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

A45B 25/16 (2006.01)

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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AT DE ES FR GB IT PT

DOCDB simple family (publication)

EP 0979623 A1 20000216; **EP 0979623 B1 20040414**; AT 264074 T 20040415; DE 69823181 D1 20040519; DE 69823181 T2 20050127; ES 2217507 T3 20041101

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