Sept. 22, 1964 S. N. SMALL 3,149,638

TILTABLE SUPPORT FOR UMBRELLAS

Filed May 19, 1961

FIG. 2A

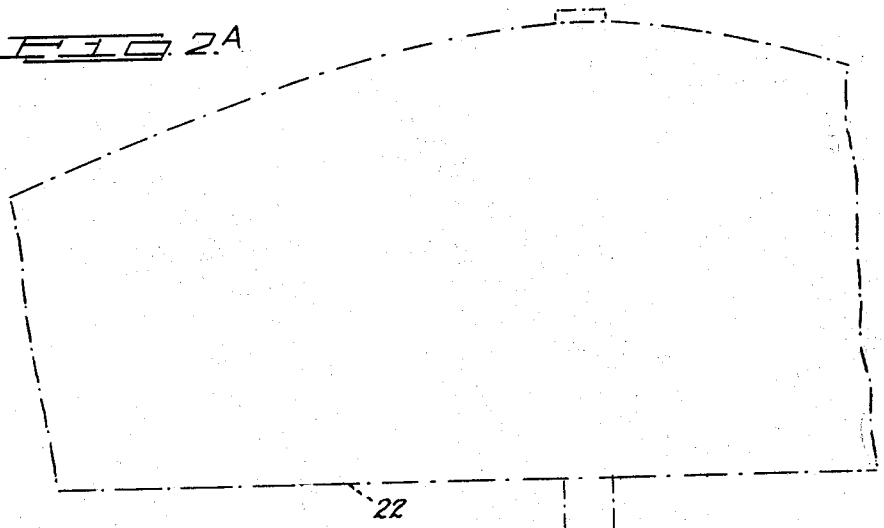


FIG. 1

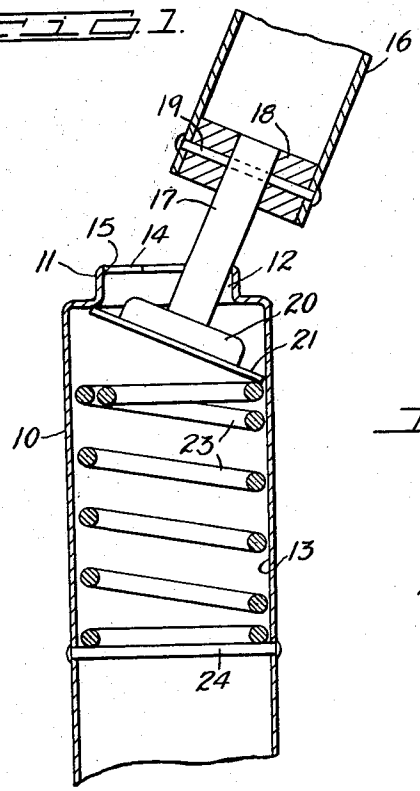


FIG. 2

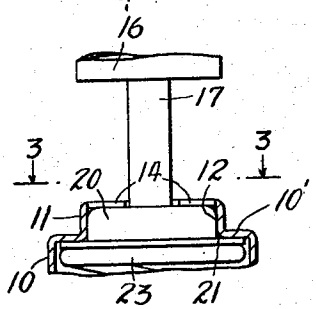
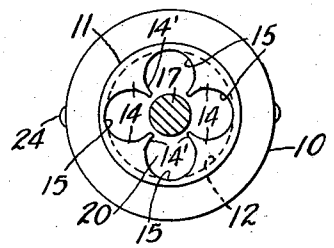


FIG. 3



INVENTOR.
SAMUEL N. SMALL
BY
Howard C. Thompson
ATTORNEY

United States Patent Office 3,149,638 Patented Sept. 22, 1964

3,149,638

TILTABLE SUPPORT FOR UMBRELLAS

Samuel N. Small, Valley Stream, N.Y., assignor to Alfred G. Cohen and Paul Weiss, Flushing, N.Y.

Filed May 19, 1961, Ser. No. 111,321
2 Claims. (Cl. 135—46)

This invention relates to umbrellas of various sizes and particularly to the provision of a support, in connection with which the umbrella post is mounted for supporting an umbrella in several tilted positions. Further, the invention deals with a supporting structure of the character described which is simple and economical in construction and which will facilitate quick and easy manual movement of an umbrella into different tilted positions and for supporting the same in such tilted positions.

The novel features of the invention will be best understood from the following description, when taken together with the accompanying drawing, in which certain embodiments of the invention are disclosed and, in which, the separate parts are designated by suitable reference characters in each of the views and, in which:

FIG. 1 is a sectional view through the upper portion of a support and the lower portion of an umbrella post, with parts of the construction shown in elevation and indicating the post in a titlted position.

FIG. 2 is a detail view of the upper portion of the support and illustrating the umbrella post in elevation in non-tilted position in said support.

FIG. 2A is a dot-dash showing of a portion of an umbrella top and part of the post, with the umbrella top in upright or non-tilted position, the post being on a reduced scale with respect to the showing in FIGS. 1 and 2; and

FIG. 3 is a section on the line 3—3 of FIG. 2.

