

[54] UMBRELLA HANDLE

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[58] Field of Search 135/20, 36 R, 36 TP, 36 F,
135/44, 46 R, 46 F, 46 SH, 46 M, 46 T, 26, 25, 33,
47, 47 M

[56]

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[57]

ABSTRACT

An umbrella handle comprising a hollow handle body and a snap-lock cap adapted to engage the body and a handle strap anchored to the cap. Snap-lock means in the cap are adapted to anchor with the cap and the strap to the interior of the handle body.

10 Claims, 10 Drawing Figures

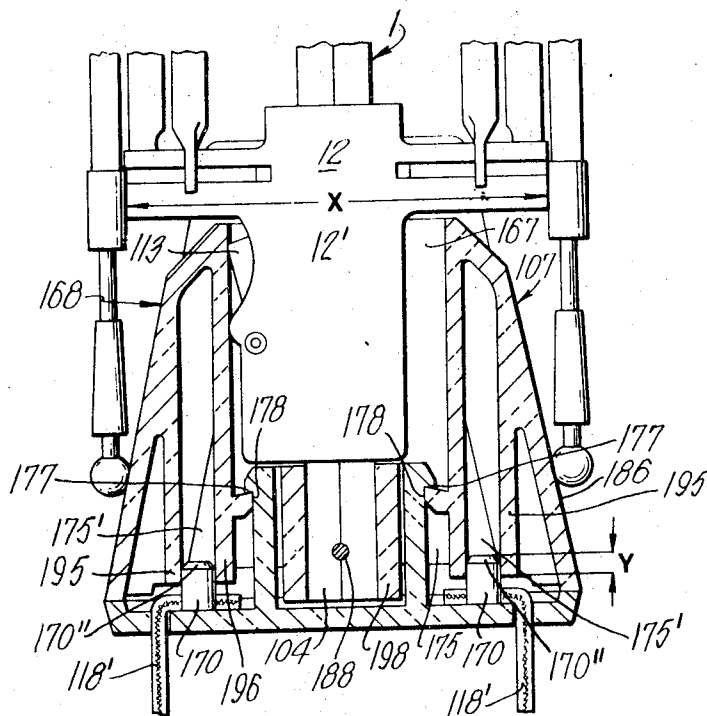
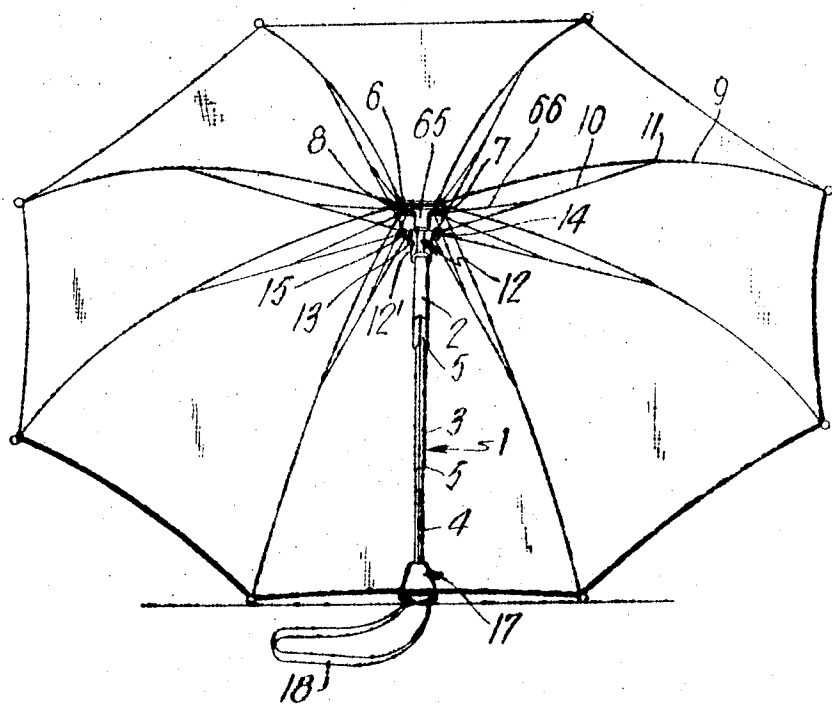


