

Title (en)
Magnetic latch assembly

Title (de)
Magnetische Verriegelungsvorrichtung

Title (fr)
Dispositif de verrouillage magnétique

Publication
EP 1693538 A1 20060823 (EN)

Application
EP 05250739 A 20050209

Priority
EP 05250739 A 20050209

Abstract (en)
A magnetic latch assembly includes a latch member (18, 82, 118) movably mounted to a first object (10, 68, 108) such as a door and a container, and a retainer (34, 94, 132) arranged in a second, opposing object (12, 70) such as a door frame and a lid. The latch member (18, 82, 118) includes a latch arm (20, 84, 124), a hook (24, 86, 126) formed on the distal end of the latch arm (20, 84, 124), and a first magnet (26, 92, 130) mounted in the hook (24, 86, 126). The retainer (34, 50, 94, 132) includes a housing (36, 52, 94, 134) with a cavity (40, 54, 96, 138) and a second magnet (42, 64, 100, 142). The cavity (40, 54, 96, 138) includes a first horizontal passage (40a, 54a, 96a, 138a) and a second vertical passage (40b, 54b, 96b, 138b) communicated with the horizontal passage (40a, 54a, 96a, 138a). The second magnet (42, 64, 100, 142) has a magnetic pole of opposite polarity from the magnetic pole of the first magnet (26, 26, 92, 130). When the first and second objects are relatively moved toward each other, the latch member (18, 82, 118) is moved into the first passage (40a, 54a, 96a, 138a) of the cavity (40, 54, 96, 138). When the latch head (24, 86, 126) is completely received in the first passage (40a, 54a, 96a, 138a), the two magnets (26, 42, 64, 92, 100, 130, 142) are operatively associated to cause the latch member (18, 82, 118) to be moved from the horizontal passage (40a, 54a, 96a, 138a) to the vertical passage (40b, 54b, 96b, 138b) and urge the latch member (18, 82, 118) or the latch head (24, 86, 126) into latching engagement with one end of the housing (36, 52, 94, 134) which serves as a retainer.

IPC 8 full level
E05C 19/16 (2006.01)

CPC (source: EP)
E05C 5/00 (2013.01); **E05C 19/163** (2013.01)

Citation (search report)
• [X] FR 2722232 A1 19960112 - RENAULT REGIE NATIONALE USINES [FR]
• [X] US 5711556 A 19980127 - MASTERS ALLAN R [AU]
• [X] DE 1553544 A1 19690724 - BAERMANN MAX
• [A] EP 0923887 A2 19990623 - SAMA S P A [IT]
• [A] US 6048004 A 20000411 - KAUFMAN ELI [US], et al

Cited by
EP1857622A3; EP2997212A4; US11591825B2; WO2024133433A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
EP 1693538 A1 20060823

DOCDB simple family (application)
EP 05250739 A 20050209