

[54] HANDLE FOR UMBRELLA

[75] Inventor: **Heinz Weber**, Hilden, Germany

[73] Assignee: **Telesco Brophey Limited**, Montreal,
Quebec, Canada

[22] Filed: **Aug. 20, 1973**

[21] Appl. No.: 389,499

Related U.S. Application Data

[63] Continuation of Ser. No. 164,736, July 21, 1973, abandoned.

[30] Foreign Application Priority Data

July 24, 1970 Germany..... 2036701

[52] U.S. Cl..... 135/46 M, 135/25 R, 135/46 T

[51] Int. Cl. A45b 9/02

[58] **Field of Search** 135/20-27,
135/44, 46 M, 46 SH, 46 T

[56] References Cited

UNITED STATES PATENTS

1,885,968	11/1932	Wedemann	135/25 R X
2,221,288	11/1940	Okun	135/44 X

2,717,609	9/1955	Zimmermann.....	135/46 T
3,411,519	11/1968	Weber.....	135/46 T X
3,678,949	7/1972	Weber.....	135/25 R X
3,799,180	3/1974	Weber.....	135/46 M

FOREIGN PATENTS OR APPLICATIONS

2,003,612	11/1969	France	135/44
-----------	---------	--------------	--------

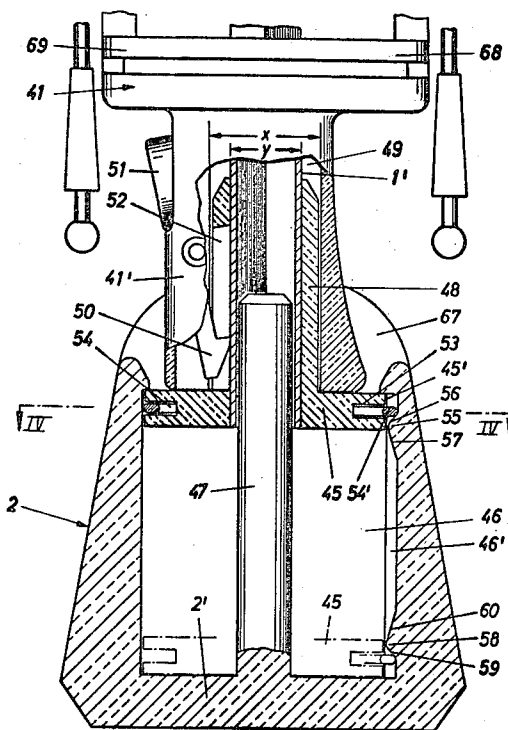
Primary Examiner—J. Karl Bell

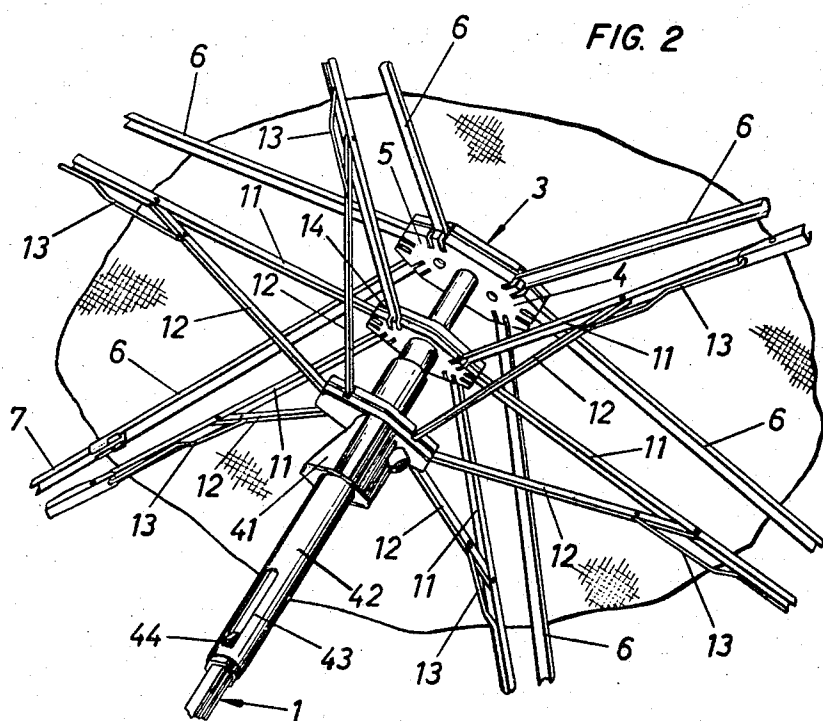
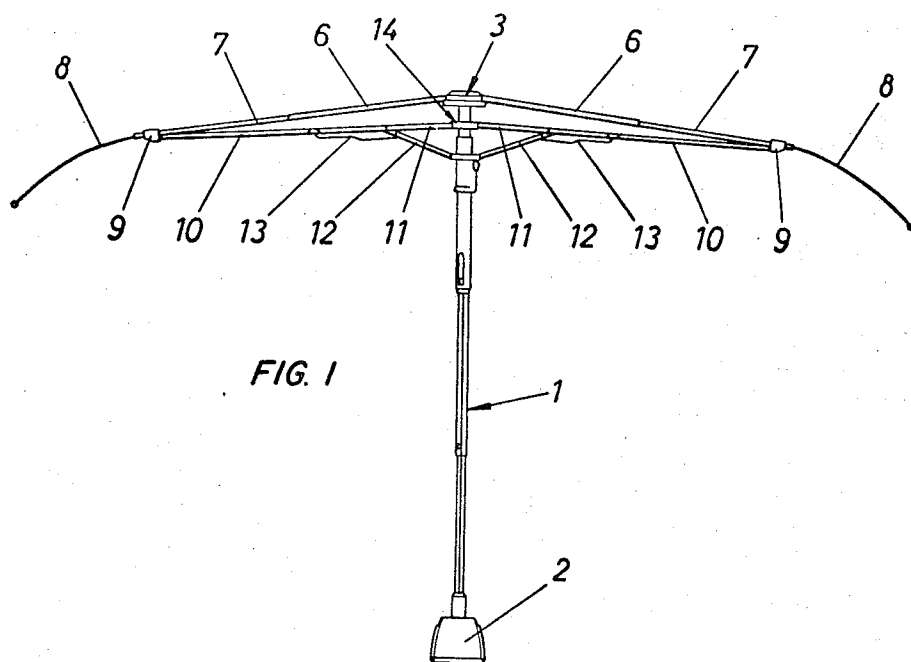
Attorney, Agent, or Firm—Robert E. Mitchell; Alan Swabey

[57] **ABSTRACT**

The handle of an umbrella telescopes on the stick in order to reduce the overall length of the stick and handle when the umbrella is collapsed to a closed condition. The embodiment discussed in the specification includes a handle having a recess axially defined therein, a stem centrally and axially extending from the bottom of the recess and sliding within the hollow stick and a flanged bottom wall extending from the bottom of the stick having a periphery corresponding to the cross section of the recess in the handle.

5 Claims, 6 Drawing Figures





INVENTOR
Heinz WEBER

Alan S. Stryker
ATTORNEY

FIG. 3

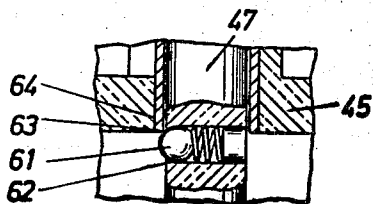
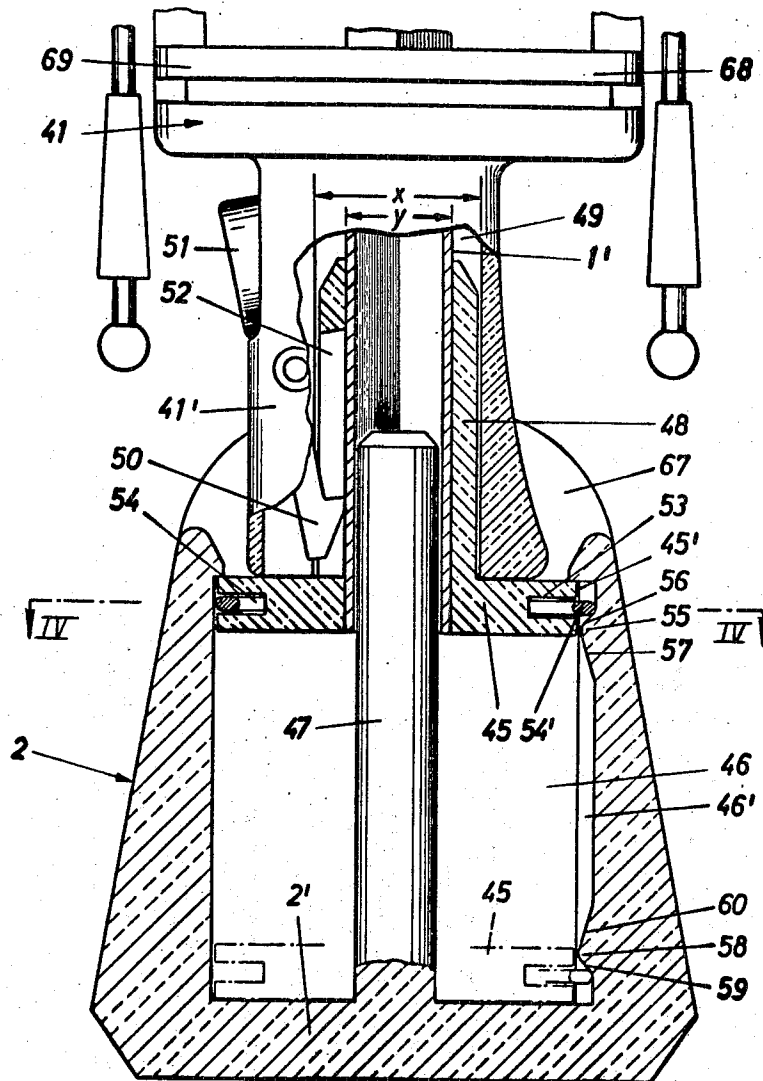