FIG. 1



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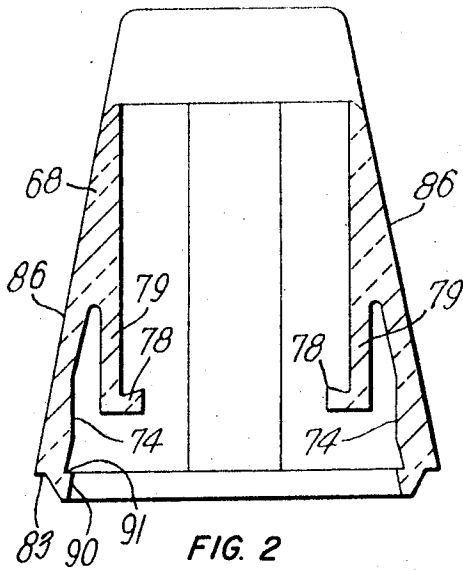


FIG. 2

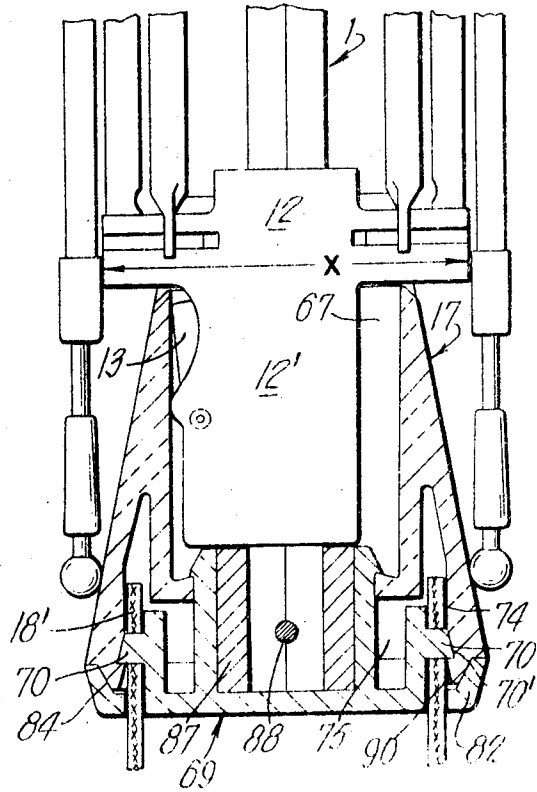


FIG. 4

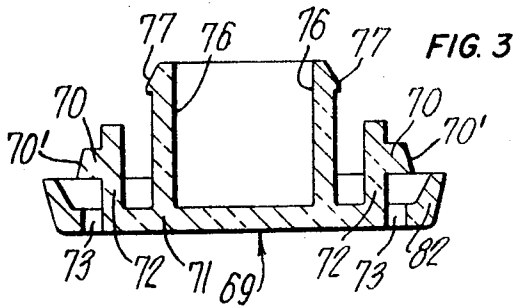
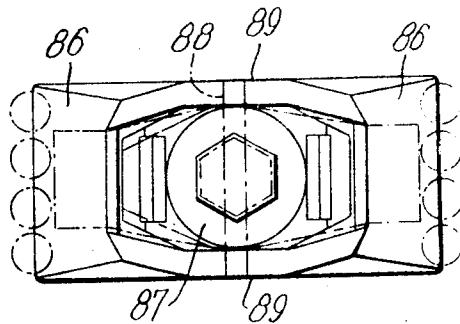


