

Title (en)  
Automatic spreading umbrella

Title (de)  
Automatisch öffnender Schirm

Title (fr)  
Parasol à ouverture automatique

Publication  
**EP 0979623 A1 20000216 (EN)**

Application  
**EP 98306395 A 19980811**

Priority  
EP 98306395 A 19980811

Abstract (en)  
An umbrella includes a handle shaft (40) has a tubular top end portion (40T) with a distal end surface and a stop member (42) disposed in the top end portion (40T) and spaced apart from the distal end surface. A hub (60) is mounted on the top end portion (40T) of the handle shaft (40). A lower runner (50) is mounted slidably on the handle shaft (40) and is movable toward and away from the hub (60). A rib assembly (80) is mounted pivotally at one end on the hub (60). A stretcher assembly (100) is connected operably to the rib assembly (80) and the lower runner (50). An upper runner (70) has an enlarged head (72) disposed above the hub (60), and a guide shaft (71) that extends from the enlarged head (72) and into the tubular top end portion (40T) of the handle shaft (40). A compression spring (90) is sleeved on the guide shaft (71) of the upper runner (70), and has a bottom end that is disposed in the top end portion (40T) of the handle shaft (40) and that abuts against the stop member (42), and a top end that extends outwardly of the top end portion (40T) of the handle shaft (40) and that abuts against the head (72) of the upper runner (70). A spreader assembly (200) is connected operably to the rib assembly (80) and the head (72) of the upper runner (70). <IMAGE>

IPC 1-7  
**A45B 25/16**

IPC 8 full level  
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CPC (source: EP)  
**A45B 25/16** (2013.01)

Citation (search report)  
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• [XA] US 4548222 A 19851022 - DAY SAN-TONG [TW]  
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