

Title (en)
PLUG DOOR DEVICE

Title (de)
DREHSCHWENKTÜR

Title (fr)
DISPOSITIF DE PORTE ENCASTRÉE

Publication
EP 4001573 A1 20220525 (EN)

Application
EP 21201674 A 20211008

Priority
JP 2020189717 A 20201113

Abstract (en)
A plug door device (1) related to an embodiment includes: a guide rail (5) defining an opening-closing path (20) of a door (2) for opening or closing an entrance (15) of a vehicle; a drive source (6) for moving the door (2); a rotating member (36) moving along with the door (2) with a driving force from the drive source (6), the rotating member (36) being guided by the guide rail (5) to roll along the opening-closing path (20) when the door (2) is opened or closed; a restraining member (7) moving from an unrestraining position where the door (2) is unrestrained to a restraining position where the rotating member (36) is restrained in a position where the door (2) is fully closed, the restraining member (7) being pushed by the rotating member (36) to move from the unrestraining position to the restraining position when the rotating member (36) moves along the opening-closing path (20) in a closing direction (Vc); and a locking mechanism (8) for retaining the restraining member in the restraining position.

IPC 8 full level
E05F 15/643 (2015.01); **E05F 15/638** (2015.01); **E05F 15/646** (2015.01)

CPC (source: CN EP)
B61D 19/005 (2013.01 - CN); **E05B 83/363** (2013.01 - CN); **E05B 83/40** (2013.01 - CN); **E05F 15/638** (2015.01 - EP); **E05F 15/643** (2015.01 - CN); **E05F 15/646** (2015.01 - EP); **E05F 15/655** (2015.01 - CN); **E05Y 2201/218** (2013.01 - EP); **E05Y 2201/22** (2013.01 - EP); **E05Y 2900/51** (2013.01 - CN EP); **E05Y 2900/531** (2013.01 - CN)

Citation (applicant)
JP 2020100397 A 20200702 - FUJI ELECTRIC CO LTD

Citation (search report)
• [XAI] DE 19735181 A1 19990225 - WEBASTO TUERSYSTEME GMBH [DE]
• [XI] US 2014020299 A1 20140123 - TAKAHASHI KAZUTAMA [JP], et al
• [X] DE 10343359 A1 20050414 - FAHRZEUGTECHNIK DESSAU AG RAIL [DE]

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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 4001573 A1 20220525; CN 114482726 A 20220513; CN 114482726 B 20230609; JP 2022078791 A 20220525

DOCDB simple family (application)
EP 21201674 A 20211008; CN 202111180215 A 20211011; JP 2020189717 A 20201113