No. 886,078. PATENTED APR. 28, 1908.

G. W. RUGG.

UMBRELLA.

APPLICATION FILED DEC. 16, 1907.

2 SHEETS—SHEET 1.

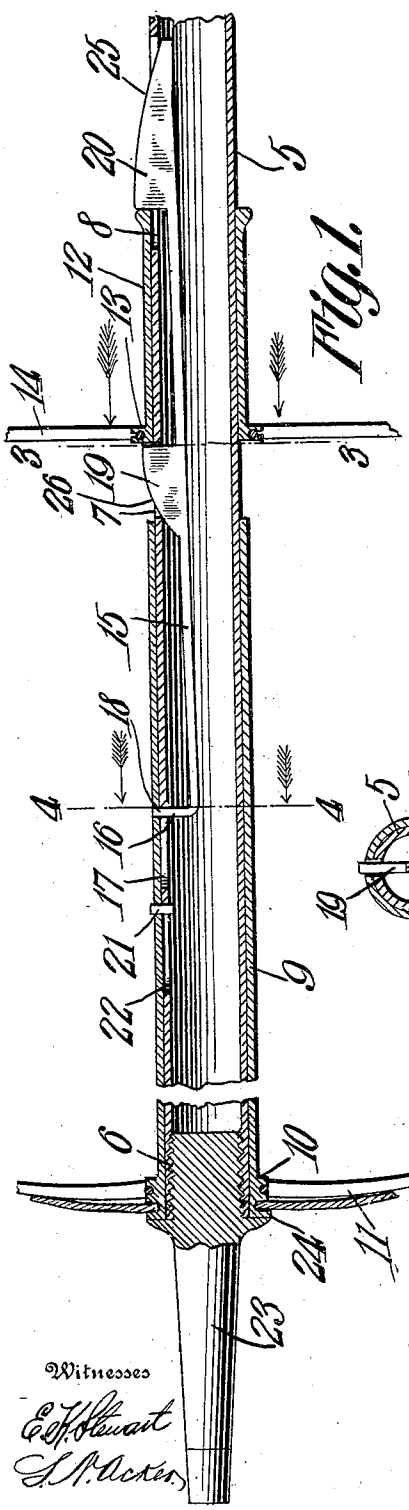


Fig. 1.

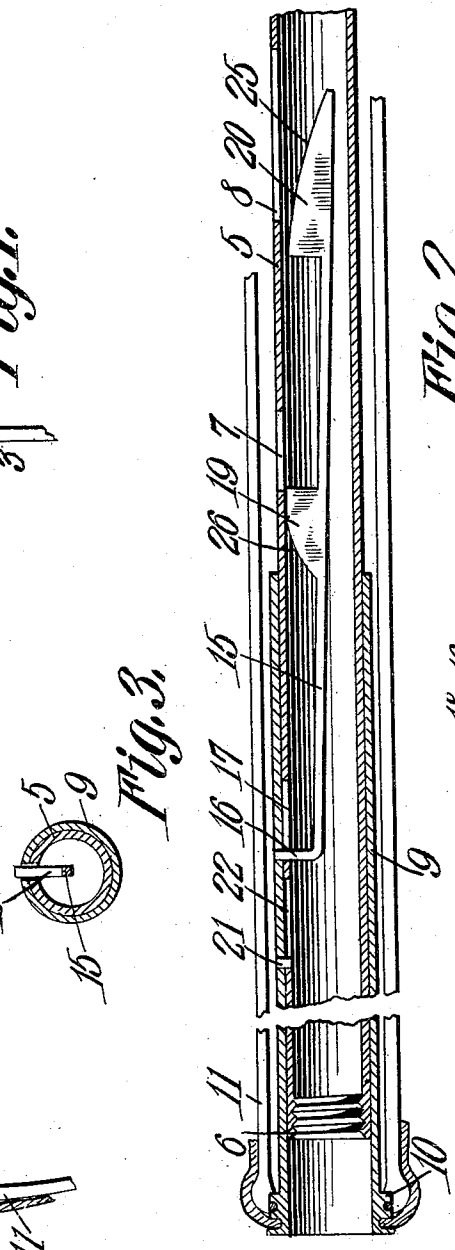


Fig. 2.

Fig. 3.



Fig. 4.

Witnesses

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2 SHEETS—SHEET 2.