FIG. 5

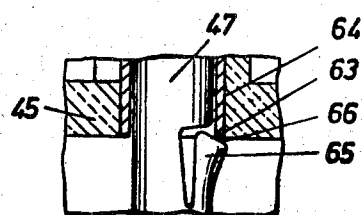
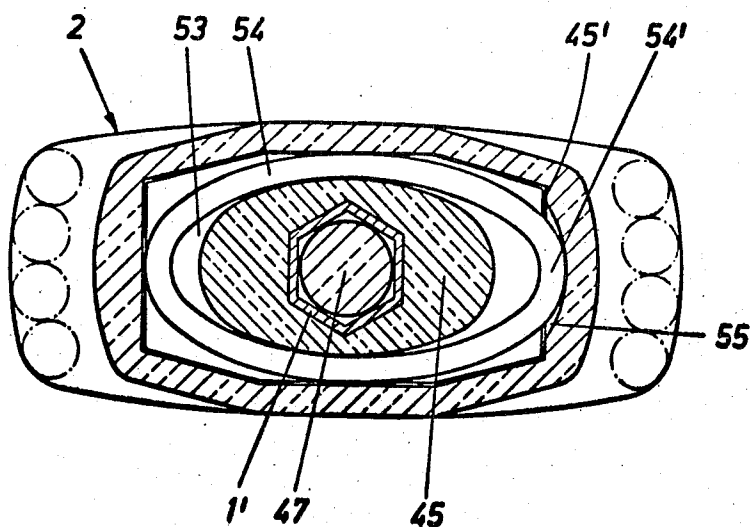


FIG. 6

INVENTOR
Heinz WEBER

Alan Sinsky
ATTORNEY

FIG. 4



INVENTOR
Heinz WEBER

Alan Strakey
ATTORNEY

HANDLE FOR UMBRELLA

This is a continuation of application Ser. No. 164,736, filed July 21, 1973, now abandoned.

BACKGROUND OF INVENTION

1. Field of Invention

The present invention relates to a telescopic umbrella and particularly to an improved handle for a telescopic umbrella.

2. Description of Prior Art

In the development of the telescopic umbrella, the quest has been to reduce the size of the umbrella as much as possible when the umbrella is in a closed condition, but maintaining the stability and size of a non-telescopic umbrella when the umbrella is in an open condition.

In applicant's copending application Ser. No. 035,184, filed May 6, 1970 now U.S. Pat. No. 3,699,988, an umbrella is described which has a stick made up of three telescopic sections and dome ribs, having three telescopic sections, hinged to the crown at one end of the stick. The overall length of the closed umbrella, of such a "three-stage umbrella" is considerably reduced as compared with the average two-stage telescopic umbrella, and the overall diameter or width of the umbrella is considerably reduced from a three-stage umbrella wherein the outer dome rib section is folded over the two telescoping sections of the dome ribs.

