

Title (en)

BRAKE DEVICE FOR GARAGE DOORS AND THE LIKE, AND DOOR ASSEMBLY INCLUDING THE SAME

Title (de)

BREMSVORRICHTUNG FÜR GARAGENTORE UND DERGLEICHEN UND DIESE ENTHALTENDE TORANORDNUNG

Title (fr)

DISPOSITIF DE FREINAGE POUR PORTES DE GARAGE ETC., ET ENSEMBLE DE PORTE COMPORTANT LEDIT DISPOSITIF

Publication

EP 1778940 A4 20130918 (EN)

Application

EP 05774625 A 20050816

Priority

- CA 2005001257 W 20050816
- CA 2477679 A 20040816

Abstract (en)

[origin: WO2006017931A1] A braking device (1) configured for use with the counterbalancing system (3) of a garage door. The brake device (1) includes a support bracket (11), a ratchet wheel (13), a pawl arm (15), and a biasing spring (49). The support bracket (11) is rigidly connected to a fixed structure and has a guiding slot (45). The ratchet wheel (13) is securely mounted about the overhead shaft (5) of the counterbalancing system (3) and has at least one notch (23). The pawl arm (15) has first and second ends (25,27), the first end (25) of the pawl arm (15) being pivotally connected to the support bracket (11) and the second end (27) of the pawl arm (15) cooperating with the guiding slot (45) and being movable with respect to the support bracket (11) along said guiding slot (45). The first and second ends (25,27) of the pawl arm (15) are further connected to flanges (29) of a plug (7) on either side of the overhead shaft (5). The biasing spring (49) is operatively connected between the support bracket (11) and the pawl arm (15) so as to exert a biasing force for biasing the pawl arm (15) towards the ratchet wheel (13). The pawl arm (15) is devised so that, an element (31) thereof is adjacent to the ratchet wheel (13), said element (31) being shaped and sized to be removably insertable into at least one notch (23) of the ratchet wheel (13) so as to block rotation of the ratchet wheel (13), and thus block rotation of the overhead shaft (5), in the event of a failure of the counterbalancing system (3) of the door. The brake device (1) further includes a shear pin (53) operatively connectable between the support bracket (11) and the pawl arm (15) for maintaining said pawl arm (15), prior to installation of the brake device (1) onto the counterbalancing system (3), in an intermediate configuration between the first and second configurations. The shear pin (53) is made of a specific material being breakable when the pawl arm (15) is rotated with respect to the support bracket (11) when the torsional force of the torsional spring (9) transmitted to said pawl arm (15) via the plug (9) has reached a predetermined value, ensuring namely that a predetermined minimal amount of load is present is said torsional spring (9) for counterbalancing purposes.

IPC 8 full level

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CPC (source: EP)

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Citation (search report)

- [A] WO 03078773 A1 20030925 - CANIMEX INC [CA]
- [A] DE 9310792 U1 19940519 - HOERMANN KG [DE]
- See references of WO 2006017931A1

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DOCDB simple family (application)

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