

Title (en)

DRIVE UNIT FOR A DOOR SLIDING HORIZONTALLY ALONG A GUIDE RAIL BY MEANS OF ROLLERS

Publication

EP 0374271 B1 19921104 (DE)

Application

EP 88121120 A 19881216

Priority

EP 88121120 A 19881216

Abstract (en)

[origin: EP0374271A1] The invention relates to drive units for the motive operation of horizontally displaceable doors, so-called all-round doors. According to the invention, it is proposed to fasten to the door (3), displaced along a guide rail (7), a drive unit (2) in which in addition to the motor transmission unit (1) there are, among other things the limit switches (8) for cutting off the door (3) in the end positions. The output shaft (50) of the motor transmission unit (2) projects outwards through the base plate (5) of the housing (4) and there carries a pinion (70) which engages into a toothing (77) along the guide rail (7) and which thereby moves the door during the rotation of the output shaft (50). A metal bush (18) is attached on the output shaft (50), for example by means of a conical multi-toothed profile (13). In contrast, the pinion (70) itself can consist, for example, of plastic and is in turn connected fixedly in terms of rotation to the metal bush (18). To compensate the lower strength of the plastic of the pinion (70) in relation to the metal of the toothing, in the toothing form selected there are extremely narrow tooth necks of the metal toothing and wide tooth cross-sections on the pinion (70). Furthermore, a bush (12), for example likewise made of plastic, is pushed onto the metal bush (18) in such a way that it projects back just into the housing (4) axially relative to the output shaft (50) and at this end carries a bevel gear (13). A bevel pinion (14) engages into this and is connected fixedly in terms of rotation to the end of a threaded rod (9), on which nuts (10) are screwed. However, because of an angle piece (16) fastened in parallel, these cannot rotate with the threaded rod (9), but during the rotation of the output shaft (50) are displaced axially on the then likewise rotating threaded rod (9). Thus, these nuts (10) of variable basic position serve as actuating elements for limit switches (8) fastened parallel and next to the threaded rod (9) for cutting off the door (3). <IMAGE>

IPC 1-7

E05F 15/14

IPC 8 full level

E05F 15/14 (2006.01)

CPC (source: EP)

E05F 15/638 (2015.01); **E05Y 2201/434** (2013.01); **E05Y 2201/722** (2013.01); **E05Y 2400/614** (2013.01); **E05Y 2400/656** (2013.01); **E05Y 2400/66** (2013.01); **E05Y 2600/46** (2013.01); **E05Y 2800/26** (2013.01)

Cited by

DE19739820A1; US6073394A; US11486195B2; WO2021146314A1; US11643849B2; US11725422B2

Designated contracting state (EPC)

AT CH DE LI

DOCDB simple family (publication)

EP 0374271 A1 19900627; **EP 0374271 B1 19921104**; AT E82034 T1 19921115; DE 3875738 D1 19921210

DOCDB simple family (application)

EP 88121120 A 19881216; AT 88121120 T 19881216; DE 3875738 T 19881216