

Title (en)
DOOR CLOSER

Title (de)
TÜRSCHLIESSER

Title (fr)
FERME-PORTE AUTOMATIQUE

Publication
EP 1064446 A1 20010103 (DE)

Application
EP 00901073 A 20000107

Priority
• DE 19901035 A 19990114
• EP 0000078 W 20000107

Abstract (en)
[origin: WO0042283A1] The invention relates to a door closer (10), comprising a spring arrangement (14) which is tensed for opening the door and which provides the necessary closing moment for the door to close; and a gear mechanism (20 to 28) between the spring arrangement (14) and the door for influencing the force characteristic which changes through the opening angle of the door. The gear mechanism (20 to 28), which changes in its transmission ratio through the opening angle of the door has a first and a second toothed wheel (24, 28) which engage with each other and which are each formed by a circular gear ring. Said toothed wheels are mounted eccentrically in relation to their central points (42, 44), their axial distance being maintained. The first toothed wheel (28) is connected to an output shaft (30) and the second toothed wheel (24) is connected to a toothed wheel (22), coaxially in relation to its centre of rotation (38). Said toothed wheel (22) engages with a toothed rack (20) which is coupled with the spring arrangement (14). The axis of rotation (32) of the output shaft (30) extends through the centre of rotation (40) of the first toothed wheel (28). The entire device is arranged in such a way that the eccentricities of the toothed wheels (24, 28) resulting from their respective centre points (42, 44) and centres of rotation (38, 40) are point-symmetrical to their pitch point (46).

IPC 1-7
E05F 3/10

IPC 8 full level
E05F 3/10 (2006.01); **E05F 3/00** (2006.01)

CPC (source: EP US)
E05F 3/102 (2013.01 - EP US); **E05F 3/00** (2013.01 - EP US); **E05F 2003/228** (2013.01 - EP US); **E05Y 2900/132** (2013.01 - EP US)

Cited by
US9995076B1

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
WO 0042283 A1 20000720; AT E264982 T1 20040515; AU 2106400 A 20000801; BR 0004135 A 20001121; CA 2321871 A1 20000720; CN 1143048 C 20040324; CN 1293733 A 20010502; DE 19901035 C1 20000817; DE 19964297 A1 20021031; DE 19964297 B4 20060511; DE 50006121 D1 20040527; EP 1064446 A1 20010103; EP 1064446 B1 20040421; ES 2220387 T3 20041216; HU 224233 B1 20050628; HU P0100767 A2 20010628; HU P0100767 A3 20011029; PL 196250 B1 20071231; PL 342839 A1 20010716; US 6510586 B1 20030128

DOCDB simple family (application)
EP 0000078 W 20000107; AT 00901073 T 20000107; AU 2106400 A 20000107; BR 0004135 A 20000107; CA 2321871 A 20000107; CN 00800003 A 20000107; DE 19901035 A 19990114; DE 19964297 A 19990114; DE 50006121 T 20000107; EP 00901073 A 20000107; ES 00901073 T 20000107; HU P0100767 A 20000107; PL 34283900 A 20000107; US 66141200 A 20000913