

PATENT SPECIFICATION

DRAWINGS ATTACHED

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COMPLETE SPECIFICATION

Improvements relating to Umbrellas

We, BREMSHEY & Co., a Kommandit Gesellschaft organised under the laws of Germany, of Ahrstrasse 5—7, Solingen-Ohligs, Germany, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The invention relates to umbrellas, of the kind which have a flat shaped cross-section when in the fully closed state, a correspondingly laterally elongated crown, to which the spokes are attached, and a canopy which, sometimes together with an interposed elastic member, is clamped between the crown and a laterally elongated cap mounted on the crown. Such umbrellas are usually telescopic.

In umbrellas which have a circular cross-section when closed, that is to say in round umbrellas, the cap is usually screw-threaded and is screwed into the crown.

However the method of attaching the cap to the crown used in round umbrellas is not satisfactory for use with flat shaped umbrellas of the kind described because with these umbrellas it is necessary to ensure that the two laterally elongate parts, that is the crown and the cap, always extend with their longer dimensions parallel to each other when the umbrella has been assembled. A screwed connection cannot satisfy this requirement.

The object of the present invention is to provide an umbrella of the kind described which is constructed in such a way that when the parts have been assembled the cap is always aligned with the crown.

To this end, according to this invention, in a frame for an umbrella of the kind described the cap is attached to the crown by means of an axially projecting spigot on one of the cap and crown, the spigot being received in an axial socket in the other of the cap and crown, and the spigot and socket having a configuration and resilience such that when the spigot is pushed into the socket they snap into

a locked position in which the cap and crown are axially located relatively to one another, overlapping complementary end parts of the elongate cap and crown remote from the axis being provided one with axially projecting teeth and the other with complementary recesses for use in clamping the canopy between them and for locating the cap and crown against relative rotation about the longitudinal axis of the umbrella frame.

An example of an umbrella constructed in accordance with the invention is illustrated in the accompanying drawings in which:—

Figure 1 is a perspective view of the crown parts showing the parts before assembly, with the umbrella canopy omitted;

Figure 2 shows, in the left-hand half, a plan view of the parts shown in Figure 1 when assembled, and, in the right-hand half, a plan view with the cap removed; and

Figure 3 is a section as seen in the direction of the arrows on the line III—III in Figure 2 showing also a canopy and spokes.

In the illustrated example, a tubular umbrella stick 1 has a crown 2 in the form of a flat shaped body mounted on its end as is usual in the case of flat umbrellas of the kind described. Umbrella spokes 3, shown in Figure 3, are pivoted to the crown by means of pivot pins 4 attached to lugs 5, which are rotatable in the umbrella crown 2 about axes parallel to the stick axis. However the spokes can if desired be attached in some other way, for example in the usual manner by means of wire rings.

The upper surface of the crown 2 contains radial grooves 6. Only the right-hand groove is visible in Figures 1 and 2. These grooves each receive a cushion 7 made of a resilient plastics material. The purpose of the cushions 7 is to ensure a firm grip for the canopy 8, this being necessary for the reasons which have already been explained.

As already mentioned, the canopy 8 is clamped between the crown 2 and a cap 9,

which is also of flat shape. The lower surface of the cap 9 has projecting teeth 10 which project into the cushions 7 when the parts are assembled. The location of the cushions 7 in the grooves 6, together with the engagement of the teeth 10 in the cushions, ensures that the two parts 2 and 9 are locked against relative rotation about the stick axis X—X.

The cap 9 is made of a slightly resilient plastics material and has a closed end 11 the cylindrical interior of which contains an internal annular collar 12 which is a snap fit in an annular groove 13 in the outer surface of a cylindrical extension 14 of the umbrella crown 2. To assemble the parts, the cushions 7 are inserted in the grooves 6 and then the canopy 8 is placed over the cushions. The cap 9 is then snapped over the cylindrical extension 14, until the collar 12 engages in the groove 13. When it is desired to remove the cap 9, for example in order to replace the canopy, this can easily be done using a suitable tool, due to the resilience of the material of the cap 9.

25 **WHAT WE CLAIM IS:—**

1. A frame for an umbrella which has a substantially flat rectangular cross section when closed, the frame including a laterally elongate crown and a laterally elongate cap between which the umbrella canopy will be trapped when the frame is covered, the cap being attached to the crown by means of an axially projecting spigot on one of the cap and crown, the spigot being received in an axial socket in the other of the cap and crown, and the spigot and socket having a configuration and resilience such that when the spigot is pushed into the socket they snap into a locked

position in which the cap and crown are axially located relatively to one another, overlapping complementary end parts of the elongate cap and crown remote from the axis being provided one with axially projecting teeth and the other with complementary recesses for use in clamping the canopy between them and for locating the cap and crown against relative rotation about the longitudinal axis of the umbrella frame.

2. A frame according to claim 1, in which the snap lock is provided by an annular rib or groove on the outer surface of the spigot and a complementary annular groove or rib on the inner surface of the socket.

3. A frame according to claim 2, in which the spigot extends from the crown and is provided with the annular groove and the socket is formed in the cap and is provided with the annular rib.

4. A frame according to any one of claims 1 to 3, in which there are complementary teeth and recesses at both ends of the elongate cap and crown.

5. An umbrella having a frame according to any one of the preceding claims, with its canopy and at least one resilient cushion clamped between at least that portion or portions of the cap and crown at which the complementary teeth and recesses are formed.

6. An umbrella according to claim 5, substantially as described with reference to the accompanying drawings.

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position in which the cap and crown are axially located relatively to one another, overlapping complementary end parts of the elongate cap and crown remote from the axis being provided one with axially projecting teeth and the other with complementary recesses for use in clamping the canopy between them and for locating the cap and crown against relative rotation about the longitudinal axis of the umbrella frame.

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