Feb. 22, 1949. E. SCHMIDT 2,462,560

TILTABLE UMBRELLA

Filed Oct. 28, 1947

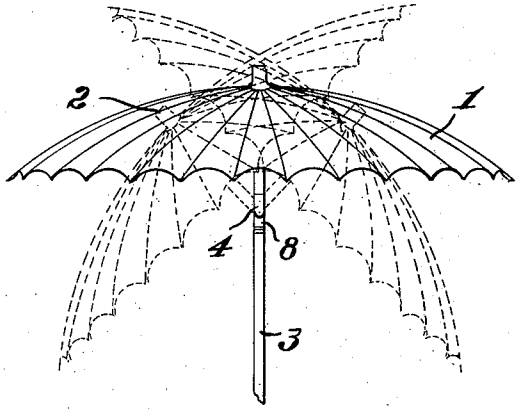


Fig. 1

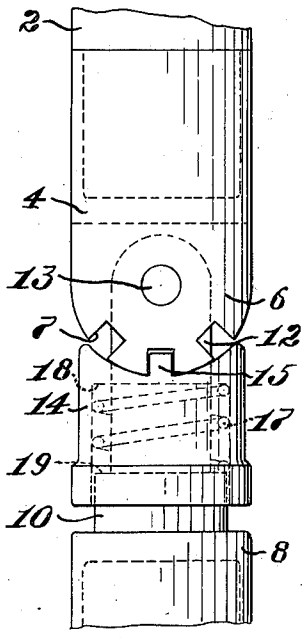


Fig. 2

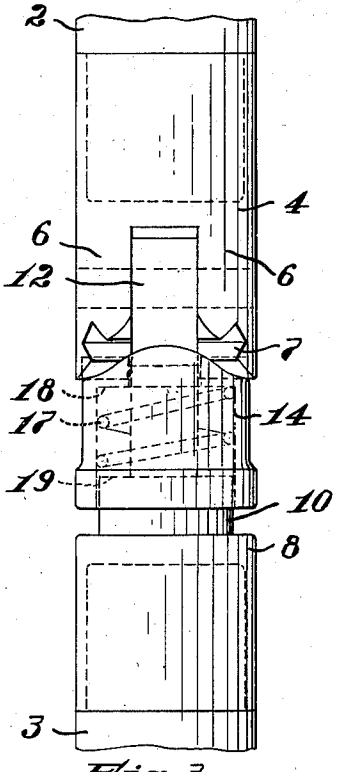


Fig. 3

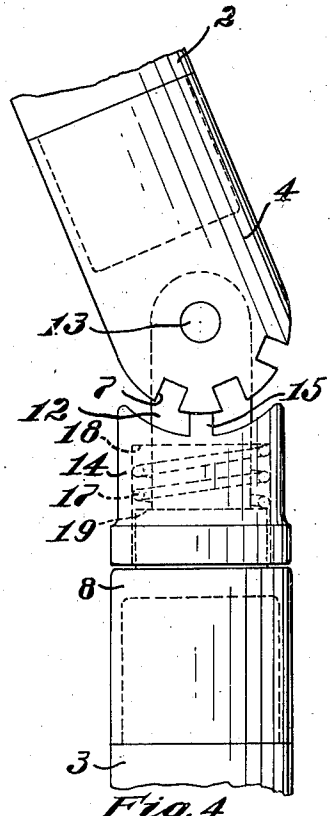


Fig. 4

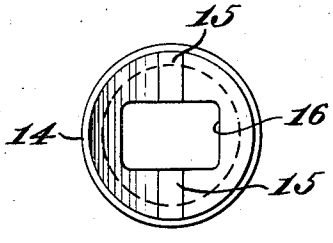


Fig. 5

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Patented Feb. 22, 1949 2,462,560

UNITED STATES PATENT OFFICE

2,462,560

TILTABLE UMBRELLA

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Application October 28, 1947, Serial No. 782,486

2 Claims. (Cl. 135—46)

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This invention relates to tiltable umbrellas of the type used on beaches and in gardens where it is desirable to tilt the canopy at different angles to the staff, depending upon the position of the sun, in order to cast the shadow in the desired location. Various attempts have been made to produce umbrellas of this type but they have not been satisfactory for various reasons, chiefly because the adjusting mechanism is difficult to operate by women and children or because the mechanism fails to hold the canopy in adjusted position against strong wind pressures.

Objects of the present invention are to provide an umbrella of the type referred to which can be adjusted to various positions easily and quickly, which does not have a complicated mechanism to get out of order, which is held in adjusted position without aid of a pin or other detachable part likely to be lost or misplaced, which is durable and reliable in use, and which is neat and attractive in appearance.

