Title (en)

Spindle drive for a mobile element of a motor vehicle

Title (de)

Spindelantrieb für ein Verstellelement eines Kraftfahrzeugs

Title (fr)

Entraînement par vis sans fin pour un élément mobile d'un véhicule automobile

Publication

EP 2226453 B1 20200805 (DE)

Application

EP 10001968 A 20100226

Priority

DE 202009006216 U 20090303

Abstract (en)

[origin: EP2226453A2] The drive has a driving motor (2), and a spindle-spindle nut transmission (3) provided downstream to the driving motor for production of linear drive movements and comprising two connections (4, 5) for recovery of drive movements. An integral helical compression spring aligned to a spindle longitudinal axis is provided for pre-stressing the drive in a withdrawn position. The helical compression spring has spring coils of different diameters for adjustment of the helical compression spring at geometrical conditions.

IPC 8 full level

E05F 1/10 (2006.01); **E05F 15/622** (2015.01)

CPC (source: EP)

E05F 1/1058 (2013.01); **E05F 15/622** (2015.01); E05Y 2201/474 (2013.01); E05Y 2201/702 (2013.01); E05Y 2800/422 (2013.01); E05Y 2900/546 (2013.01)

Citation (opposition)

Opponent : Edscha Engineering GmbH

- US 4318535 A 19820309 - IMAI KIYONORI
- DE 102004040170 A1 20060302 - SIEMENS AG [DE]
- EP 1840310 A1 20071003 - VALEO SICHERHEITSSYSTEME GMBH [DE]
- DE 202006015153 U1 20080228 - KIEKERT AG [DE]
- DE 202005003466 U1 20060713 - BROSE SCHLIESSSYSTEME GMBH [DE]
- DE 202005008222 U1 20060126 - INNOTEC FORSCHUNGS & ENTW GMBH [DE]
- US 4423535 A 19840103 - OJIMA JUJI [JP], et al
- DE 102005009213 A1 20060907 - THYSSENKRUPP BILSTEIN SUSPENSI [DE]

Cited by

DE102014117454A1; CN107630622A; DE202013004785U1; WO2015055484A1; DE102015106356A1; WO2016083194A1; US10871019B2; DE202018103482U1; DE102014117454B4

Designated contracting state (EPC)

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 SE SI SK SM TR

DOCDB simple family (publication)

DE 202009006216 U1 20100722; EP 2226453 A2 20100908; EP 2226453 A3 20140402; EP 2226453 B1 20200805; HU E050760 T2 20210128

DOCDB simple family (application)

DE 202009006216 U 20090303; EP 10001968 A 20100226; HU E10001968 A 20100226