

Title (en)
Shaft structure of automatic umbrella

Title (de)
Wellenstruktur eines automatischen Regenschirms

Title (fr)
Structure de tige de parapluie automatique

Publication
EP 2572602 B1 20140702 (EN)

Application
EP 11182677 A 20110926

Priority
EP 11182677 A 20110926

Abstract (en)
[origin: EP2572602A1] The present invention provides a structure of shaft of automatic umbrella, which includes a shaft assembly (30) including a second section (32) having a top end fixed to an internal plug (35). An inner tube (34) is fixed at a top end thereof to the internal plug (35) and receives therein an operation tube (36) having a bottom coupled to an operation plug (38). The inner tube (34) receives in a top portion thereof a pulley (37) around which an operation cable (39) wraps. An end of the operation cable (39) is fixed to a bullet-like member (50) and an opposite end fixed to the operation plug (38). To open the umbrella, a push button (22) is depressed and an expansion spring (60) pushes upward the second section (32) so that the runner cable (42) and the operation cable (39) drive a runner (40) and a third shaft section (33) upward to completely open the umbrella.

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

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

Cited by
CN110193148A; CN109008118A

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
EP 2572602 A1 20130327; EP 2572602 B1 20140702

DOCDB simple family (application)
EP 11182677 A 20110926