FIG. 3

FIG. 5



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FIG. 6

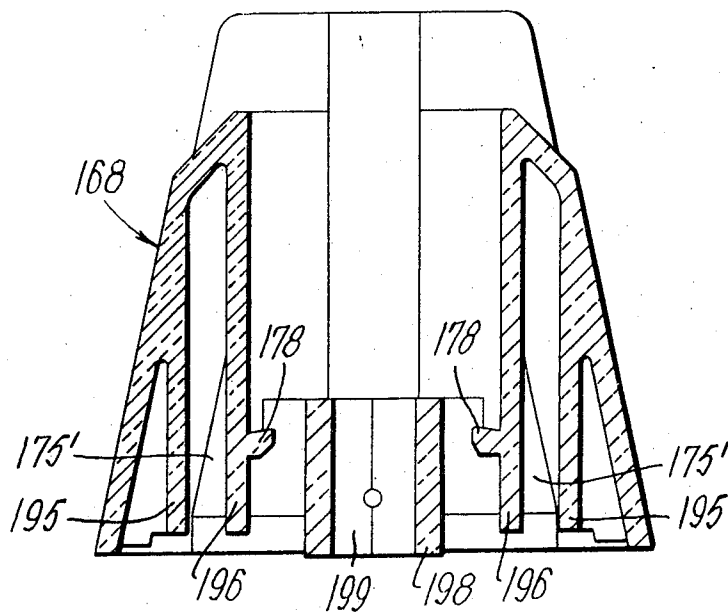


FIG. 7

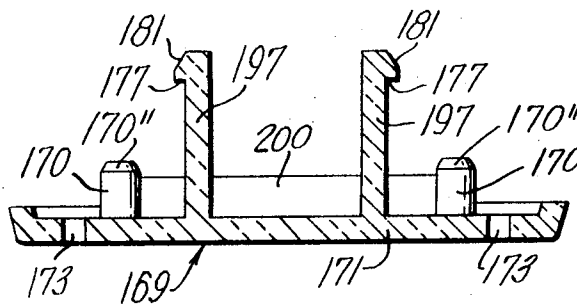
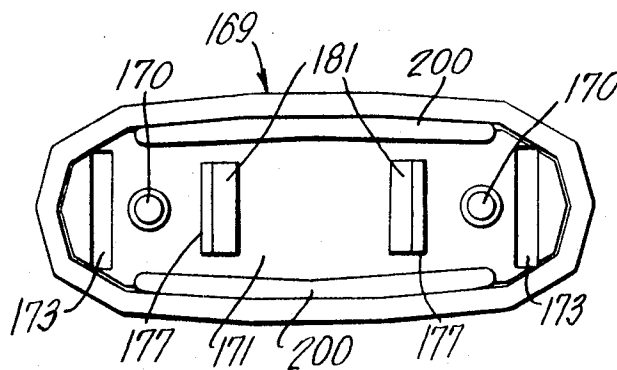


FIG. 8



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FIG. 9

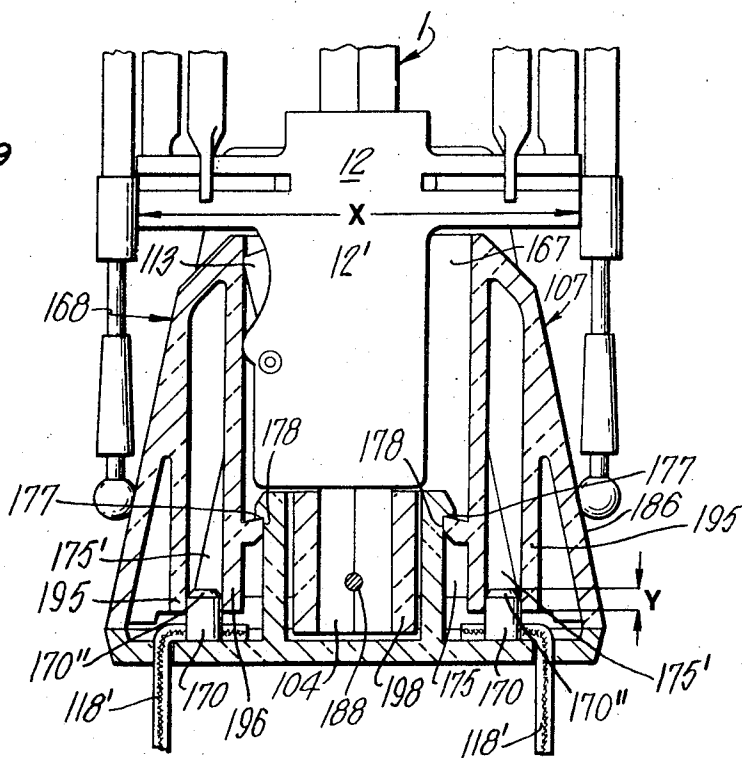
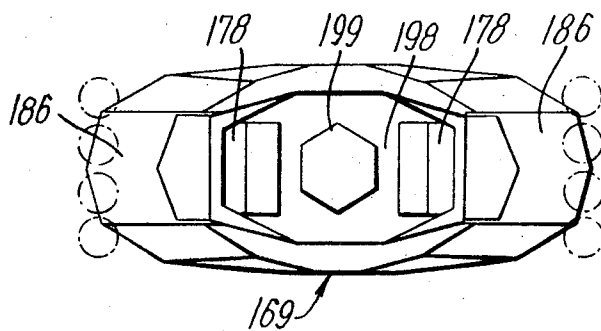


FIG. 10

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UMBRELLA HANDLE

The present invention relates to a handle for an umbrella, and especially to an umbrella of the telescopic type which assumes a flattened condition when collapsed.

