

PATENT SPECIFICATION

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DRAWINGS ATTACHED

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(54) IMPROVEMENTS IN OR RELATING TO UMBRELLAS

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

This invention relates to a so called "flat" shortenable umbrella having a substantially rectangular cross-sectional shape transverse to the stick axis, when closed.

It is an object of the invention to provide such an umbrella with its associated casing, so that the resulting advantageous structure is simple to handle and has parts which associate with one another in a way which does not damage the umbrella covering.

According to the present invention, in a cased shortenable, flat umbrella having a substantially rectangular cross-sectional shape transverse to the stick axis when closed, the case has a correspondingly substantially rectangular cross-sectional shape formed by two opposed wide side walls and two opposed narrow side walls with a bottom closure at one end and an insertion opening at the other upper end; the wide side walls extending upwards beyond the narrow side walls to provide flaps on opposite sides of the opening and apertures above the narrow side walls, the arrangement being such that after insertion of the umbrella into the case through the opening, the umbrella handle lies between the flaps and lateral surfaces of the handle are exposed in the apertures. Preferably, the case is semi-rigid and advantageously at least the flap-part of each wide side wall is reinforced.

Preferably the flaps and apertures are sufficiently long to cause a part of the length of the rib end portions adjacent to the handle to be exposed through the apertures.

According to another advantageous feature of one example of the invention, a freely projecting cover flap is disposed on the inside

of each narrow side wall, behind an open ended longitudinal slot in each narrow side wall adjacent the aperture. The cover flaps may be connected, preferably welded, at their lower transverse edge and by a portion of the length of the two adjacent lateral edges to the inner surface of the narrow side wall. Preferably, the lower transverse edge is disposed below the slot, which preferably terminates in a round hole and, furthermore, in the direction of their free end, the cover flaps are preferably wider than the width of the narrow side walls.

Thus, the present invention provides a flat umbrella with associated case which is extremely advantageous to handle, more particularly as regards the closing and shortening of the umbrella. During the closing and shortening process, the case itself can be very advantageously used for ordering the umbrella ribs in groups. Conveniently, after being partly closed, a portion of the umbrella is introduced into the insertion opening in the case. The narrow side walls of the case force the ribs into a convenient position for the subsequent final closing of the umbrella which is produced by displacing the handle in the direction of the slider and crown. The resulting high security of operation can be further encouraged, on the one hand, by supporting walls of the slider, which may form an inside limiting stop for the ribs and, on the other hand, by inclined transverse lateral walls of a handle shaft. These two factors also prevent the rib ends from entering a socket in the shaft into which a slider sleeve enters, for the more complete shortening of the umbrella. In the correct inserted position of the umbrella, the insertion opening in the case is closed by the umbrella handle. The shortened construction of the narrow side walls produces finger apertures and by introducing the index finger and the thumb, the umbrella can conveniently be removed again, either by grasping the exposed transverse

lateral surfaces of the handle, or by directly grasping the umbrella itself if the narrow side walls are further shortened as compared with the wide side walls. Even after it has been used for a very long time, the case remains attractive in appearance if at least the flap-parts of the wide side walls are reinforced. The finger apertures are also advantageous even if the umbrella ribs are placed in order, but more particularly the rib ends are not forced inwards. When covering flaps are provided the umbrella can be introduced into the case through its end face insertion opening without hindrance and more particularly without any damage to the umbrella covering. At every stage in the insertion of the umbrella, the cover flaps prevent the umbrella covering from entering open slots in the narrow sides of the case, with consequent possible damage to the covering. The provision of the cover flaps behind the slots on the narrow side walls, therefore, affords adequate durability, even over very long periods of use. The fact that the lower transverse edges of the flaps are connected to the case itself is no disadvantage to the flexing apart of the flap parts on the wide side walls. More particularly, that zone of the cover flaps which is subject to tearing is stabilised by the fact that the lower transverse edge is disposed below the slot, which preferably terminates in a round hole. The fact that the cover flaps preferably widen in the direction of their free ends to a width greater than the width of the narrow side walls itself means that for a considerable flexing apart of the flap parts on the wide side walls, an advantageous funnel-like insertion opening is produced in the case, the freely projecting cover flaps encouraging the entry of the umbrella.

