United States Patent

Weber

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[54] HANDLE FOR UMBRELLA

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[52] **U.S. Cl.**.....**135/20,** 135/25

[51] **Int. Cl.**.....**A45b 25/00**

[58] **Field of Search**.....135/20–26, 44

[56] **References Cited**

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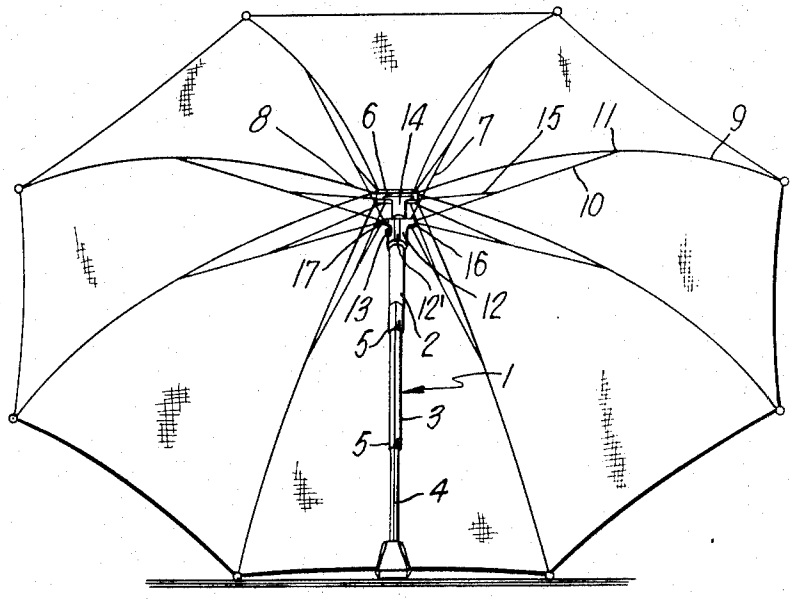
[57] **ABSTRACT**

A handle for use with an umbrella which assumes a flat rectangular cross sectional shape when collapsed wherein the handle is of a trapezoidal outline and is of flat cross section.

7 Claims, 5 Drawing Figures



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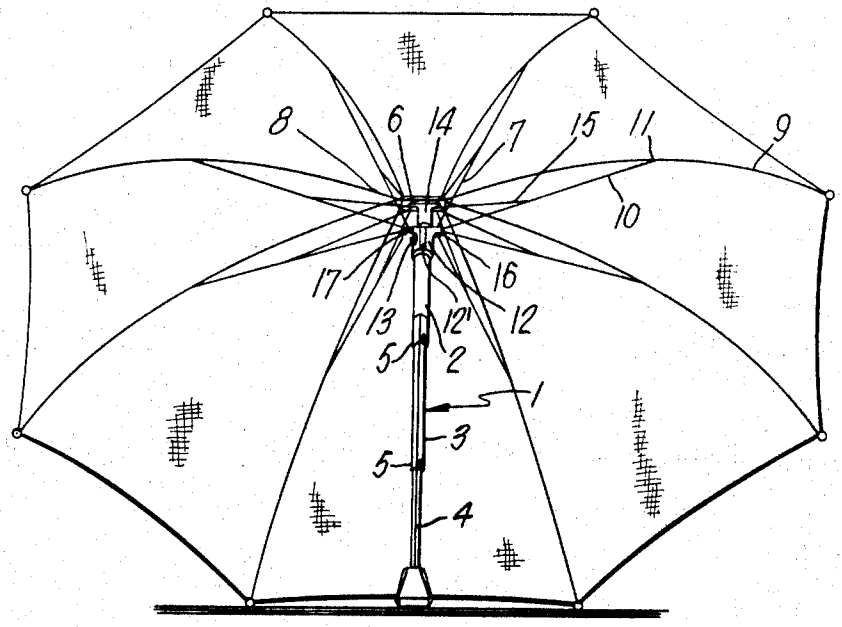

