

Title (en)
UMBRELLA RIB ASSEMBLY AND FOLDABLE UMBRELLA

Title (de)
STANGENANORDNUNG FÜR EINEN REGENSCHIRM UND FALTBARER REGENSCHIRM

Title (fr)
ENSEMBLE BALEINES DE PARAPLUIE ET PARAPLUIE PLIANT

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Abstract (en)
The present invention relates to an umbrella rib assembly and to a foldable umbrella. The umbrella rib assembly comprises: a plurality of main ribs, a plurality of first auxiliary ribs, and a plurality of second auxiliary ribs. Each of the main ribs includes an inner member, one end of which is coupled to a main rib fixing member such that the inner member is circumferentially rotatable; an intermediate member, one end of which is rotatably coupled, via a pin, to an upper portion from the other end of the inner member; and an outer member, one end of which is rotatably coupled, via a pin, to the other end of the intermediate member, wherein said inner member, said intermediate member, and said outer member are assembled so to be foldable. Each of the first auxiliary ribs has one end coupled via a pin to a first auxiliary rib fixing member such that the first auxiliary rib is circumferentially rotatable, each of the first auxiliary ribs has an intermediate portion to which the other end of the inner member is rotatably coupled via a pin, such that the first auxiliary rib is parallel to the intermediate member of the main rib, and the other end of each of the first auxiliary ribs is rotatably coupled, via a pin, to a lower portion from the upper end of the outer member rotatably coupled to the intermediate member of the main rib. One end of each of the second auxiliary ribs is coupled to a second auxiliary rib fixing member interposed between the main rib fixing member and the first auxiliary rib fixing member such that the second auxiliary rib is circumferentially rotatable, and the other end thereof is rotatably coupled, via a pin, to the portion to which the inner member of the main rib and an intermediate portion of the first auxiliary rib are coupled. The diameter of the joint portion of the main rib fixing member (15), to which the inner member (12a) of the main rib (12) is rotatably coupled, is significantly larger than the diameter of the joint portion of the second auxiliary rib fixing member to which the second auxiliary rib is rotatably coupled, such that the second auxiliary rib fixing member is drawn downwardly to spread the umbrella rib assembly, and pushed upwardly to fold the umbrella rib assembly. Foldable umbrellas having various configurations can be produced using the umbrella rib assembly of the present invention.

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