In copending application, Ser. No. 820,603, filed Apr. 30, 1969, issued as U.S. Pat. No. 3,580,262 on May 5, 1971, there is provided a handle and a carrying strap. The ends of the carrying strap are anchored within the body of the handle. A cap is snapped to the body of the handle.

A configuration of this kind makes it possible to anchor the ends of the carrying strap satisfactorily in the body of the umbrella handle, in such a manner that the anchoring means in question are hidden from view.

It is an aim of the present invention to provide the anchor means for the strap on the cap and to provide a more positive snap lock on the cap for engaging the body of the handle.

According to the invention snap-lock cap includes a centrally located upstanding projection integral with the cap and having a locking flange adapted to engage mating shoulders within the body of the handle.

As a result of this configuration, the carrying strap and the handle is of a simpler and more compact form. The areas in which the ends of the carrying strap are located are hidden from view. No securing means, such as screws, spring washers, etc., for anchoring the strap are required. Assembly is still further simplified as a result of the fact that the ends of the strap are now anchored on retaining lugs on the cap itself. This permits pre-assembly of the carrying strap and cap. This unit may then be fitted to the handle merely by snapping it on to the handle body. Fitting of the ends of the carrying strap involves merely threading the ends through slots provided in the web of the cap and lying adjacent the retaining lugs. Fitting of the cap is also facilitated by the fact that these inner walls have beveled guide surfaces cooperating with similar surfaces on the handle. Optimal retention of the cap is obtained as a result of the design proposed by the invention, namely to provide the cap with a central projection projecting into the handle cavity and engaging by means of reversed hooks, with the internal retaining shoulders in the said handle.

Having thus generally described the nature of the invention, it will now be referred to in more detail by reference to the accompanying drawings, illustrating preferred embodiments of the invention, and in which:

FIG. 1 is a perspective view of a typical flat umbrella in an opened position;

FIG. 2 is an enlarged vertical cross-sectional view of one embodiment of the handle body;

FIG. 3 is a cross-sectional view of the snap-on cap;

FIG. 4 is an enlarged vertical cross section of an assembled handle;

FIG. 5 shows a plan view of the umbrella handle;

FIG. 6 is a vertical cross section of a detail of the body of another embodiment of the handle in vertical section;

FIG. 7 is a cross section of the snap-on cap associated with the said handle;

FIG. 8 is a plan view of the said cap;

FIG. 9 is a cross section of the umbrella handle assembled; and

FIG. 10 is a plan view of the umbrella handle.

The umbrella has an umbrella stick 1 comprising three telescoping tubes 2, 3 and 4. The extended position is secured by catches 5. Tube 2 has the largest diameter, and this guides tube 3 which is of correspondingly smaller diameter. Tube 4 finally has the smallest diameter.

Umbrella stick 1 mounts a crown 6 at its upper end. In a so-called flat umbrella, the latter is of rectangular cross section, and dome ribs 9 are hinged thereto in the region of diametrically opposed narrow lateral extensions 7, 8. All the dome ribs 9 are of the same length.

When the umbrella is open, dome ribs 9 are supported by struts 10 hinged thereto at 11. The other end of the struts 10 are hinged to the main runner 12, the shape of which is adapted to the flat shape of the umbrella, and has a guide sleeve 12' formed on it and provided with slide-locking lever 13.

Located between the main runner and the crown 6 is auxiliary runner 65 with hinge means to support struts 10 by means of stretcher members 66 hinged from its diametrically opposed narrow lateral extensions.

Guide sleeve 12' of runner 12 has diametrically opposed extensions 14, 15 projecting beyond the general cross section of the sleeve to which the support struts 10 will be hinged. When the umbrella is in its collapsed condition, the sleeve 12' enters into a recess 67 defined in a handle 17 attached to umbrella stick 1.

Umbrella handle 17 is provided with a carrying strap 18.

Referring now to FIGS. 2 and 3, the umbrella handle 17 comprises a handle body 68 and a snap-on cap 69 adapted to be fitted thereto.

