

Title (en)

Automatically opening and closing umbrella.

Title (de)

Selbstöffnender und selbstschliessender Schirm.

Title (fr)

Parapluie à ouverture et fermeture automatique.

Publication

**EP 0518814 A2 19921216 (EN)**

Application

**EP 92810377 A 19920520**

Priority

JP 16778491 A 19910612

Abstract (en)

An umbrella having a tubular shaft 1, a set of rib assembly 2 expandable and collapsible by a runner mechanism, a handle 3 arranged to be slidable in relation to the shaft 1, an umbrella-opening energy accumulating mechanism 4 including an upper energy accumulating device 41 and a lower energy accumulating device 42, a linkage mechanism 6 capable of linking and controlling the umbrella-opening energy accumulating mechanism 4, an actuating mechanism 6 worked by an operating mechanism 7 and an umbrella-closing coil spring 8 disposed between the inside lower end of said shaft 1 and the front end of said intermediate shaft 32. The invention has for its purpose to provide a self opening and closing umbrella capable of being opened or closed without having to consume any extra energy and with a little strength, while at the same time the umbrella will in no way collapse accidentally. <IMAGE>

IPC 1-7

**A45B 25/16**

IPC 8 full level

**A45B 25/14** (2006.01); **A45B 25/16** (2006.01)

CPC (source: EP)

**A45B 25/143** (2013.01)

Cited by

EP0638258A1; CN103416928A; US9282793B2; EP0827701A3; EP0947147A3; US2015208772A1; US9468274B2

Designated contracting state (EPC)

AT BE CH DE ES FR GB IT LI LU NL SE

DOCDB simple family (publication)

**EP 0518814 A2 19921216**; **EP 0518814 A3 19930310**; JP H05245004 A 19930924; JP H0767405 B2 19950726

DOCDB simple family (application)

**EP 92810377 A 19920520**; JP 16778491 A 19910612