

Title (en)  
An umbrella operating mechanism

Title (de)  
Betätigungsmechanismus für einen Schirm

Title (fr)  
Mecanisme d'actionnement pour parapluie

Publication  
**EP 0897678 A1 19990224 (EN)**

Application  
**EP 98108678 A 19980513**

Priority  
ZA 977504 A 19970821

Abstract (en)  
An umbrella operating mechanism is provided having a pair of hubs (31,32), each of which is securable to an umbrella shaft (33). Each hub has a plurality of spokes (34,35) extending from slots (25) defined in the hub and the spokes are pivotable in a plane through the axis of the hubs. The spokes (34,35) have an enlarged end (23) which is captured in the complementary shaped slots (25) between a pair of surfaces. <IMAGE>

IPC 1-7  
**A45B 25/06**; **A45B 25/10**

IPC 8 full level  
**A45B 25/06** (2006.01); **A45B 25/10** (2006.01)

CPC (source: EP)  
**A45B 25/06** (2013.01); **A45B 25/10** (2013.01)

Citation (search report)

- [X] FR 441072 A 19120729 - EDMOND METAUT [FR]
- [X] GB 191112950 A 19110810 - BILKEY JOHN FREDERICK, et al
- [X] US 3157186 A 19641117 - NATHAN HAMMER
- [X] DE 1152226 B 19630801 - C ROB HAMMERSTEIN FA
- [X] FR 855628 A 19400516
- [A] FR 575364 A 19240729
- [A] FR 500777 A 19200324 - JOSEPH BUISSON [FR]
- [A] CH 228354 A 19430815 - SARGENTI OLIVIERO [CH]

Cited by  
US7178535B2; US7318444B2; US2017112242A1; US10034524B2; USD833137S; US9655416B1; US10631604B2; WO2009045182A1; US10292466B2; US10874182B2; US10060152B2; US10631605B2; US10631603B2; US11206904B2; US10736390B2; US11206905B2

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