

Title (en)
CRANK ARRANGEMENT FOR DRIVING A MECHANICAL OSCILLATOR

Title (de)
KURBELANORDNUNG ZUM ANTREIBEN EINES MECHANISCHEN OSZILLATORS

Title (fr)
AGENCEMENT À MANIVELLE DESTINÉ À ENTRAÎNER UN OSCILLATEUR MÉCANIQUE

Publication
EP 3739394 A1 20201118 (EN)

Application
EP 19174824 A 20190516

Priority
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Abstract (en)
Crank arrangement (1) for driving a pin-driven two degrees of freedom mechanical oscillator (5), comprising:- a crank element (7) arranged to be rotationally driven about an axis of rotation (19) by means of a mechanical source of energy (M),- a crank slot (8) provided in said crank element, said crank slot being adapted to receive a driving pin (3) arranged to cause an inertial mass (5a) of said oscillator (5) to oscillate in response to rotation of said crank element (7), wherein said crank slot (8) comprises a driving section at least partially delimited by a drive surface (8a) and by a guiding surface (8c) situated opposite at least part of said driving surface (8a), said drive surface (8a) being arranged to drive said pin (3) in response to rotation of said crank element (7); characterised in that said crank slot (8) further comprises a return section adjoining said driving section, said return section being delimited by:- a braking surface (8d) adjoining said driving surface (8a) so as to form an obtuse interior angle (180°-α) therewith,- a return surface (8e) arranged opposite said braking surface (8d) at an acute angle (β) with respect thereto, wherein said crank slot (8) is configured such that said axis of rotation (19) is situated in said return section at a distance of less than one radius ($R < r$) of said drive pin (3) from said braking surface (8d).

IPC 8 full level
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CPC (source: EP)
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Citation (applicant)
• US 1222757 A 19170417 - GUNDORPH FERDINAND [US]
• FR 359117 A 19060316 - THOMAS HALLER A. G. [DE]
• US 1595169 A 19260810 - HEINRICH SCHIEFERSTEIN GEORG
• FR 1044957 A 19531123
• US 9465363 B2 20161011 - WINKLER PASCAL [CH], et al
• WO 2015104692 A2 20150716 - ECOLE POLYTECH [CH]
• WO 2015104693 A2 20150716 - ECOLE POLYTECH [CH]
• EP 3339969 A1 20180627 - ECOLE POLYTECHNIQUE FED LAUSANNE EPFL [CH]

Citation (search report)
• [A] WO 2016037726 A1 20160317 - SWATCH GROUP RES & DEV LTD [CH]
• [A] CH 713056 A2 20180430 - ETA SA MFT HORLOGERE SUISSE [CH]

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