FIG. 1

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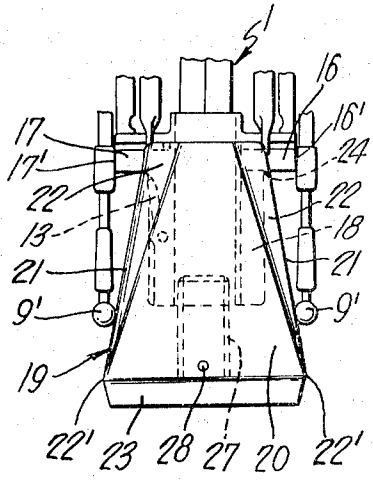

FIG. 2

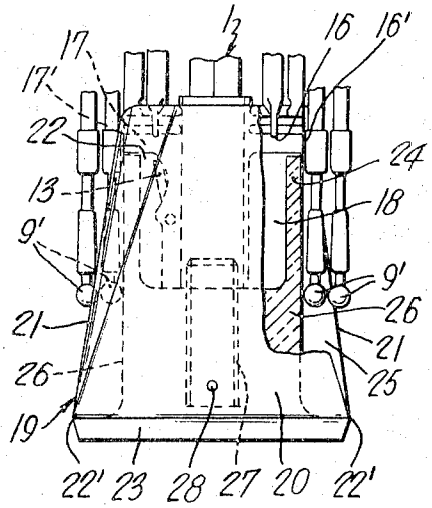

FIG. 4

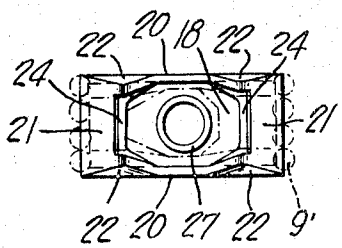

FIG. 3

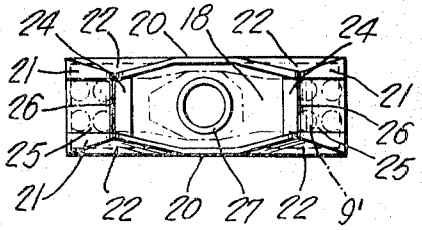

FIG. 5

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HANDLE FOR UMBRELLA

BACKGROUND OF INVENTION

1. Field of Invention

The present invention relates to an umbrella of the telescopic type which assumes a flat rectangular package when collapsed in the closed condition, and particularly to a handle for use with this type of umbrella.

2. Description of Prior Art

In umbrellas of this type, the handle defines with the umbrella crown the shape the umbrella will assume when collapsed and when carried in a sheath. However, corresponding structural shapes of the handle are frequently not comfortable to carry, since usually little attention is paid to the shape of the carrying hand.

SUMMARY OF INVENTION

It is the aim of the present invention to design an umbrella of this kind in such a manner that the carrying handle thereof is more convenient to carry and provides more satisfactory accommodation for arranging the ends of the telescoped or folded dome ribs.

According to the present invention, this aim is accomplished in that the wide sides of the handle are of trapezoidal shape, while the substantially rectangular narrow sides converge towards the umbrella stick.

In this connection, it is of advantage, according to the present invention for the wide sides to project beyond the edges of the narrow sides near the umbrella stick, and for the handle to have an axial recess for receiving the main runner.

According to the present invention a satisfactory configuration is also obtained by aligning the largest cross section of the handle approximately with the end-faces of the main runner lateral extensions.

On the other hand, another satisfactory solution according to the innovation consists in that pocket-shaped recesses extend from the narrow sides.

It is also of advantage according to the present invention for the wide walls to be divided into segments in the area of the longitudinal edge, to form preferably triangular segments, the apex of which lies in the area of maximal handle cross section.

Finally, the present invention proposes that the handle shall taper from its maximal cross section to the bottom in the shape of a truncated pyramid.

In conclusion it is also of advantage, according to the present invention, for the narrow sides of the handle to taper towards the umbrella stick.