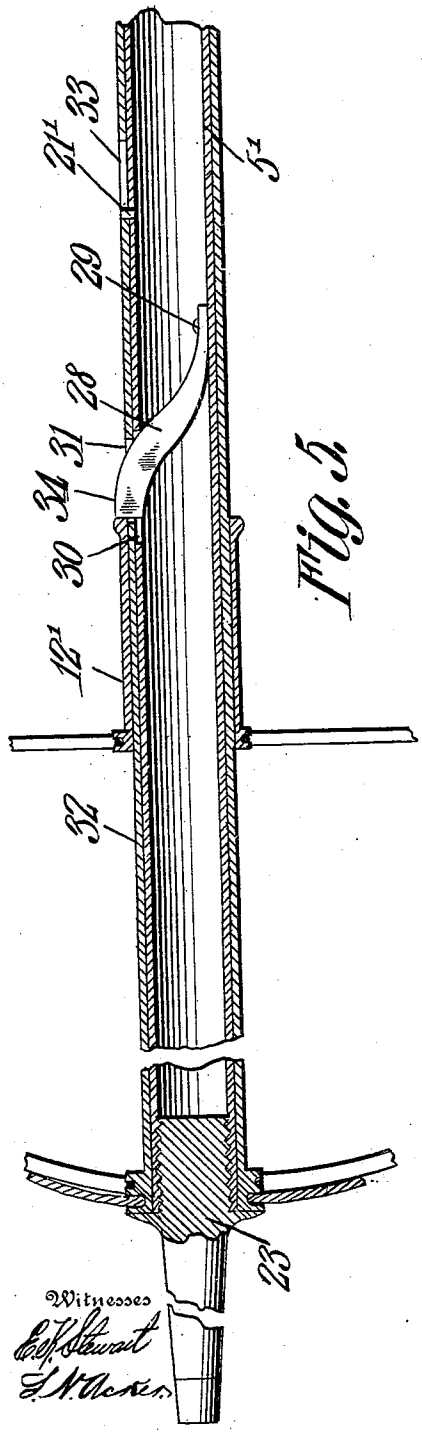


Fig. 5.

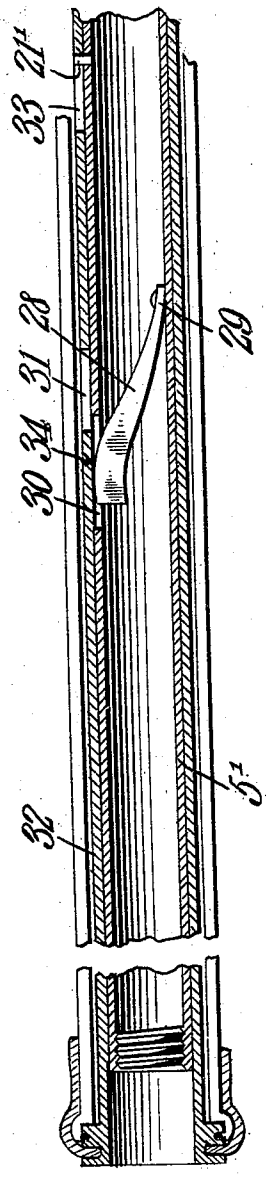


Fig. 6.

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UMBRELLA.

No. 886,078. Specification of Letters Patent. Patented April 28, 1908.

Application filed December 16, 1907. Serial No. 406,684.

To all whom it may concern:

Be it known that I, GEORGE W. RUGG, a citizen of the United States, residing at Newark, in the county of Licking and State of Ohio, have invented a new and useful Umbrella, of which the following is a specification.

This invention relates to umbrellas and has for its object to provide an umbrella which cannot be opened by any person except the owner thereof, thereby to prevent an unauthorized person from using the same.

A further object of the invention is to provide an umbrella having a movable tip or ferrule piece which, when in position on the staff, permits the umbrella to be opened and closed in the ordinary manner but which, when detached, renders the umbrella incapable of being held in open position.

A still further object of the invention is generally to improve this class of devices so as to increase their utility, durability and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification: Figure 1 is a longitudinal sectional view of a portion of an umbrella constructed in accordance with my invention showing the several parts arranged to support the umbrella in open position. Fig. 2 is a similar view showing the several parts in inoperative position. Fig. 3 is a transverse sectional view taken on the line 3—3 of Fig. 1. Fig. 4 is a similar view taken on the line 4—4 of Fig. 1. Fig. 5 is a longitudinal sectional view illustrating a modified form of the invention. Fig. 6 is a similar view showing the parts in Fig. 5 in inoperative position so as to prevent locking or supporting the umbrella in open position.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The improved umbrella forming the subject matter of the present invention includes a hollow staff 5 preferably formed of tubular metal, as shown, and having its interior walls threaded at 6 and provided with spaced elongated slots 7 and 8 of different lengths and communicating with the interior of the staff.

Slidably mounted on the exterior walls of the staff 5 is an actuating member or sleeve 9 having one end thereof provided with a circumferential collar 10 for attachment to the adjacent ribs 11, there being a runner 12 slidably mounted on the staff beneath the sleeve 9 and provided with a similar collar 13 for attachment to the adjacent ribs 14.

Arranged within the staff 5 is a spring locking member 15 preferably in the form of a longitudinally disposed spring bar having one end thereof bent at right angles to form an attaching arm 16, which latter extends through an auxiliary slot 17 formed in the adjacent wall of the staff and is soldered or otherwise rigidly secured to the sleeve 9, as indicated at 18. The locking member 15 is provided with spaced laterally disposed lugs or catches 19 and 20 which normally project through the adjacent main slots 7 and 8 for engagement with the opposite ends of the runner 12 thereby to lock the runner in position on the staff and thus support the umbrella in open position.

