un premier sommet (6), le mécanisme (10) comporte des moyens d'entraînement (11) en pivotement du canon (2), et des moyens (12) de mise sous contrainte du premier segment flexible (5) pour faire varier la position du premier sommet (6) par rapport à l'axe de sortie (D), en fonction des efforts appliqués à la lame flexible (3), ces moyens d'entraînement (11) et/ou ces moyens (12) de mise sous contrainte comportent un premier rouage de forme (111) et/ou un deuxième rouage de forme (131), pour accélérer ou stabiliser en vitesse ou ralentir au moins le canon (2) sur une partie de sa course angulaire.

IPC 8 full level

G04B 13/00 (2006.01); **G04B 19/04** (2006.01); **G04B 45/00** (2006.01)

CPC (source: CN EP US)

G04B 9/005 (2013.01 - EP US); **G04B 13/001** (2013.01 - EP US); **G04B 13/007** (2013.01 - US); **G04B 13/008** (2013.01 - EP US); **G04B 13/021** (2013.01 - US); **G04B 19/02** (2013.01 - US); **G04B 19/04** (2013.01 - CN); **G04B 19/042** (2013.01 - CN US); **G04B 19/048** (2013.01 - EP US); **G04B 19/082** (2013.01 - EP US); **G04B 45/0061** (2013.01 - EP US); G04B 13/02 (2013.01 - US)

Citation (applicant)

- EP 2863274 A1 20150422 - OMEGA SA [CH]
- EP 3159751 A1 20170426 - OMEGA SA [CH]

Citation (search report)

- [XDAI] EP 2863274 A1 20150422 - OMEGA SA [CH]
- [A] EP 1710637 A2 20061011 - CRABBE J-PAUL [FR]
- [A] EP 0211285 A2 19870225 - PFORZHEIMER UHREN ROHWERKE [DE]
- [A] CN 201576169 U 20100908 - KAIDI YU

Cited by

EP4276544A1; CN113741163A; CN113741164A; WO2024052467A1; EP3764168A1; EP3764170A1; EP3605244A1

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 3605244 A1 20200205; **EP 3605244 B1 20210421**; CN 111684363 A 20200918; CN 111684363 B 20220121; CN 111902778 A 20201106; CN 111902778 B 20220225; CN 111902779 A 20201106; CN 111902779 B 20220225; CN 112213934 A 20210112; CN 112213934 B 20211119; CN 113741163 A 20211203; CN 113741163 B 20230113; CN 113741164 A 20211203; CN 113741164 B 20230110; EP 3605243 A1 20200205; EP 3764168 A1 20210113; EP 3764168 B1 20220216; EP 3764170 A1 20210113; EP 3764170 B1 20220316; EP 3765919 A1 20210120; EP 3765919 B1 20240228; EP 3765920 A1 20210120; EP 3765920 B1 20211229; EP 3830649 A1 20210609; EP 3830649 B1 20240320; JP 2021015110 A 20210212; JP 2021189163 A 20211213; JP 2021189165 A 20211213; JP 2021515224 A 20210617; JP 2021515226 A 20210617; JP 2021515889 A 20210624; JP 6933743 B2 20210908; JP 6977179 B2 20211208; JP 7050167 B2 20220407; JP 7050168 B2 20220407; JP 7181330 B2 20221130; JP 7212087 B2 20230124; US 11537080 B2 20221227; US 11774909 B2 20231003; US 11841684 B2 20231212; US 11841685 B2 20231212; US 11860577 B2 20240102; US 11886147 B2 20240130; US 2021011433 A1 20210114; US 2021026305 A1 20210128; US 2021048782 A1 20210218; US 2021223740 A1 20210722; US 2021373496 A1 20211202; US 2021373497 A1 20211202; WO 2020025423 A1 20200206; WO 2020025424 A1 20200206; WO 2020025428 A1 20200206

DOCDB simple family (application)

EP 19185917 A 20190712; CN 201980011737 A 20190724; CN 201980021418 A 20190724; CN 201980021634 A 20190724; CN 202010233315 A 20200327; CN 202110583420 A 20210527; CN 202110583787 A 20210527; EP 18186552 A 20180731; EP 19742224 A 20190724; EP 19742225 A 20190724; EP 19744698 A 20190724; EP 20176720 A 20200527; EP 20176726 A 20200527; EP 2019069946 W 20190724; EP 2019069949 W 20190724; EP 2019069968 W 20190724; JP 2020046222 A 20200317; JP 2020545556 A 20190724; JP 2020545689 A 20190724; JP 2020545702 A 20190724; JP 2021025950 A 20210222;

JP 2021047033 A 20210322; US 201916965766 A 20190724; US 201916979685 A 20190724; US 201917051617 A 20190724; US 202016820791 A 20200317; US 202117168504 A 20210205; US 202117186146 A 20210226