

Title (en)  
DOOR CLOSER

Publication  
**EP 0409445 B1 19930512 (EN)**

Application  
**EP 90307271 A 19900703**

Priority  
JP 18958989 A 19890721

Abstract (en)  
[origin: EP0409445A1] A door closer has a main shaft (2) connected to a door, a piston (11) reciprocally moved in a case (1) in response to the movement of the door, a first and a second pressure chamber (A, B) operated by the piston (11), and four hydraulic oil passages (P1, P2 --- P4) for communicating and stopping communicating the two pressure chambers (A, B) with each other. A door stop releasing angle adjusting mechanism (15) for adjusting an angle at which the door is kept open is provided between the piston (11) and the end postion (14) of the case (1).

IPC 1-7  
**E05F 3/10**; **E05F 3/12**; **E05F 3/22**

IPC 8 full level  
**E05F 3/10** (2006.01); **E05F 3/12** (2006.01); **E05F 3/20** (2006.01); **E05F 3/22** (2006.01)

CPC (source: EP)  
**E05F 3/104** (2013.01); **E05F 3/12** (2013.01); **E05F 3/223** (2013.01); **E05Y 2900/132** (2013.01)

Cited by  
CN102220823A; GB2573376A; EP0545624A3; CN105392952A; EP2508702A3; CN110630130A; CN103658582A; GB2525444A; EP0663503A1; US2013160238A1; US8720005B2; EP0684360A1; CN104989208A; CN105370127A; US6976289B1; EP0606168A1; AU666058B2; CN110965886A; CN112554694A; WO2011160785A1; WO0042282A1

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