

Title (en)

A device for opening and closing umbrellas.

Title (de)

Vorrichtung zum Öffnen und Schliessen von Schirmen.

Title (fr)

Dispositif d'ouverture et de fermeture de parapluies.

Publication

EP 0392989 A2 19901017 (EN)

Application

EP 90830139 A 19900403

Priority

IT 6725889 A 19890410

Abstract (en)

A device for opening and closing an umbrella includes a rod (7) which is slidable in the upper part of the pole (3) for supporting the flexible canopy (2) of the umbrella (1) and to which is articulated a first array of spokes (9) connected to the pole by means of a second array of spokes (10) articulated to a collar (16) which is slidable along the pole, and a third array of spokes (15) which interconnect the spokes of the second array (10) and the pole above the slidable collar (16). The rod can be moved between an extended position (corresponding to the closed condition of the umbrella) and a retracted position (corresponding to the open condition of the umbrella) by means of an external crank (24) and an internal rack-and-pinion transmission (21, 22), and a catch (26) is provided for locking the rod (7) in the extended position and in the retracted position.

IPC 1-7

A45B 25/14

IPC 8 full level

A45B 25/14 (2006.01)

CPC (source: EP)

A45B 25/14 (2013.01); **A45B 2025/146** (2013.01)

Cited by

EP1602297A1; EP1400186A1; AT408602B; AU648148B2; US5329953A; US6871659B2; CH689577A5; US9930942B2; US7533680B2; US6202660B1; WO9944459A1; WO9215218A1; US7134442B2; US7493909B2; US7708022B2; US9642421B2; US7963293B2; US8066021B2; US10368617B2; US11013303B2; US7798161B2; US7900643B2; US8555906B2; US10136709B2

Designated contracting state (EPC)

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