With umbrellas of the type and kind under consideration, rather intricate mechanisms are employed for moving and supporting umbrella tops in tilted positions with respect to their posts or supports for the umbrella and the object of my present invention is to provide a very simple and economical means for moving an umbrella from an upright to one of several tilted positions by manual movement and with a supporting structure of simple and economical construction. While the support herein shown is adapted for use in conjunction with umbrellas of various sizes, the structure in question is especially desirable for use in conjunction with the medium or smaller type of umbrellas used in conjunction with chairs and the like for producing shade to a single individual.

In illustrating one adaptation and use of my invention, I have shown, in FIG. 1 of the drawing, a tubular support **10**, the lower part of which is broken away, it being understood that the lower portion of this support can have any means for mounting the same or for attachment of the same to a fixed support. The upper end of the support **10** has a contracted collar **11**, forming a socket **12** of reduced diameter with respect to the bore **13** of the support **10**. The upper end of the collar **11** has an inwardly extending flange in the form of four bearing portions **14**. In other words, the flange is cut away to form four recesses **15**, between which the bearing portions **14** are arranged. The bearing portions **14** also form top wall portions, partially closing the socket **12**. This structure will be clearly apparent from a consideration of FIG. 3 of the drawing.

At **16** I have shown the lower end portion of a tubular post, to the lower end of which is fixed a plunger **17** seating in a ring or washer **18**, the plunger and ring being secured to the post by a rivet pin **19**, as clearly illustrated in FIG. 1 of the drawing. The plunger **17** projects beyond the end of the post and terminates in a disc-type head **20** having a lower outwardly projecting annular flange **21**. The head **20** is adapted to fit snugly in the socket **12** when the post **16** is in upright position or, in other words, when the umbrella top, indicated in part in dot-dash lines at **22** in FIG. 2A of the drawing, is in upright position. The snug fit of the head **20** in the socket **12** results from shaping the socket **12** to conform with the contour of the head **20**. However, in moving the umbrella or the post **16** into the tilted position, as indicated in FIG. 1 of the drawing, the post **16** is manually forced downwardly in the direction of the support **10** to disengage the head **20** from the socket **12**. This movement is against the tension of a coil spring **23** arranged in the upper portion of the support **10**, the lower end of the spring seating upon a transverse rivet **24** in the support **10**. After the head **20** has cleared the socket, the post **16** can be moved into any one of the recesses **15**, positioning the post and the umbrella top in an angular position. The spring **23** will urge the head, including the flange **21** thereof, upwardly and the post will be retained in the angular position noted in FIG. 1, the showing of the position of the head and the spring being diagrammatic in this figure. To return the umbrella to the upright position, all that is essential is to again apply downward pressure on the post **16** to compress the spring **23** and, then, swing the post into its upright position, as noted in FIG. 2, and the spring will operate to return the head **20** for positioning in the socket **12**. It will be noted, from a consideration of FIG. 3 of the drawing, that, in the foregoing operation, the plunger **17** yieldably passes over spring finger projections **14'** on the portions **14**, so that the plunger **17** snaps into the recesses **15** and is forcibly removed therefrom in bringing the plunger into the position shown in section in FIG. 3. This structure is to prevent accidental displacement of the plunger **17** from any one of the sockets. It will also be understood that the bearing portions **14** serve to engage sides of the plunger **17** when in tilted position to key the plunger in position or, in other words, prevent swinging movement of the plunger **17** or the post **16** with respect to the support.

In either position of the umbrella, the post, including the umbrella top, will be firmly retained in position in connection with the support. When the parts are in the position shown in FIG. 2 of the drawing, it will appear that the annular flange **21** bears directly upon the inwardly offset wall **10'** of the support, thus relieving any strain upon the bearing portions **14**.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In tiltable umbrellas having an umbrella post, a support including a tubular portion with a reduced diameter socket projecting from the upper terminal end of the tubular portion, the boundary wall of the socket forming a collar concentric to the axis of said tubular portion, the post including a projecting plunger having a disc-type head end normally conforming to and fitting snugly in the socket of said support, the collar of the socket having an upper

horizontal flange at right angles to said collar, said flange including circumferentially spaced recesses adapted to receive said plunger at a position spaced with respect to said head in tilted positions of the post with respect to said support, a coil spring mounted in said support and operatively engaging said head to urge the head in the direction of the socket of said support, the upper flange of the socket having bearing portions between said recesses for keying the post against swinging movement in the support, said bearing portions terminating in spring finger ends, and said spring finger ends being flexed in movement of the plunger into and out of said recesses.

2. An umbrella as defined in claim 1, wherein said head includes a projecting annular flange at its lower end arranged at all times in the upper tubular portion of said

support, and the terminal end of the support being engaged by the flange in checking outward movement of the plunger with respect to the support.

References Cited in the file of this patent

UNITED STATES PATENTS

896,445	Fredericks	Aug. 18, 1908
1,435,363	Wood	Nov. 14, 1922
1,528,967	Bersted	Mar. 10, 1925
1,996,071	Kahn	Apr. 2, 1935
2,096,966	Hufferd	Oct. 26, 1937
2,752,116	Minnis	June 26, 1956

FOREIGN PATENTS

1,151,258	France	Aug. 19, 1957