However, it has been noted that, when the three-stage umbrella is in its extended position, ready for use, the umbrella handle and stick combined is slightly shorter than what would normally be convenient. It is noted that, in the telescopic umbrellas, the handle is recessed axially and that the stick is fixed to the bottom of the recess so that, when the handle is being closed, the sliding main runner on the stick slips into the recess and is almost completely hidden from view. However, although the overall length of the handle and stick is considerably reduced when the umbrella is folded, it is not at the desired length when the umbrella is fully extended.

SUMMARY OF INVENTION

It is an aim of the present invention to provide a handle and stick wherein the handle telescopes onto the stick when the umbrella is being closed, and the handle can be extended relative to the stick when the umbrella is being opened, to give an overall greater length to the combined length of the stick and handle.

A construction in accordance with the present invention includes an umbrella handle mounted at one end of a hollow umbrella stick wherein the handle has an axially recessed portion defined by side walls and a bottom wall of the handle. There is a centering stem fixed to the bottom wall and which extends axially within the umbrella stick and releasable stop means for retaining the handle in one of a handle extended position and a handle telescoped position.

In a more specific embodiment of the present invention, the umbrella stick is provided with a flange at the bottom thereof, which has a periphery corresponding to the cross section of the recess defined by the side walls of the handle, and the stop means are associated with the flange. The flange is adapted to slide within the recess of the handle.

BRIEF DESCRIPTION OF THE DRAWINGS

Having thus generally described the nature of the invention, reference will now be made to the accompanying drawings, showing by way of illustration, preferred embodiments thereof, and in which:

FIG. 1 is a schematic view of an umbrella in an open condition;

FIG. 2 is a fragmentary perspective view of the umbrella in an open condition;

FIG. 3 is an enlarged detailed view in side elevation, partly in vertical cross section of a detail of the umbrella;

FIG. 4 is a horizontal cross section taken along lines 4—4 of FIG. 3;

FIG. 5 is a fragmentary cross-sectional view of a detail of the umbrella; and

FIG. 6 is a fragmentary cross-sectional view of a detail of an embodiment different from that of FIG. 5.

The umbrella shown in the Figures, particularly FIGS. 1 and 2 is a three-stage umbrella having a three-sectional telescopic stick and three-sectional telescopic dome ribs. The telescopic stick 1 mounts a handle 2 at one end thereof. At the top end of the stick 1 is a crown 3. The particular umbrella shown in FIGS. 1 and 2 is of the type generally referred to as a flat umbrella. The crown 3 extends laterally of the stick 1 and is narrow in the perpendicular direction. The lateral extensions are identified as extensions 4 and 5 in the drawings.

Hinged to the crown 3 are dome rib sections 6, which are of U-shaped cross section, with the opening of the U in the downward direction when the umbrella is open. The dome rib section 6 is adapted to receive the middle section 7 of the dome rib, which in turn is adapted to receive the outer section 8 of the three-stage dome rib. The stretcher member section 10 is hinged at one end to an auxiliary runner 14 and at the other end to a stretcher section 11 which in turn is hinged to a geats 9 attached to the outer dome rib section 8 and adapted to slide on the mid section 7 as well as the inner section 6 of the dome ribs. Struts 12 are hinged to the main runner 41 and to the mid point of stretcher member section 11. Finally, a link member 13 is connected to the struts 12 and the end of the stretcher member section 10 to form a quadrilateral structure with the stretcher members 10 and 11 and the strut member 12.

The dome ribs section 6 which are hinged to the crown 3 are hinged thereto by means of a wire passing peripherally about the crown and a groove provided therefor. Below the groove are pairs of individual slots 15 and 16 arranged side by side and parallel with each other. Each pair of slots 15 and 16 are adapted to receive the legs of the U-shaped dome ribs section 6, that is, 27 and 28, respectively. The web 29 of the U-shaped dome ribs section 6 passes over the portion between the slots 15 and 16.

The auxiliary runner 14 has a sleeve 42 extending therefrom coaxial with the stick. The main runner 41 is adapted to pass over the sleeve 42. The sleeve 42 has a longitudinal slot 43 which cooperates with a catch 44 on the umbrella stick 1 to ensure that when the umbrella stick 1 is fully extended, the auxiliary runner 14 stops at a predetermined distance from the crown 3. The lower stick section 1', which is of tubular cross section, mounts a flange 45 which extends in a plane normal to the axis of the stick.

