Title (en)

ENCASED ASYMMETRIC COIL INNERSPRINGS WITH ALTERNATING COIL SPRING ORIENTATIONS

Title (de)

ASYMMETRISCHE UMHÜLLTE SPULENINNENFEDERN MIT ALTERNIERENDEN SCHRAUBENFEDERAUSRICHTUNGEN

Title (fr)

RESSORTS HÉLICOÏDAUX INTERNES ASYMÉTRIQUES ENCASTRÉS PRÉSENTANT DES ORIENTATIONS DE RESSORTS HÉLICOÏDAUX ALTERNÉES

Publication

EP 2967222 A4 20160921 (EN)

Application

EP 14768907 A 20140314

Priority

- US 201361784085 P 20130314
- US 2014028311 W 20140314

Abstract (en)

[origin: WO2014152935A1] Encased coil innersprings with alternating spring coil orientations utilize a common coil configuration and a uniform encasement or pocket configuration, and wherein the coils have an asymmetrical configuration and the vertical end-up orientation of the coils that is alternated or otherwise varied. Selected coils in different areas or patterns in the array of pocketed coils that form the spring core are inverted, relative to a support surface of the spring core, within the individual pockets. The inverted coils have spring characteristics including spring rate, stiffness and initial deflection force which are different from the spring characteristics of the non-inverted coils due to the asymmetry of the coils along a longitudinal axis.

IPC 8 full level

A47C 27/06 (2006.01); **A47C 27/05** (2006.01)

CPC (source: EP US)

A47C 27/05 (2013.01 - US); **A47C 27/064** (2013.01 - EP US)

Citation (search report)

- [X] EP 2105069 A1 20090930 - L&P SWISS HOLDING CO [CH]
- [X] JP H11128027 A 19990518 - DREAM SOGO KENKYUSHO KK
- See references of WO 2014152935A1

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

DOCDB simple family (publication)

WO 2014152935 A1 20140925; AU 2014236431 A1 20151008; AU 2014236431 B2 20180607; CA 2906122 A1 20140925; CN 105377082 A 20160302; DK 2967222 T3 20180305; EP 2967222 A1 20160120; EP 2967222 A4 20160921; EP 2967222 B1 20171206; ES 2660293 T3 20180321; JP 2016512156 A 20160425; MX 2015012909 A 20151203; MX 362901 B 20190225; PL 2967222 T3 20180530; US 2016029809 A1 20160204

DOCDB simple family (application)

US 2014028311 W 20140314; AU 2014236431 A 20140314; CA 2906122 A 20140314; CN 201480015541 A 20140314; DK 14768907 T 20140314; EP 14768907 A 20140314; ES 14768907 T 20140314; JP 2016502757 A 20140314; MX 2015012909 A 20140314; PL 14768907 T 20140314; US 201414775849 A 20140314