

Title (en)  
AUTOMATIC DOOR CLOSER

Publication  
**EP 0166285 B1 19880727 (DE)**

Application  
**EP 85107093 A 19850608**

Priority  
DE 3423242 A 19840623

Abstract (en)  
[origin: US4660250A] An automatic door closer whose housing confines a reciprocable damper piston cooperating with a rotary shaft to rotate the shaft in a direction to close the door or to be moved by the shaft in response to opening of the door. The piston can be biased in a direction to close the door through the medium of the shaft by a strong coil spring as well as by a relatively weak second spring in the form of a torsion spring, an extension spring or a compression spring. The second spring ensures that the party opening the door invariably encounters some resistance to movement of the door from closed position as well as that the door begins to move toward the closed position as soon as the door opening force is reduced below the force of the second spring. The first spring is acted upon by a stressing device to ensure that such spring cannot oppose movements of the door to open position but is available to close the door with a certain delay following a relaxation of the door opening force so that the first spring can assist the second spring in closing the door if the first spring cannot close the door alone.

IPC 1-7  
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IPC 8 full level  
**E05F 3/10** (2006.01); **E05F 3/22** (2006.01); **E05F 15/53** (2015.01); **E05F 15/63** (2015.01)

CPC (source: EP US)  
**E05F 1/006** (2013.01 - EP US); **E05F 3/102** (2013.01 - EP US); **E05F 3/224** (2013.01 - EP US); **E05F 15/53** (2015.01 - EP US); **E05F 15/63** (2015.01 - EP US); **E05Y 2201/256** (2013.01 - EP US); **E05Y 2201/264** (2013.01 - EP US); **E05Y 2201/41** (2013.01 - EP US); **E05Y 2201/448** (2013.01 - EP US); **E05Y 2400/3015** (2024.05 - EP US); **E05Y 2400/45** (2013.01 - EP US); **E05Y 2800/205** (2013.01 - EP US); **E05Y 2800/21** (2013.01 - EP US); **E05Y 2800/22** (2013.01 - EP US); **E05Y 2900/132** (2013.01 - EP US); **Y10S 16/09** (2013.01 - US); **Y10S 16/10** (2013.01 - US)

Cited by  
EP0255781A3; EP4279691A1; US2012272475A1; CN102639804A; CN102656332A; WO2011157264A3; WO2011066946A1; US9995076B1; US6957533B1; WO0066864A1

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