

Title (en)
AUTOMATIC DOOR CLOSER

Publication
EP 0252554 B1 19911009 (EN)

Application
EP 87201217 A 19870625

Priority
GB 8616922 A 19860711

Abstract (en)
[origin: EP0252554A2] A door closer in the form of a floor spring has two coaxial cams (4 and 5) fastened to its door spigot (3). One cam (4) acts via a roller (6) on the rod (7) of a restoring spring unit (8). The other cam (5) acts via a roller (9) and lever (10) on the rod (13) of a damper/assist unit (14). This unit (Fig 4) has a spring (25) which acts on a piston (24) arranged to drive oil through a hydraulic circuit (26) in which there is an automatic throttle (27) (Fig 5). The shape of the second cam (5) is such that as soon as the door is "cracked" the force of the spring (25) in the damper/assist unit (14) acts to assist the door to open in opposition to the spring in the restoring unit (8). The throttle (27) is arranged to apply no significant damping to the movement of the piston (24) in this direction. However, when the door is released and closes under the force of the spring in the restoring unit (8) there is a reversal of the flow direction in the hydraulic circuit (26) as the rod (13) of damper/assist unit (14) is pushed in, and the throttle (27) is arranged to apply a significant damping action to the piston (24) in this direction.

IPC 1-7
E05F 3/10

IPC 8 full level
E05F 3/10 (2006.01)

CPC (source: EP)
E05F 3/104 (2013.01); **E05F 3/225** (2013.01); **E05Y 2201/626** (2013.01); **E05Y 2600/41** (2013.01); **E05Y 2600/452** (2013.01); **E05Y 2900/132** (2013.01)

Cited by
DE102013100293A1; US2013081227A1; CN101566028A; EP2112315A3; US10961761B2; FR2894610A1; ES2321257A1; BE1018429A5; US9995076B1

Designated contracting state (EPC)
BE DE NL

DOCDB simple family (publication)
EP 0252554 A2 19880113; EP 0252554 A3 19880608; EP 0252554 B1 19911009; DE 3773552 D1 19911114; GB 2192426 A 19880113; GB 2192426 B 19891220; GB 8616922 D0 19860820; GB 8715980 D0 19870812

DOCDB simple family (application)
EP 87201217 A 19870625; DE 3773552 T 19870625; GB 8616922 A 19860711; GB 8715980 A 19870707