

Title (en)  
IMPROVED SHOCK ABSORBER

Title (de)  
VERBESSERTER STOSSDÄMPFER

Title (fr)  
AMORTISSEUR AMÉLIORÉ

Publication  
**EP 2698465 A1 20140219 (EN)**

Application  
**EP 13179738 A 20130808**

Priority  
IT PN20120047 A 20120814

Abstract (en)  
Shock absorber to damp through a friction action the swinging of a first body, for example a tub of an household washing machine, with respect to a second body, for example a cabinet portion of the same appliance, comprising an outer cylinder (2) connected with one (22) of its ends to said first body, an inner shank (1) able of sliding inside said outer cylinder, and connected through respective end (21) to said second body, a damping assembly placed between said outer cylinder and said inner shank, and able of causing a differentiated damping force which shows a weak damping force when the swinging transferred from said first to said second body is limited, and which offers a higher damping force when said swinging is wider, whereby said damping assembly also comprises a first friction element (4) engaged between said shank and a defined first portion of the inner surface of said outer cylinder, a second friction element (5) engaged between said first friction element (4) and a second defined portion of the inner surface of said outer cylinder, said second portion being other than said first portion.

IPC 8 full level  
**D06F 37/20** (2006.01)

CPC (source: EP)  
**D06F 37/20** (2013.01)

Citation (applicant)  
• EP 1584730 A2 20051012 - SUSPA HOLDING GMBH [DE]  
• US 2004144137 A1 20040729 - PARK GWAN-RYONG [KR], et al  
• EP 0407755 A1 19910116 - MIELE & CIE [DE]  
• EP 1220961 A1 20020710 - SUSPA HOLDING GMBH [DE]

Citation (search report)  
• [AD] US 2004144137 A1 20040729 - PARK GWAN-RYONG [KR], et al  
• [A] DE 3216152 A1 19821230 - SCHWARZENBERG WASCHGERAETE [DD]  
• [A] KR 20040070403 A 20040809 - LG ELECTRONICS INC

Citation (third parties)  
Third party :  
• JP 2002113283 A 20020416 - SHARP KK  
• DE 102004033531 A1 20050203 - AWECO APPLIANCE SYS GMBH & CO [DE]  
• EP 1862694 B1 20090715 - SUSPA HOLDING GMBH [DE]  
• DE 29720092 U1 19980129 - R & D S SRL [IT]  
• US 2004144137 A1 20040729 - PARK GWAN-RYONG [KR], et al

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA

DOCDB simple family (publication)  
**EP 2698465 A1 20140219; EP 2698465 B1 20161005; IT PN20120047 A1 20140215**

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**EP 13179738 A 20130808; IT PN20120047 A 20120814**