Before the two parts of the handle 17 are assembled, strap ends 18' are attached to push-on cap 69. The latter has two anchor lugs 72. These are spaced apart in relation to the axis of the umbrella stick, and extend parallel thereto. The retaining lugs 72 have projections 70 extending laterally outwardly. The lugs 72 are integral with web 71 of the cap 69. Slots 73 are defined in web 71 of the cap 69 and are adjacent the lugs 72. The cross section of the slots 73 may be adapted to the cross section of the ends 18' of the strap 18. In the assembled condition, see FIG. 4, the locking end 70' of the projection 70 is directly in front of inner wall 74 of handle recess 75.

The cap 69 is provided with an upstanding central projection 76. A flanged hook 77 is provided at the upper end of the projection 76. The flanged hook 77 cooperates with an associated retaining shoulder 78 in handle body 68. The retaining shoulders 78 project inwardly, from bottom walls 79 defining the handle recess 67.

Wall 82 of cap 69 diverges outwardly about the edge of the cap. Corresponding horizontal surface 83 continues inwardly in an oblique surface 84. This oblique surface helps align the cap when it is being snapped on the handle body.

The general shape of the handle is trapezoidal so that it extends beyond the largest dimension "x" of the main runner 12 and it also makes it easier to carry the open umbrella, since this shape corresponds to the anatomical shape of the hand.

A space-saving arrangement of the dome ribs is made possible. As may be seen in FIG. 5, these come to rest in front of the lateral ends 86 of the handle.

As may be seen in FIG. 4, the projection 76 can define a cylindrical recess to accommodate filler sleeve 87, the inside dimensions of which correspond to the cross-sectional shape of the bottom of umbrella stick tube 4. The cross section of the filler sleeve 87 may be circular, hexagonal or even octagonal. The filler sleeve 87 also contributes to improving the anchorage of the umbrella stick to handle 17. The construction is such that a transverse pin 88 passes through the filler sleeve 87, projection 76, umbrella stick 1, and the walls 89 of handle body 68.

Both parts of the handle may be made of plastic. When these parts are pressed together, slightly bending of the web 71 makes it possible to bring flanged hooks 77 far enough over retaining shoulders 68 to produce a permanent tension between the two parts.

When pressing the parts together, it is an advantage that inner wall 74 forms a beveled guide surface 90. As may be seen in FIGS. 2 to 4, projection 70 of cap 69 is located behind a shoulder 91 on inner wall 74 of the handle, when assembled. Guide surface 90 also facilitates the passage of retaining lug 70 over shoulder 91. Freely projecting wall 72, from which retaining lug 70 issues, deviates resiliently during the snapping process. Guide surface 90 and retaining lug end face 70' have the same angle of bevel.

In the embodiment shown in FIGS. 6 to 10, the umbrella handle 117 is provided with a carrying strap 118. The handle comprises a handle body 168 and a snap-on cap 169 associated therewith.

Before the two parts of the handle are joined together, strap ends 118' are connected to cap 169.

To this end, the cap 117 is provided with anchor pins 170. These extend parallel with the axis of the umbrella stick.

Furthermore, they extend directly from the bottom 171 of the cap and point in the direction of the interior of the handle body. Retaining pins 170 are of circular cross section. Their free ends terminate in the shape of a truncated cone 170'. The said pins are integral with the bottom 171 of the cap in the immediate vicinity of slots 173, through which pass ends 181' of the carrying strap 118 which are to be anchored. The cross section of the slot 173 is adapted dimensionally to the size of strap 118.

In the assembled condition, the free ends of retaining pins 170 each enter a recess 175' in the body 168 of the handle, overlapping the dimension "y" transverse walls 195 and 196 forming the recess 175. The walls 195, 196 are materially integral with handle body 168 and extend in the longitudinal direction thereof. The recess 175 extends to the top of the handle body 168.