Two examples of cased umbrellas constructed in accordance with the invention are illustrated in the accompanying drawings, in which:

Figure 1 is a perspective view of one umbrella in a case, the umbrella being in the intermediate insertion position;

Figure 2 shows the case of Figure 1 with the umbrella in the final inserted position;

Figure 3 corresponds to Figure 1, but shows the umbrella and case before the handle is inserted in the case;

Figure 4 is a cross-section taken along line IV—IV of Figure 3;

Figure 5 is a perspective view of the raised umbrella of Figures 1 to 4;

Figure 6 is a perspective view of a second case, with an umbrella inserted therein shown in dot-dash lines;

Figure 7 is a perspective view of the case of Figure 6, with the insertion opening expanded;

Figure 8 is a cross-section taken along line VIII—VIII in Figure 6, to an enlarged scale and without the umbrella;

Figure 9 is a partial cross-section taken along line IX—IX in Figure 8; and,

Figure 10 is a partial plan of Figure 8.

The umbrella illustrated in Figures 1 to 5 collapses into a substantially rectangular cross-sectional shape transverse to the stick axis and has a stick 1 which comprises telescopic tubular members 2, 3, 4 whose extended position is secured by means of catches 5.

The tubular member 4 has at its lower end a handle 6 formed with outer, opposed pockets 7, 8 for receiving ends 9' of umbrella ribs 9. Between the pockets 7, 8, the handle 6 forms a shaft 10 which extends past the pockets by about twice their depth. Transverse lateral walls 11 of the shaft 10 taper in the direction of the axis of the shaft 10 towards a crown 20; the handle 6 also narrowing on all sides in the direction of its free end face 6', so that the receiving pockets 7, 8 are trough-like.

Running on the stick 1 is a main slider 12 having opposed wings 13 to which struts 14 are articulated, the struts 14 being connected via links 15 to the umbrella ribs 9. This is in accordance with our application No. 54305/69, accepted with Serial No. 1,199,834. Also running on the stick 1 is an auxiliary slider 16 having wings 17 to which auxiliary struts 18 are articulated, the auxiliary struts 18 cooperating with the supporting struts 14. The ribs 9 are pivoted to wings 19 of a crown 20.

The umbrella is closed and shortened from the Figure 5 configuration in the usual way, that is by releasing the main slider and drawing the main slider 12 along the stick towards the handle. As a result the ribs 9 and struts 14 and 18 fold down parallel to the stick 1. The umbrella is then shortened by pressing the handle 6 and rib tips 9' towards the crown 20 whereupon the stick 1 and ribs 9 shorten telescopically. The canopy is wrapped around the ribs and stick and the umbrella is ready for insertion into its case.

In its closed condition, the umbrella is placed in a correspondingly shaped case 21 of rectangular cross-section and made of a semi-rigid material. The sizes of the umbrella and case are so adapted to one another that the handle 6 of the umbrella when inserted fills and closes the insertion opening 22 in the case. Due to the shortened construction of the narrow side walls 23 of the case 21, the transverse side walls 6'' of the handle 6 are exposed in the outward direction when the umbrella is cased. This shortening is such that a portion x of the length of some of the rib end portions 9'' is also exposed.

At least those portions 24' of the two wide side walls 24 which project, as a result of the shortening, in the form of flaps are reinforced, for instance, by the insertion of a portion of a different material. To prevent

any tearing at the connecting place 25 between the narrow longitudinal side walls and the wide side walls, a recess 26 is produced in the narrow walls when cutting up the material and making the case.

5 The main slider 12 has supporting surfaces 27 against which the rib end portion 9'' bear on the inside. The supporting surfaces 27 are the end faces of the wings 13. 10 They can be flat, or, as shown in Figure 4, slightly curved, and are substantially aligned above the rib-receiving pockets 7, 8. At least two rib portions 9'' are disposed on each supporting surface.

15 Conveniently, to insert the umbrella in the case, it is first shortened by telescoping together the tubular members 2 and 3, while at the same time bringing the ribs 9 together. The whole umbrella frame then assumes a 20 rectangular cross-sectional shape and, after the ordering of the umbrella covering 28, is introduced completely or at first only partially, into the case 21. The actual introduction into the case encourages the ordering into 25 two bunches of the ribs, in cooperation with the slider supporting surfaces 27. The remaining, relatively short extended length of the tubular member 4 can then be telescoped by moving the handle 6 in the direction indicated by the arrow a in Figure 3. With 30 constrained control, the rib ends 9' enter the rib-receiving pockets 7, 8 and, at the same time, a sleeve part 12' of the slider 12 enters a socket in the shaft 10.

