

Title (en)

Counterbalanced hinge device with vertical and frontal movement of a door particularly for dishwashing machine

Title (de)

Ausbalancierte Scharniervorrichtung mit senkrechter und frontaler Bewegung einer Tür insbesondere für Geschirrspülmaschine

Title (fr)

Dispositif de charnière contrebalancé avec mouvement vertical et frontal d'une porte en particulier pour lave-vaisselle

Publication

EP 1183988 A3 20030319 (EN)

Application

EP 01120308 A 20010824

Priority

IT BO20000505 A 20000830

Abstract (en)

[origin: EP1183988A2] A counterbalanced hinge device with vertical and frontal movement for a door particularly for dishwashing machine, includes a connection mean (1) to fixing means (10) of the dishwashing machine and a support mean (2) to which it is connected the door. The hinge device includes a crank (4) pivoted on the connection mean (1) and rotatably connected to the support mean (2), a first arm (6) pivoted on the connection mean (1) and rotatably connected to the support mean (2) and balancing means (11) connected to the fixing means (10) and to the support mean (2). The hinge device also includes cam means (15) rotatably connected to the balancing means (11) and articulated members (8), these latter being linked to the support mean (2). The hinge further includes friction means (14) connected to the cam means (15) and fit for friction mating the connection mean (1) for the door counterbalancing in correspondence of its change from a closing condition (C) to an opening condition (A) and vice versa. The cam means (15) are subject at least to a couple of opposed and misaligned forces, respectively of the balancing means (11) and the articulated members (8), in such a way to produce friction forces of the friction means (14) on said support mean (2) for contributing in counterbalancing the door. <IMAGE>

IPC 1-7

A47L 15/42; F24C 15/02; E05F 1/10

IPC 8 full level

A47L 15/42 (2006.01); **E05F 1/12** (2006.01); **E05F 5/06** (2006.01)

CPC (source: EP)

A47L 15/4261 (2013.01); **E05F 1/1261** (2013.01); **E05F 1/1276** (2013.01); **E05F 5/06** (2013.01); **E05Y 2201/26** (2013.01); **E05Y 2201/264** (2013.01); **E05Y 2900/304** (2013.01)

Citation (search report)

- [A] US 3704550 A 19721205 - HANCOCK CHARLIE L
- [A] FR 2727302 A1 19960531 - FAGOR S COOP LTDA [ES]
- [A] GB 2235723 A 19910313 - CMI CERNIERE MECC IND [IT]
- [A] EP 0859197 A2 19980819 - CMI SRL [IT]

Cited by

WO2020058366A1; EP3056644A1; CN108487806A; IT201800009511A1; EP1302150A1; CN112325471A; RU2667137C2; EP2620576A3; ITUB20150164A1; WO2009121815A1; US9427134B2; EP2116167A1; EP2407723A1; US11702878B2; EP2620576A2

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

EP 1183988 A2 20020306; **EP 1183988 A3 20030319**; **EP 1183988 B1 20070919**; DE 60130527 D1 20071031; DE 60130527 T2 20080612; ES 2291255 T3 20080301; IT BO20000505 A0 20000830; IT BO20000505 A1 20020302; PT 1183988 E 20071212

DOCDB simple family (application)

EP 01120308 A 20010824; DE 60130527 T 20010824; ES 01120308 T 20010824; IT BO20000505 A 20000830; PT 01120308 T 20010824