This results in a flat umbrella of a more satisfactory and simpler configuration, meeting the requirement of a compact shape. The shape is determined by the trapezoidal configuration of the wide sides of the handle. The narrow sides thus converge towards the umbrella stick. The open umbrella is easier to carry, since the trapezoidal shape selected adequately matches the dimensional conditions of the carrying hand. Above all, the trapezoidal shape makes it possible to obtain a larger, i.e. longer handle shape, since the ends of the dome ribs can enter the lateral angular seat resulting from the trapezoidal shape. In spite of this, the bottom of the handle provides an adequately covered end at the handle end of the casing. The structural arrangement, whereby the wide sides are allowed to project beyond the edges of the narrow sides near the umbrella stick, provides not only a radial location for the main runner mainly equipped with diametrically opposite lateral extensions but also a configuration adapted to the compact structural shape sought. Since in the area of its maximal cross section, the handle is in approximate alignment with the end faces of the main runner lateral extensions already mentioned, the width of the flat umbrella is kept within limits. In the case of larger structural shapes, it is advisable to provide pocket-shaped recesses on the narrow sides into which the ends of the dome ribs may enter. Here again the shape is such that the bottoms of the said recesses are in approximate alignment with the end faces of the main runner lateral extensions.

The proposed segmented edge zones in the region between the narrow and the wide sides eliminate the natural sharp edges in this area. Since the triangle apex of the segments extend in the region of maximal cross section, this provides the advantage that, at least in this region, a rectangular cross section adapted to the desired cross sectional shape of the umbrella is obtained. The fact that the narrow sides of the handle taper towards the umbrella stick not only facilitates the introduction of the umbrella handle into a sheath during the final shortening of the umbrella stick, but also produces oblique surfaces directed towards the narrow sides of the handle, and these in cooperation with the sheath, steer the ends of the dome ribs positively into the free angular space or into the pocket-shaped recesses in the region of the narrow sides.

In the Drawings:

Having thus generally described the nature of the invention, it shall now be described in detail with reference to the accompanying drawing illustrating two embodiments thereof and in which:

FIG. 1 is a perspective view showing a flat umbrella in the open and erected position;

FIG. 2 is a side elevation of the umbrella handle;

FIG. 3 is a top plan view thereof;

FIG. 4 is a side elevation partly in cross section of another embodiment of the handle; and

FIG. 5 is a top plan view of the handle shown in FIG. 4.

The umbrella has an umbrella stick **1** comprising three telescoping tubular members **2**, **3**, and **4**. The extended positions are secured by means of catches **5**.

Tubular stick member **2** is the largest in diameter. Tubular stick member **3** correspondingly smaller in diameter is guided therein. Finally, tubular stick member **4** is the smallest in diameter.

Located at the top of umbrella stick **1** is crown **6**, of rectangular cross section. Dome ribs **9** are hinged to crown **6** in the region of diametrically opposed narrow extensions **7** and **8**. The dome ribs **9** are all of the same length.

When the umbrella is open, dome ribs **9** are supported by struts **10** hinged to the said dome ribs at **11**. The umbrella stick ends of support struts **10** are seated on main runner **12**, which is adapted to the flat shape of the umbrella, and has a guide sleeve moulded on to it mounting a slide locking lever **13**.

Located between the main slide and crown **6** is auxiliary runner **14** hinged to support struts **10** by auxiliary struts **15** running from its diametrically opposed narrow edges.

Guides sleeve **12'** of runner **12** exhibits diametrically opposed lateral extensions **16** and **17** projecting beyond the general cross section of the sleeve, the said forming the hinge locations for support struts **10**. When the umbrella is in the shortened condition, the said sleeve **12'** enters into a recess **18** in the handle **19** attached to umbrella stick **1**.

The handle **19** is trapezoidal in shape.

The trapezoidal shape is determined by wide side walls **20** shaped accordingly.

Narrow sides **21** are substantially rectangular. They converge towards umbrella stick **1**.

The edge zones between wide walls **20** and narrow walls **21** are divided into segments **22**. The segments **22** are triangular in shape, so that apex **22'** lies in the region of maximal handle cross section.

From this region of maximal cross section, handle **19** tapers downwards into a handle bottom **23** in the form of a truncated pyramid.