The anchorage for the ends of the carrying strap is hidden from view. Moreover, there are not securing means such as retaining screws, spring washers, etc. The retaining pins for the ends 118' of the carrying strap 118, now extending upwards from the bottom of the cap 169, may be made far longer because of the adequate free space available in the longitudinal direction of the body of the handle 168. During pre-assembly, therefore, the ends 118' of the carrying strap 118 may be much more easily attached. The length of the pins 170 eliminates the danger of the restoring force of the material of the strap 118 loosening its connection to the body 168 of the handle. The retaining pins may also be made larger in cross section. The structural arrangement, according to the invention, of allowing the free ends of the retaining pins to enter into a recess in the body of the handle completely rules out the possibility of the retaining pins buckling when subjected to high tensile forces. Instead, the ends of the retaining pins projecting into the recesses 175' are adequately secured by the transverse walls running in the longitudinal direction of the body of the handle, especially the outer transverse walls in the said handle 117. In this connection, it is also of advantage for the transverse walls lying adjacent the center axis, which also form the defining walls of the main runner entry seat, to carry the retaining shoulders for the snap-on attachment of the cap at a distance from the end overlapping the retaining pins. The retaining pins 170, entering between the transverse walls when the cap is clipped on, largely prevent the retaining shoulders 178 from deflecting under the application of high tensile forces. Instead, the shoulders 178 are supported by the retaining pins 170 standing immediately behind the corresponding transverse walls 196. It is, therefore, also possible not only to make the body of the handle of plastic, but also to make the walls thereof extremely thin.

Retaining shoulders 178 project from the transverse walls 196. These shoulders project into recess 167, cooperating with flanged hooks 177 on cap 169 which produce the required snap-on attachment. Flanged hooks 177 are integral with central projection 197, extending upwardly from cap bottom 171, to which they are injection molded. Once the attachment is made, it cannot be undone without a special device, except by breaking it, since the retaining pins provided according to the invention, support the ends of transverse walls 196. Moreover, central projections 197 carrying flanged hooks 177 can bend inwardly only to a limited extent because of stick housing section 198 which holds the bottom end of the

umbrella stick and extends between the said projections. The section 198 defines a recess 199 having a similar cross section as that of the stick. The attachment element is in the form of a transverse pin 188 which passes through the umbrella stick section 198, and the outer walls of the handle body 168.

The body 168 of the handle and the snap-on cap butt together. Lateral centering is effected by means of two ribs 200 running from cap bottom 171, whereas the immovable location in the direction of the longest length of the cap bottom is also assisted by retaining pins 170.

I claim:

1. A handle for an umbrella comprising means for receiving an umbrella stick, a handle gripping portion, a cap portion adapted to be connected to the handle gripping portion, a flexible carrying strap, anchor means on said cap portion adapted to anchor the ends of said carrying strap, said cap portion and said handle gripping portion defining a recess whereby when said carrying strap and cap portion are assembled with said handle gripping portion, the anchor means on said cap and the ends of the carrying strap are within the confines of said recess and hidden from view.

2. A handle as defined in claim 1 wherein the cap includes a centrally located axially extending projection, flanged hook means on the free end of said projection, flanged hook receiving shoulders provided in said handle and adapted to receive the flanged hook means of said central projection.

3. A handle as defined in claim 2 wherein a pair of axially extending lugs are provided on said cap adapted to extend within the recess thereby defined, said lugs being spaced apart from each other and being diametrically opposed from the axially extending central projection, slots in said cap adjacent the lugs for passing the ends of the carrying strap and means provided on said lugs for anchoring the ends of said carrying strap.

4. A handle as defined in claim 3 wherein said lugs include snap-lock projections adapted to engage mating snap-lock seats defined on the walls of said handle defining said interior recess in said handle.

5. A handle as defined in claim 1 wherein the general outline of said handle is trapezoidal in shape.

6. A handle as defined in claim 2 wherein the central projection defines a recess and a filler sleeve mounted in said recess and connected to the projection, and the filler sleeve is adapted to receive the end of an umbrella stick.

7. A handle as defined in claim 6 wherein the pin passes through the handle body, the central projection, the filler sleeve and the umbrella stick to lock said members together.

8. A handle as defined in claim 4 wherein the upstanding lugs include laterally extending projections adapted to engage a mating seat in the walls of the handle gripping portion on the interior of said recess, and the ends of said straps are anchored to said laterally extending projections.

9. A handle as defined in claim 3 wherein the upstanding lugs are adapted to be received in axially defined recesses in the gripping portion of the handle and the ends of said carrying strap are anchored over the lugs proper, with the ends of the lugs fitted within the said recesses.

10. A handle as defined in claim 9 wherein the wall defining the innermost portion of the axial lug receiving recesses is common to the wall mounting the flanged hook receiving shoulders.

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