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UMBRELLA RUNNER AND CATCH THEREFOR

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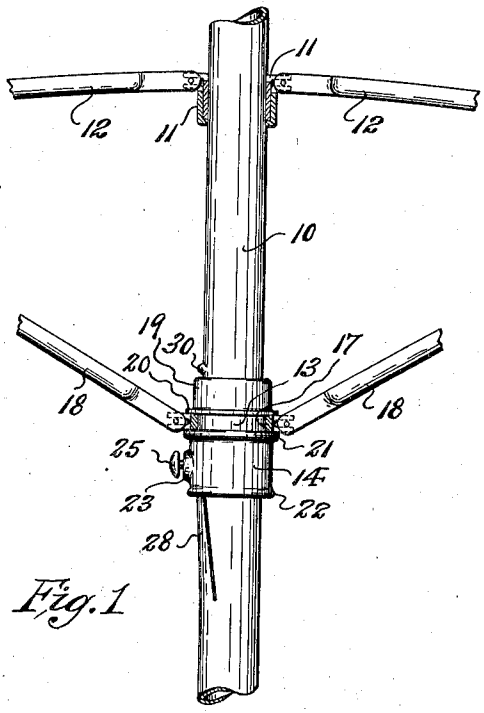


Fig. 1

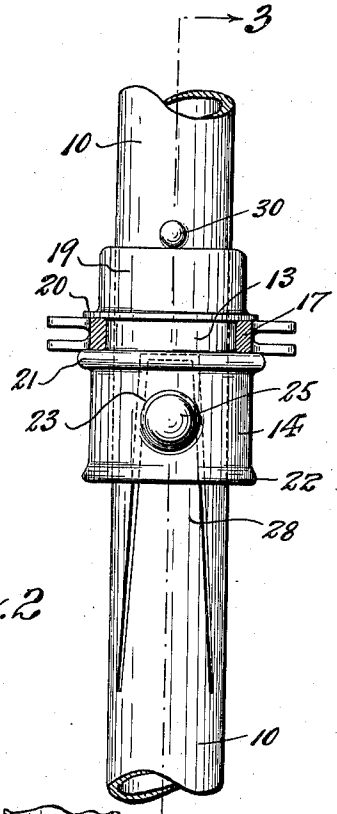


Fig. 2

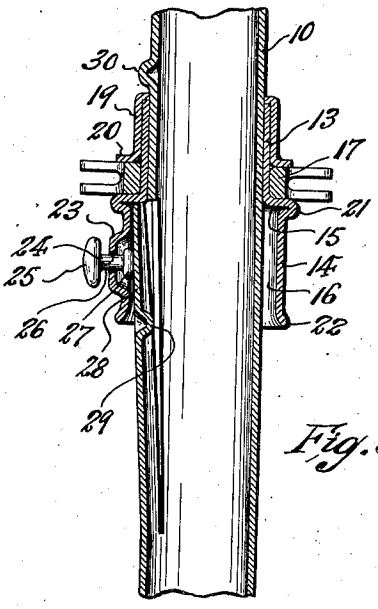


Fig. 3

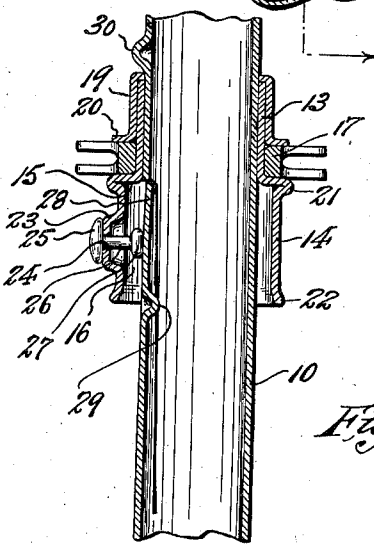


Fig. 4

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UMBRELLA RUNNER AND CATCH THEREFOR

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4 Claims. (Cl. 135—41)

This invention relates, generally, to improvements in umbrellas, parasols and the like; and the invention has reference, more particularly, to an improved construction of rib stay supporting runner and depressible stop or detent means for cooperation therewith.

