

Title (en)  
Automatic foldable umbrella

Title (de)  
Automatisch faltbarer Schirm

Title (fr)  
Parapluie pliable automatique

Publication  
**EP 2522243 A1 20121114 (EN)**

Application  
**EP 12166291 A 20120501**

Priority  
• CN 201120148018 U 20110511  
• CN 201120514694 U 20111202

Abstract (en)  
An automatic foldable umbrella includes a central shaft unit (30) having upper, lower and middle shafts (32, 31, 33) telescopically coupled to one another. A first force transmitting unit (80) is disposed to pull the upper shaft (32) to a stretched-out position relative to the middle shaft (33) when the middle shaft (33) is biased by a central spring (40) to move to an extended position, and to permit the upper shaft (32) to move downward to a retracted position when a rib-and-stretcher assembly (70) is collapsed. A second force transmitting unit (90) is disposed to permit movement of a runner (60) toward a top hub (50) when the upper shaft (32) is displaced to the stretched-out position, thereby rendering the folding operation convenient and effortless.

IPC 8 full level  
**A45B 25/14** (2006.01)

CPC (source: EP KR)  
**A45B 25/00** (2013.01 - KR); **A45B 25/14** (2013.01 - KR); **A45B 25/143** (2013.01 - EP); **A45B 25/16** (2013.01 - KR); **A45B 19/04** (2013.01 - EP); **A45B 19/10** (2013.01 - EP)

Citation (applicant)  
US 6684893 B2 20040203 - KUO SHIH-SHIN [TW]

Citation (search report)  
[AD] US 6684893 B2 20040203 - KUO SHIH-SHIN [TW]

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

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DOCDB simple family (publication)  
**EP 2522243 A1 20121114**; **EP 2522243 B1 20140402**; KR 101289940 B1 20130726; KR 20120127265 A 20121121; RU 2497426 C1 20131110

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