The handle 2 has a bottom wall 2' and side walls extending upward from the bottom wall 2' along the periphery thereof. A recess 46 is defined by the bottom wall 2' and the handle side walls. The umbrella stick flange 45 includes a sleeve 48 coaxial with the stick and extending upwardly therefrom about the stick and fixed thereto. A slot 52 is provided in the side of the sleeve 48 for cooperation with the catch 50 of the catch lever 51, provided in the downwardly extending sleeve 41' of runner 41, as shown in FIG. 3.

The flange 45 is retained either in a position where the umbrella is fully extended as shown in FIG. 3 or in a position shown in dotted lines in FIG. 3 where the handle is telescoped onto the stick by means of a snap catch. This snap catch is provided in an annular groove 53 and is in the form of a snap spring 54 and has a slightly bulged-out portion 54' adapted to engage the projection 55 in the inside face of the recess 46 on the side walls of the handle 2. A groove 46' is provided between the projections 55 and 58 near the bottom 2' and sloped walls 57 and 60 are provided respectively, to each projection 55 and 58. The projections form a locking groove on either side thereof and are provided with sloping surfaces 56 and 59, respectively.

In operation, as the umbrella is open to the fully-extended position, the handle is made to assume the position shown in FIG. 3, with the spring 54 engaged beyond the projection 55. If it is required to close the umbrella, it is necessary to tap the bottom 2' of the handle so as to overcome the resilience of the spring 54 on the projection 55 and to push the handle so that the stem 47 slides within the handle stick section 1' until the flange 45 arrives at a position shown in dotted lines in FIG. 3.

In another embodiment, instead of the springs 54 and projections 55, ball spring catches, such as shown in FIG. 5 can be provided. In this embodiment, the stem 47 includes a lateral recess in which a spring 62 and a ball 61 are provided. The ball slips under the edge 63 of the passage 64 associated with the end of the stick 1'.

In FIG. 6, another embodiment is provided in which a pawl 65, which is formed out of the material of the stem 47 engages the end of the passage 64 in the umbrella stick.

As can be seen from the drawings, the runner 41 sits over the sleeve 48 of the flange 45 and reaches close to the end of the stick section 1'. As the handle is closed, the side walls of the handle 2 cover all sides of the sleeve 41' of the runner 41 and the extensions 67 of the side walls protrude above the lateral extensions 68, 69 of the main runner to cover it. The extensions themselves, 68 and 69, project over the edges of the other side walls of the handle 2.

I claim:

1. In a collapsible umbrella including a handle

mounted at one end of a hollow stick comprising a plurality of telescopic sections having cross sections respectively decreasing from the handle, the handle having an axial recess defined by side and bottom walls, a centering stem fixed to the bottom wall and extending axially within the lowermost stick section of the umbrella stick for guiding relative movement therebetween, a sleeve telescopically and fixedly secured about the lowermost stick section and increasing the cross section of the stick section thereat, said sleeve having a slot therealong for removably receiving a lock lever catch therein, said sleeve including an integral flange having a periphery substantially conforming to the axial recess of the handle and reciprocable therein; limiting stop means operatively connected between said handle and said stick and sleeve flange for limiting flange movement of said flange relative to the handle recess during an extended or retracted position corresponding to respective erected or collapsed conditions of the umbrella; and a main runner slidably mounted on said stick and having catch-lever-and-catch means thereon and including a catch displaceably engagable with the slot along said sleeve, said runner having a cross-section receivable in the axial recess of said handle and movable into the axial recess when the umbrella is collapsed.

2. The structure as claimed in claim 1 in which said main runner has an upper tubular projection, a second runner slidably supported of the stick above said main runner, said second runner having a depending sleeve upon which said main runner reciprocates when the umbrella is erected, said depending sleeve of the second runner overlying the sleeve secured to the lowermost stick section when the umbrella is collapsed.

3. The structure as claimed in claim 1 in which said main runner has lateral extensions, said handle having upper, spaced axial extensions, said handle enclosing said main runner and lateral extensions thereof when the umbrella is collapsed.

4. An umbrella as defined in claim 1 wherein the limiting stop means includes a snap ring provided in the periphery of the flange, and seats on the side wall of the handle near the top thereof and near the bottom thereof for engagement by said snap ring, whereby the handle can be retained in position, when the flange is at the top of the handle, thereby keeping the handle in its fully-extended position and a position at the bottom of the handle, when the handle is in its telescoped position, relative to the stick.

5. An umbrella handle as defined in claim 1, wherein there is a spring and ball arrangement provided in the stem and adapted to engage the edge of the umbrella stick for stopping the handle in one position or the other.

* * * * *