35 In the example shown in Figures 6 to 10, the umbrella itself is constructed exactly as in the example shown in Figures 1 to 5, more particularly as regards its collapsibility. The umbrella can be placed in a case 29. To 40 this end, the umbrella covering is put in order and laid around the umbrella body comprising the umbrella stick and the ribs, etc. The whole is then inserted into the case.

45 The shape of the case 29 is adapted to the shape of the umbrella and the case 29 has narrow side walls 30, wide side walls 31, a bottom 32 and an insertion opening 33. In the zone of the insertion opening 33, the narrow side walls 30 are formed with a longitudinal slot 34 open on the edge adjacent the 50 opening 33. On the inside of each slot 34, a covering flap 35 extends, the flaps 35 so screening the slot 34 that portions of an umbrella covering cannot enter the slot.

55 The covering flaps 35 are connected, in the present case by welding 38, by their lower transverse edge 36 and a portion y of the length of the two adjacent lateral edges 37, to the inner surface of the narrow side walls.

60 As shown in Figure 8, the lower transverse edge 36 is disposed a short distance below the slot 34 which extends into a round hole 34'. The covering flap 35 therefore provides a reinforcement for a zone which is particularly 65 susceptible to tearing. In practice, this zone

forms the hinging place for the flaps 39 which can be moved outwards and downwards into the position shown in Figure 7.

The covering flaps 35 widen in the direction of the free ends thereof and have a 70 width z larger than the width z' of the narrow side walls 30. As can be seen from Figure 7, the covering flaps 35, even though the flaps 39 are hinged downwardly, occupy an upright position pointing in the direction of the 75 continuation of the narrow side walls 30. The umbrella body to be inserted is guided along the inner surfaces of the covering flaps 35 which then, if necessary, yield.

The fact that the narrow side walls 30 80 are shorter than the wide side walls 31 means that finger apertures are left free for grasping the handle 6 to remove the umbrella.

To secure the inserted position, the casing 29 can have a retaining band 40, which 85 extends across the insertion aperture 33 and which has a press-stud top portion, in accordance with our copending application No. 9841/69 (Serial No. 1219375).

WHAT WE CLAIM IS:—

90 1. A cased, shortenable, flat umbrella having a substantially rectangular cross sectional shape transverse to the stick axis when closed, wherein the case has a correspondingly 95 substantially rectangular cross sectional shape formed by two opposed wide side walls and two opposed narrow side walls, with a bottom closure at one end and an insertion opening at the other upper end, the wide side walls 100 extending upwards beyond the narrow side walls to provide flaps on opposite sides of the opening and apertures above the narrow side walls, the arrangement being such that after 105 insertion of the umbrella into the case through the opening, the umbrella handle lies between the flaps and lateral surfaces of the handle are exposed in the apertures.

2. A cased umbrella according to claim 1, 110 in which the case is made of a semi-rigid material.

3. A cased umbrella according to claim 1 or claim 2, wherein the flaps and apertures are 115 sufficiently long to cause a part of the length of the rib end portions adjacent to the handle to be exposed through the apertures.

4. A cased umbrella according to any one of claims 1 to 3, wherein at least the flap part 120 of each wide side wall is reinforced.

5. A cased umbrella according to any one of the preceding claims, wherein a freely 125 projecting cover flap is disposed on the inside of each narrow side wall, behind an open ended longitudinal slot in each narrow side wall adjacent the aperture.

6. A cased umbrella according to claim 5, 125 wherein each cover flap is connected to the respective narrow side wall along a lower transverse edge of the cover flaps and a portion of each of its adjacent lateral edges.



any tearing at the connecting place 25 between the narrow longitudinal side walls and the wide side walls, a recess 26 is produced in the narrow walls when cutting up the material and making the case.

The main slider 12 has supporting surfaces 27 against which the rib end portion 9' bear on the inside. The supporting surfaces 27 are the end faces of the wings 13. They can be flat, or, as shown in Figure 4, slightly curved, and are substantially aligned above the rib-receiving pockets 7, 8. At least two rib portions 9' are disposed on each supporting surface.

