

Title (en)
MECHANICAL LOCKING PIN ASSEMBLY

Title (de)
MECHANISCHE VERRIEGELUNGSSTIFTANORDNUNG

Title (fr)
ENSEMBLE GOUPILLE DE VERROUILLAGE MÉCANIQUE

Publication
EP 4332356 A1 20240306 (EN)

Application
EP 22193563 A 20220901

Priority
EP 22193563 A 20220901

Abstract (en)
There is provided a mechanical locking pin assembly comprising a hollow cylindrical locking pin retractable into the through bore and having an extended position protruding from the member, a spring seat for mounting within the through bore to grip the inner wall of the through bore, and a spring disposed within the locking pin and acting on the spring seat to urge the locking pin away from the spring seat toward the extended position. The spring seat comprises an end plate and plurality of protrusions extending axially from the perimeter of the end plate toward the locking pin. Complimentary axially extending slots are formed in the cylindrical side wall of the locking pin for receiving the protrusions of the spring seat in both the extended and retracted positions of the locking pin. When used in a cam phaser, this proposal enables a phaser of a shorter overall length.

IPC 8 full level
F01L 1/047 (2006.01); **F01L 1/34** (2006.01); **F01L 1/344** (2006.01)

CPC (source: EP)
F01L 1/047 (2013.01); **F01L 1/34** (2013.01); **F01L 1/34413** (2013.01); **F01L 1/3442** (2013.01); **F01L 2001/0471** (2013.01); **F01L 2001/0475** (2013.01); **F01L 2001/34456** (2013.01); **F01L 2001/34473** (2013.01); **F01L 2001/34489** (2013.01); **F01L 2001/34493** (2013.01); **F01L 2301/00** (2020.05)

Citation (search report)
• [IA] US 2018135474 A1 20180517 - ASAHI TAKEO [JP], et al
• [Y] US 9587526 B2 20170307 - LICHTI THOMAS H [US]
• [Y] US 2017198612 A1 20170713 - NOGUCHI YUJI [JP], et al
• [A] US 7270096 B2 20070918 - LANCEFIELD TIMOTHY MARK [GB], et al
• [A] EP 2492459 B1 20141210 - SHW AUTOMOTIVE GMBH [DE]

Designated contracting state (EPC)
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