

Title (en)  
Automatic openable and closable, and in pocket-size contractible umbrella

Title (de)  
Automatisch öffnender und schliessender, auf Taschenformat verkürzbarer Schirm

Title (fr)  
Parapluie à ouverture et fermeture automatique et contractible en format de poche

Publication  
**EP 0827701 A3 19990331 (DE)**

Application  
**EP 97110703 A 19970701**

Priority  
DE 19636690 A 19960910

Abstract (en)  
[origin: US5823214A] An automatic umbrella of the collapsible pocket type includes a handle accommodating a first release mechanism (A1) for the opening operation and a second release mechanism (A2) for the closing operation, a control button (11) arranged in the umbrella handle (12) for staggered actuation of the release mechanisms (A1, A2), a telescopically shortenable umbrella stick (1) with an umbrella crown (4), a runner (5) traveling along the umbrella stick (1) and a canopy rib assembly (2) formed by canopy rib units (2 DEG ), a first spring mechanism (F1) arranged in the umbrella stick (1) for opening the umbrella by extending the umbrella stick (1), a second spring mechanism (F2) integrated in the canopy rib units (20) and tensioned during opening operation for effecting a closing of the umbrella, a tackle (S) including a rope (S') which engages the runner (5) and cooperates with the release mechanism (A2) via a rod (8) mounted slidably in the umbrella stick (1) and a first catch (9) arranged thereon and formed with a hooked end engageable on a locking member (10). The second release mechanism (A2) includes a release slider (14, 15) cooperating with the first catch (9) and slidably guided within in the stick, and a locking catch (16) slidable synchronously with the release slider (14, 15) and cooperating with the control button (11), with this slidable assembly (14, 15, 16) as a function of retraction and extension of the umbrella stick (1) moving alternately into the position ready for release relative to the first catch (9) and the control button (11) in a direction towards first catch (9), and moves away from the first catch (9) into a neutral position.

IPC 1-7  
**A45B 25/14**

IPC 8 full level  
**A45B 25/16** (2006.01); **A45B 19/04** (2006.01); **A45B 19/10** (2006.01); **A45B 25/14** (2006.01)

CPC (source: EP US)  
**A45B 19/04** (2013.01 - EP US); **A45B 19/10** (2013.01 - EP US); **A45B 25/143** (2013.01 - EP US)

Citation (search report)

- [DA] US 5492140 A 19960220 - LIN CHUNG-KUANG [TW], et al
- [A] US 5390686 A 19950221 - LIN CHUNG-KUANG [TW], et al
- [A] US 5505222 A 19960409 - LIN CHUNG-KUANG [TW], et al
- [A] EP 0518814 A2 19921216 - DAY SHENQ TONG [TW]

Designated contracting state (EPC)  
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)  
**US 5823214 A 19981020**; AT E197881 T1 20001215; CN 1176084 A 19980318; DE 19636690 C1 19971127; DE 59702710 D1 20010111; EP 0827701 A2 19980311; EP 0827701 A3 19990331; EP 0827701 B1 20001206; EP 0947147 A2 19991006; EP 0947147 A3 19991020; ES 2152598 T3 20010201; JP 2843806 B2 19990106; JP H1085017 A 19980407; MX 9704949 A 19980331; PL 321400 A1 19980316; PT 827701 E 20010531; RU 2137411 C1 19990920

DOCDB simple family (application)  
**US 88872997 A 19970707**; AT 97110703 T 19970701; CN 97116630 A 19970807; DE 19636690 A 19960910; DE 59702710 T 19970701; EP 97110703 A 19970701; EP 99112322 A 19970701; ES 97110703 T 19970701; JP 18546797 A 19970710; MX 9704949 A 19970630; PL 32140097 A 19970730; PT 97110703 T 19970701; RU 97110660 A 19970620