Conveniently, to insert the umbrella in the case, it is first shortened by telescoping together the tubular members 2 and 3, while at the same time bringing the ribs 9 together. The whole umbrella frame then assumes a rectangular cross-sectional shape and, after the ordering of the umbrella covering 28, is introduced completely or at first only partially, into the case 21. The actual introduction into the case encourages the ordering into two bunches of the ribs, in cooperation with the slider supporting surfaces 27. The remaining, relatively short extended length of the tubular member 4 can then be telescoped by moving the handle 6 in the direction indicated by the arrow a in Figure 3. With constrained control, the rib ends 9' enter the rib-receiving pockets 7, 8 and, at the same time, a sleeve part 12' of the slider 12 enters a socket in the shaft 10.

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The shape of the case 29 is adapted to the shape of the umbrella and the case 29 has narrow side walls 30, wide side walls 31, a bottom 32 and an insertion opening 33. In the zone of the insertion opening 33, the narrow side walls 30 are formed with a longitudinal slot 34 open on the edge adjacent the opening 33. On the inside of each slot 34, a covering flap 35 extends, the flaps 35 so screening the slot 34 that portions of an umbrella covering cannot enter the slot.

The covering flaps 35 are connected, in the present case by welding 38, by their lower transverse edge 36 and a portion y of the length of the two adjacent lateral edges 37, to the inner surface of the narrow side walls.

As shown in Figure 8, the lower transverse edge 36 is disposed a short distance below the slot 34 which extends into a round hole 34'. The covering flap 35 therefore provides a reinforcement for a zone which is particularly susceptible to tearing. In practice, this zone

forms the hinging place for the flaps 39 which can be moved outwards and downwards into the position shown in Figure 7.

The covering flaps 35 widen in the direction of the free ends thereof and have a width z larger than the width z' of the narrow side walls 30. As can be seen from Figure 7, the covering flaps 35, even though the flaps 39 are hinged downwardly, occupy an upright position pointing in the direction of the continuation of the narrow side walls 30. The umbrella body to be inserted is guided along the inner surfaces of the covering flaps 35 which then, if necessary, yield.

The fact that the narrow side walls 30 are shorter than the wide side walls 31 means that finger apertures are left free for grasping the handle 6 to remove the umbrella.

To secure the inserted position, the casing 29 can have a retaining band 40, which extends across the insertion aperture 33 and which has a press-stud top portion, in accordance with our copending application No. 9841/69 (Serial No. 1219375).

WHAT WE CLAIM IS:—

1. A cased, shortenable, flat umbrella having a substantially rectangular cross sectional shape transverse to the stick axis when closed, wherein the case has a correspondingly substantially rectangular cross sectional shape formed by two opposed wide side walls and two opposed narrow side walls, with a bottom closure at one end and an insertion opening at the other upper end, the wide side walls extending upwards beyond the narrow side walls to provide flaps on opposite sides of the opening and apertures above the narrow side walls, the arrangement being such that after insertion of the umbrella into the case through the opening, the umbrella handle lies between the flaps and lateral surfaces of the handle are exposed in the apertures.

2. A cased umbrella according to claim 1, in which the case is made of a semi-rigid material.

3. A cased umbrella according to claim 1 or claim 2, wherein the flaps and apertures are sufficiently long to cause a part of the length of the rib end portions adjacent to the handle to be exposed through the apertures.

4. A cased umbrella according to any one of claims 1 to 3, wherein at least the flap part of each wide side wall is reinforced.

5. A cased umbrella according to any one of the preceding claims, wherein a freely projecting cover flap is disposed on the inside of each narrow side wall, behind an open ended longitudinal slot in each narrow side wall adjacent the aperture.

6. A cased umbrella according to claim 5, wherein each cover flap is connected to the respective narrow side wall along a lower transverse edge of the cover flaps and a portion of each of its adjacent lateral edges.

7. A cased umbrella according to claim 6, wherein the connections are effected by welding.

5 8. A cased umbrella according to claim 6 or 7, wherein the lower transverse edge of each cover flap is disposed below the respective slot.

10 9. A cased umbrella according to claim 5, 6, 7 or 8, wherein each slot terminates at its closed end in a substantially round hole.

10. A cased umbrella according to any one of claims 5 to 9, wherein the upper transverse

edge of each cover flap is wider than the width of the narrow side walls.

11. A cased umbrella according to claim 1, substantially as hereinbefore described with reference to Figures 1 to 5, or to Figures 6 to 10, of the accompanying drawings.

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