The forming of the segments **22** requires that narrow sides **21** of handle **19** taper slightly towards the umbrella stick. In spite of this, in the region where dome rib ends **9'** lie against the narrow walls, the surface remaining is large enough to bring about a grouping in rows of the dome rib ends **9'** (dotted lines in FIG. 3.)

In conjunction with an end opening sheath of corresponding cross section, segments **22** assist in the grouping of the dome rib ends, since the said segments are at an angle to the narrow

sides of the body of the handle and thus force the dome rib ends into the proper position when the handle is inserted into the tautly enclosing sheath.

Wide sides **20** project above the edge **24** of narrow sides **21** near the umbrella stick. This provides an entry recess for wings **16,17** on main slide **12**.

Thus far, except for dimensional differences, the two embodiments of execution follow the same principles of construction and the reference numerals are therefore the same.

The configuration according to FIGS. **4** and **5** differs from that according to FIGS. **2** and **3** in that pocket-shaped recesses **25** run from narrow sides **21**. As may be seen clearly in FIG. **4**, inner face **26** of this recess **25** is in alignment with end faces **16'**, **17'** of lateral extension **16, 17** of main runner **12**. Recess **25** terminates before handle bottom **23** i.e. in the region of maximal cross section of the handle. Visually, therefore, the closed design of the body of the handle is retained.

Recesses **25** are dimensioned in such a manner that the dome rib ends are grouped in fours.

In the configuration according to FIGS. **2** and **3**, end faces **16'**, **17'** of main slide wings **16, 17** are substantially in alignment with the maximal cross sectional face of the handle, the said handle being smaller than that in FIGS. **4** and **5**. It may therefore be used for a ladies' umbrella.

Both configurations have a centering pin **27** located on the axis of the umbrella stick which, in addition to centering the main runner, it also provides a stabilizing anchorage for the umbrella stick in the handle. Pin **27** is therefore made hollow, so that final tubular piece **4** can enter thereinto as far as anchoring pin **28**.

I claim:

1. In an umbrella having a relatively flat cross sectional shape in a closed condition thereof, an umbrella stick; dome ribs pivotally connected to one end of said stick in diametrically opposed groups; a main runner reciprocably supported on said stick and having support struts pivotally connected in groups corresponding to the dome ribs and pivotally connected intermediately of said dome ribs, said runner having a depending guide sleeve,

said main runner having diametrically opposed extensions; and a relatively flat handle connected to the other end of said handle extending diametrically in the same general direction as said respective groups of ribs,

said dome ribs having portions oriented adjacent diametrically opposed side portions of said handle when said umbrella is closed, the improvement in which said handle has relatively wide side walls trapezoidal in side elevation and substantially narrow rectangular sides converging towards said stick and terminating in a transverse top edge disposed inwardly of the outermost transverse portion of the handle therebelow, said wide side walls projecting upwardly beyond the transverse top edge of the narrow sides and flanking above a recess in said handle receiving said depending guide sleeve of said runner when the umbrella is closed, said runner extensions being received between said flanking walls above the top edges of said narrow sides, the dome rib portions abuttingly engaging outer ends of said runner extensions and projecting therebelow substantially within the area defined by the maximum width of the widest portion of said handle when the umbrella is closed.

2. An umbrella according to claim **1**, characterized in that pocket-shaped recesses extend in the narrow end walls, the bottoms of the said recesses being approximately in alignment with the end faces of lateral extensions of a main runner.

3. An umbrella according to claim **1**, characterized in that the wide side walls define triangular segments of the end walls, the apex of which is located in the area of maximal handle cross section.

4. An umbrella according to claim **1**, characterized in that from its maximal cross section, the handle tapers towards the bottom in the form of a truncated pyramid.

5. An umbrella according to claim **1**, characterized in that the narrow end walls of the handle taper towards the umbrella stick.

6. The structure as claimed in claim **1**, in which said narrow sides comprise transverse flat walls depending from said transverse top edge to lower maximum width of said handle.

7. The structure as claimed in claim **6** in which said wide side walls include inverted pairs of triangular segments at outer edges thereof and flanking said transverse flat walls, the apex of said segments being located substantially at the maximal lower cross section of said handle.

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