

Title (en)

TRANSMISSION STRUCTURE OF SMART LOCK CYLINDER AND SMART LOCK

Title (de)

ÜBERTRAGUNGSSTRUKTUR FÜR EINEN INTELLIGENTEN SCHLIESSZYLINDER UND INTELLIGENTES SCHLOSS

Title (fr)

STRUCTURE DE TRANSMISSION D'UN CYLINDRE DE SERRURE INTELLIGENTE ET SERRURE INTELLIGENTE

Publication

**EP 4180596 B1 20231122 (EN)**

Application

**EP 22193752 A 20220902**

Priority

CN 202122749579 U 20211110

Abstract (en)

[origin: EP4180596A1] The present disclosure relates to a transmission structure of a smart lock cylinder and a smart lock, including a lock shell assembly, a cylinder cam and a first transmission shaft. A first transmission member connected with the first transmission shaft and a first electric clutch device driving the first transmission member to connect or separate with the cylinder cam are arranged in the first transmission shaft. The first electric clutch device includes a drive motor, a worm fixedly connected with the output shaft of the drive motor, a nut sleeved on the worm and connected with the worm thread, and a double-layer spring. The worm, the nut and the double-layer spring are used to convert the kinetic energy of the motor into elastic potential energy to promote the connection or separation of the first transmission member and the cylinder cam.

IPC 8 full level

**E05B 47/06** (2006.01); **E05B 15/04** (2006.01); **E05B 47/00** (2006.01)

CPC (source: EP)

**E05B 47/0615** (2013.01); **E05B 47/0642** (2013.01); **E05B 2015/0448** (2013.01); **E05B 2047/0023** (2013.01); **E05B 2047/0031** (2013.01)

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)

**EP 4180596 A1 20230517; EP 4180596 B1 20231122; EP 4180596 C0 20231122;** CN 216617200 U 20220527

DOCDB simple family (application)

**EP 22193752 A 20220902;** CN 202122749579 U 20211110