According to the present invention the umbrella comprises a staff divided into upper and lower sections with two members fitted over the opposed ends of the two sections and means pivotally interconnecting the two members to permit the upper staff section to incline relatively to the lower staff section, one of the members having a series of sockets directed toward the other member, in combination with a sleeve fitting slidably on the other member and movable toward and from the sockets, the sleeve having a tooth opposed to and selectively engageable with the socket so as positively to lock the upper section in adjusted position. If the sleeve is associated with the upper member it can drop into locking position by gravity, but if mounted on the lower member a spring is required to lift it into locking position.

For the purpose of illustration a particular embodiment of the invention is shown in the accompanying drawing in which:

Fig. 1 is a side view of the umbrella;

Fig. 2 is a side view of the juxtaposed ends of the staff sections with the upper section in upright position;

Fig. 3 is a similar view from a direction at right-angles to that of Fig. 2;

Fig. 4 is a view similar to Fig. 2 showing the upper section in tilted position and the aforesaid sleeve retracted to permit pivotal movement of the upper section; and

Fig. 5 is an end view of the aforesaid sleeve.

The particular embodiment of the invention chosen for the purpose of illustration comprises

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a canopy 1 and upper and lower staff sections 2 and 3. Fitting over the lower end of the upper section is a member 4 which receives the end of the staff and has a bifurcated end comprising two legs 6 having flat inner faces spaced apart and semi-circular ends provided with three pairs of aligned sockets 7.

Fitted over the upper end of the lower staff section is a member 8 which receives the end of the staff and has a cylindrical neck 10 of reduced diameter and a tongue 12 projecting upwardly from the center of the neck, the width of the tongue being slightly less than the width of the space between the legs 6 so that the tongue fits loosely between the legs and the upper end of the tongue being rounded to permit the aforesaid tilting action. The two members 4 and 8 are pivotally interconnected by a pin 13.

Slidably fitted over the lower member 8 is a sleeve 14 provided on its upper end with a pair of teeth 15 to interlock with the pairs of sockets in the legs 6 of the upper member. As shown in Figs. 2 to 4 the upper end of the sleeve 14 is shaped to fit the rounded ends of lugs 6. The upper end of the sleeve is also provided with a rectangular opening 16 to accommodate the tongue 12 and the inner diameter of the sleeve is somewhat greater than the diagonal cross-sectional dimension of the tongue to accommodate a compression spring 17. Between the tongue and sleeve, the upper end of the spring bears against the shoulder 18 extending from the opening 16 to the inner periphery of the sleeve and the lower end bearing on the shoulder 19 at the junction between the neck 10 and the tongue 12.

To tilt the canopy from one position to another the sleeve 14 is pulled down from the position shown in Figs. 2 and 3 to the position shown in Fig. 4 and after the upper section of the staff has been tilted to the inclined position the sleeve is released to permit the spring 17 to snap it back to the position shown in Fig. 2 in which position the upper section is firmly locked in adjusted position by the teeth 15 interlocking with a pair of the sockets 7.

From the foregoing it will be evident that the adjusting mechanism is simple and neat, that it can be adjusted quickly and easily even by women and children, that it holds the canopy firmly in adjusted position against heavy wind pressure, and that there is no removable part to get lost or misplaced.

It should be understood that the present disclosure is for the purposes of illustration only and that this invention includes all modifications

and equivalents which fall within the scope of the appended claims.

I claim:

1. A tiltable umbrella comprising a staff divided into upper and lower sections, a bifurcated member and a tongued member fitting on the opposed ends of the staff sections, means pivotally interconnecting said members to permit the upper staff section to incline relatively to the lower staff section, a series of sockets on the bifurcated member directed toward the tongued member, a sleeve fitting slidably on the tongued member and movable toward and from the sockets, a tooth on the sleeve, said tooth being opposed to and selectively engageable with the sockets so as positively to lock the upper staff section in adjusted position, and resilient means urging the sleeve toward the bifurcated member to hold the tooth in one of said sockets.

2. A tiltable umbrella comprising a staff divided into upper and lower sections, a bifurcated member and a tongued member fitting on the opposed end of the staff sections, means pivotally interconnecting said members to permit the upper staff section to incline relatively to the lower staff section, a series of sockets on the bifurcated member directed towards the tongued member, a sleeve fitting slidably on the tongued member and movable toward and from the sockets, and a tooth on the sleeve, said tooth being opposed to and selectably engageable with the sockets so as positively to lock the upper staff section in adjusted position.

EDWARD SCHMIDT.

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