As heretofore provided, umbrella rib stay supporting runner and the cooperating stop or detent means have been so constructed and mutually related that release of the latter has required direct application of the operator's fingers thereto for depressing the same, with the result that when the runner is released by depressing the stop or detent means, and thereupon moves relative to the umbrella staff, the operator's fingers, being in the path of runner movement, are subject to risk of injury thereby, and especially are the fingernails exposed to risk of being caught and broken by the contact. This is particularly objectionable to women users of umbrellas, parasols and the like. It is, therefore, an object of this invention to provide a novel construction of runner and cooperating depressible stop or detent means, wherein the runner is provided with means for actuating the stop or detent means, without requiring direct application of the operator's fingers to the latter, but only to external parts of the runner, so that control of the latter, when released from the restraint of said stop or detent means, is not only assured, but also all necessity of placing the fingers in the path of movement of the released runner is entirely avoided.

Other objects of this invention, not at this time more particularly enumerated, will be understood from the following detailed description of the same.

An illustrative embodiment of this invention is shown in the accompanying drawing, in which:—

Fig. 1 is a fragmentary view of an umbrella staff for supporting the umbrella rib structure, the stays of which are controlled by the novel runner and cooperating stop or detent means according to this invention, said runner being shown in side elevation.

Fig. 2 is an enlarged front side elevation of the novel runner and cooperating stop or detent means of this invention; Fig. 3 is a longitudinal sectional view of the same, taken on line 3—3 in Fig. 2; and Fig. 4 is a similar longitudinal sectional view, showing the actuated position of the stop or detent releasing means carried by the runner.

Similar characters of reference are employed in the hereinabove described views, to indicate corresponding parts.

Referring to the drawing, the reference character 10 indicates the umbrella rod or staff, which usually comprises a metallic tube. Affixed to the upper end portion of the rod or staff 10 is the usual crown member 11 to which are pivotally attached the inner extremities of radiating rib members 12 for collapsibly supporting and spreading the umbrella cover or top (not shown).

Mounted upon the rod or staff 10, so as to be slidable longitudinally thereon, is the novel runner member, the same, according to this invention comprises an upper tubular slider section 13 adapted to slidingly fit over and run upon the rod or staff 10. Connected with the lower end of said slider section 13, preferably although not necessarily as an integral part thereof, is a diametrically enlarged skirt section 14 which provides a finger-piece by which the runner may be grasped and manipulated. Said skirt section is joined to the lower end of said slider section 13 by a laterally projecting annular shoulder 15, the interior underside of which provides an abutment adapted to be releaseably engaged by a depressible stop or detent member (subsequently described), whereby said runner is maintained in raised umbrella rib spreading relation to the staff or rod 10. By reason of its enlarged diametric size, said skirt section 14 defines an interior annular chamber or space 16 intermediate its walls and said staff or rod 10 to provide room for the operative movement or play of said stop or detent member. Seated upon the exterior or upper side of said shoulder 15, to encircle the slider section 13, is a second crown member 17 to which are pivotally connected the lower ends of rib stays or braces 18, the upper ends of which are pivotally connected with the rib members 12 in any customary way. Fitted over the upper end portion of said slider section 13, and suitably secured thereto, is a keeper thimble 19 having an annular bottom flange 20 to abut the upper side of said second crown member 17, thus retaining the same in fixed relation to the runner structure.

It is desirable that the juncture of the shoulder 15 with the skirt section 14 be formed to provide an annular exteriorly projecting upper bead or external flange 21 to serve as a finger guard or stop beneath the second crown member 17, and operating to prevent the fingers, when operatively grasping the skirt section or finger-piece, from slipping upwardly against said crown member 17 and the associated rib stays or braces 18. Likewise, the lower free extremity of said skirt section or finger-piece is expanded or otherwise formed to provide an annular exteriorly projecting lower bead or flange 22 to serve as a finger guard or stop to prevent the fingers from slipping downwardly off of the skirt section or finger-piece when the runner member is manipulated.

Formed in the side of said skirt section or fin-

gerpiece 14 is a hollow boss 23 having a central opening 24. Mounted in connection with said boss 23 is a push-button device 25, the stem 26 of which extends through the opening 24 into the interior of said boss. The inner end of said stem 26 is provided with an enlargement or stop element 27 which retains the push-button against displacement from operative relation to the boss 23 yet free for axial movement.

The staff or rod 10 is provided with a novel form of depressible stop or detent member to releaseably engage and hold the runner in its upwardly moved rib structure spreading position, to dispose the umbrella in its open or service position. In an illustrative and preferred form, said stop or detent member comprises an upwardly projected spring leaf or finger 28 which is struck bodily from the side wall of the tubular staff or rod 10, so as to normally spring outwardly therefrom. Said spring leaf or finger 28 may be stiffened against undue distortion by providing the same with an inwardly struck projection or tit 29 adjacent to its free end portion.

