

Title (en)

Torsion spring for the balancing of a roller shutter

Title (de)

Torsionsfedereinrichtung für den Gewichtsausgleich eines Tores

Title (fr)

Dispositif à ressorts de torsion pour compensation d'un volet

Publication

EP 0488419 B1 19960828 (DE)

Application

EP 91120635 A 19911130

Priority

DE 4038275 A 19901130

Abstract (en)

[origin: EP0488419A1] Torsion spring arrangement (4) for counterbalancing a roller shutter in a building, which is guided movably up and down at least in the direction of a component of motion, the displacement motion of which shutter being converted into the rotation of a shaft (2) running approximately coaxially with respect to the spring arrangement (4) and by means of which a rotary motion is applied to one end of the spring arrangement (4), whose other end is supported against twisting, in such a way that when the shutter moves downwards, the said spring arrangement tightens, accumulating energy, and releases the accumulated energy during the upward movement; for the purpose of simpler manufacture, and to reduce the risk posed by breakage of the spring spiral, the torsion spring arrangement is designed in such a way that a plurality of single torsion springs (10) are arranged around the shaft spindle (2) outside the shaft or distributed over the shaft circumference within the said shaft on the inner peripheral wall thereof, the one ends of which springs being put together in such a way as to transfer energy in the same direction via a gear device and the other ends of which springs being put together rigidly with respect to the energy transfer to which they are subjected. <IMAGE>

IPC 1-7

E06B 9/60; **E06B 9/84**

IPC 8 full level

E06B 9/60 (2006.01); **E06B 9/84** (2006.01)

CPC (source: EP)

E06B 9/60 (2013.01); **E06B 9/84** (2013.01)

Designated contracting state (EPC)

AT BE CH DE DK ES FR GB IT LI NL SE

DOCDB simple family (publication)

EP 0488419 A1 19920603; **EP 0488419 B1 19960828**; AT E141996 T1 19960915; DE 4038275 A1 19920611; DE 59108120 D1 19961002; DK 0488419 T3 19960916; ES 2090212 T3 19961016; FI 915660 A0 19911129; FI 915660 A 19920531; FI 98753 B 19970430; FI 98753 C 19970811; NO 300857 B1 19970804; NO 914593 D0 19911125; NO 914593 L 19920601

DOCDB simple family (application)

EP 91120635 A 19911130; AT 91120635 T 19911130; DE 4038275 A 19901130; DE 59108120 T 19911130; DK 91120635 T 19911130; ES 91120635 T 19911130; FI 915660 A 19911129; NO 914593 A 19911125