The staff or rod 10 may be provided with an outwardly projected stop tit 30 pressed from its wall, and so located as to limit the upward sliding movement of the runner structure.

When the runner is slid upwardly along the staff or rod 10 to rib structure spreading position, the same will ride over said spring leaf or finger 28, which inwardly yields to its passage, but will, by virtue of its inherent resiliency, spring outward within the chamber or space 16 of the skirt section 14, immediately the slider section 13 passes the free extremity thereof, so that its free extremity will engage beneath and about the underside of the shoulder 15, thus holding said runner in upraised rib structure spreading position. As the upper end portion of said spring leaf or finger thus springs outwardly to the described runner holding position, its outer face will engage and thrust outwardly the push-button device 25, in the manner shown in Fig. 3.

When it is desired to release the runner so that the same may be slid downwardly on the staff or rod 10 to rib structure collapsing position, the operator merely grasps the skirt section or finger piece 14, and by applying the thumb to the push button device 25 and pressing inwardly thereon, causes said push button device to thrust inwardly against the outer face of the spring leaf or finger 28, thus inwardly depressing the latter so that its free extremity is removed from abutting and obstructing relation to the shoulder 15 of the runner structure. The spring leaf or finger 28 being thus released and pressed inwardly, the runner structure may thereupon be moved downwardly over the staff or rod 10, the slider section 13 being free to pass over the depressed extremity of the spring leaf or finger. It will be noticed that in manipulating the runner, the operator's fingers need only be directly to the skirt section 14 thereof and to the push-button device 25, thus avoiding any necessity for first directly touching and depressing the spring leaf or finger 28 with risk of injury to the fingers or finger nails by the sudden downward thrust of the released runner structure. Furthermore, once the skirt section or finger piece 14 of the runner section is grasped, the grasp thereof may be uninterruptedly retained so as to maintain throughout manipulation thereof full and complete control of its movement.

It will be obvious that various changes could be made in the above described constructions, and many apparently widely different embodiments of this invention could be made without departing from the scope thereof as defined in the following claims. It is therefore intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

I claim:—

1. In an umbrella or the like, a staff having a depressible detent means normally outwardly projected from the side thereof, a rib structure controlling runner slidable on said staff, said runner comprising a slider section to slidingly fit the staff, a diametrically enlarged skirt section below said slider section, an annular shoulder forming portion interconnecting said slider and skirt sections, the internal underside of which is engageable by said detent means, and a push-button device carried by said skirt section, the same being manipulatable to releasingly depress said detent means.

2. In an umbrella or the like, a staff having a depressible detent means normally outwardly projected from the side thereof, a rib structure controlling runner slidable on said staff, said runner comprising a slider section to slidingly fit the staff, a diametrically enlarged skirt section below said slider section, an annular shoulder forming portion interconnecting said slider and skirt sections, the internal underside of which is engageable by said detent means, a hollow perforate boss outwardly projected from the side of said skirt section, and a push-button device having a stem axially movable through the perforation of said boss, means to limit outward movement of said push-button device, said push-button device being manipulatable to engage and releasingly depress said detent means.

3. In an umbrella or the like, a tubular staff, a spring leaf detent means integral with and struck out of the wall of said staff for normal depressible projection from the side of the latter, a rib structure controlling runner slidable on said staff, said runner comprising a slider section to slidingly fit the staff, a diametrically enlarged skirt section below said slider section, an annular shoulder forming portion interconnecting said slider and skirt sections, the internal underside of which is engageable by said detent means, and a push-button device carried by said skirt section, the same being manipulatable to releasingly depress said detent means.

4. In an umbrella or the like, a tubular staff, a spring leaf detent means integral with and struck out of the wall of said staff for normal depressible projection from the side of the latter, a rib structure controlling runner slidable on said staff, said runner comprising a slider section to slidingly fit the staff, a diametrically enlarged skirt section below said slider section, an annular shoulder forming portion interconecting said slider and skirt sections, the internal underside of which is engageable by said detent means, a hollow perforate boss outwardly projected from the side of said skirt section, and a push-button device having a stem axially movable through the perforation of said boss, means to limit outward movement of said push-button device, said push-button device being manipulatable to engage and releasingly depress said detent means.

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