Extending laterally from the sleeve 9 is a stop pin 21 adapted to engage the opposite wall of a second auxiliary slot 22 formed in the staff 5 thereby to limit the longitudinal movement of said sleeve.

Combined with the staff 5 is a removable tip or ferrule piece 23 having its large end threaded for engagement with the threads 6 of the staff, said tip being provided with a laterally extending shoulder 24 which bears against the collar 10 when the tip is in position on the staff and thus serves to lock the sleeve or actuating member 9 against longitudinal movement. The inherent spring qualities of the locking member 5 are such as to normally and yieldably support the catches 19 and 20 within the slots 7 and 8 with the inclined faces 25 of said catches disposed in the path of movement of the runner 12 so that under ordinary conditions when the runner is moved longitudinally of the staff in the direction of the tip 23, said runner will engage the inclined face 25 and catch 20 and depress said catch to permit the passage of the runner, the spring of the bar serving to return the catch to operative position and thus prevent movement of the runner until the locking member is pressed inwardly.

When the several parts are in the position shown in Fig. 1 of the drawings the umbrella may be opened and closed in the ordinary

manner. When, however, the owner desires to check the umbrella or leave the same in a rack or other suitable place for any length of time he removes the tip piece 23 and carries the same in his pocket until he desires to reclaim the umbrella. When the tip or ferrule piece 23 is removed, should an unauthorized person attempt to open the umbrella the initial longitudinal movement of the runner 12 will, through the medium of the ribs 11 and 14, move the actuating member or sleeve 9 to the position shown in Fig. 2 of the drawings.

As the sleeve 9 is moved longitudinally of the staff 5 the inclined face 26 of the catch 19 will bear against the adjacent wall of the slot 7 and thus depress the locking bar or member 15 laterally within the hollow chamber of the staff so as to move the locking lugs or catches 19 and 20 to inoperative position. It will thus be seen that with the parts shown in Fig. 2 of the drawings, the runner 12 will slide freely over the exterior walls of the staff so as to render it impossible to support the umbrella in open position.

In order to render the umbrella operative the ferrule piece or tip 23 is screwed into the threaded end of the staff 5 which causes the shoulder 24 of the tip to move the sleeve 9 longitudinally of said staff until the catches 19 and 20 register with the adjacent openings 7 and 8 and in which position said catches will project through the slots for engagement with the ferrule when the umbrella is again opened.

In Figs. 5 and 6 of the drawings there is illustrated a modified form of the invention in which the locking member or pawl 28 is rigidly or otherwise secured to the interior wall of the staff 5′, as indicated at 29, the free end of the locking member being extended through registering openings 30 and 31 formed in the staff and actuating sleeve 32 for engagement with the ferrule 12′.

In this form of the device the actuating member or sleeve 32 is preferably extended approximately the entire length of the staff while the stop pin 21′ is secured to the exterior walls of the staff and engages the end walls of a slot 33 formed in the sleeve, as shown.

When the tip 23′ of the umbrella, shown in Fig. 5 of the drawings, is removed from the staff and a longitudinal movement imparted to the ferrule 12′ the sleeve 32 will be moved longitudinally of the staff thus causing the adjacent wall of the slot 31 to bear against the inclined face 34 of the locking member 28 and depress the same to the position shown in Fig. 6, and in which position the ferrule is free to slide on the staff in the manner before stated.

When the tip 23 is inserted in the threaded end of the staff and screwed home the sleeve 32 will be moved longitudinally of the staff until the stop pin 21′ bears against the adjacent wall of the slot 33 and in which position the slots 30 and 31 will register with each other and thus permit the pawl 28 to project through said slot and into the path of movement of the runner 12′.

From the foregoing description it is thought that the construction and operation of the device will be readily understood by those skilled in the art and further description thereof is deemed unnecessary.

Having thus described the invention what is claimed is:

1. An umbrella including a staff, runner, and ribs, a locking member adapted to engage the runner for supporting the umbrella in open position, means forming a support for the adjacent ends of the ribs for moving the locking member to operative and inoperative position, and a removable member coacting with the lock actuating means for preventing longitudinal movement of the latter.

2. An umbrella including a staff, runner and ribs, a locking member adapted to engage the runner for holding the umbrella in open position, a sleeve slidably mounted on the staff for moving the locking member to operative and inoperative position, said sleeve forming a support for the adjacent ends of the ribs, and a tip detachably secured to the staff and adapted to engage the sleeve for locking the latter against longitudinal movement.

3. An umbrella including a staff, runner and ribs, a sleeve slidably mounted on the staff, a spring actuated locking member carried by the sleeve and adapted to engage the runner for supporting the umbrella in open position, and a removable section detachably engaging the staff and adapted to bear against the sleeve for locking the latter against longitudinal movement.

4. An umbrella including a staff, runner and ribs, said staff being provided with an elongated slot, a sleeve slidably mounted on the staff, a locking member secured to the sleeve and provided with a terminal catch adapted to extend through the slot in the staff for engagement with the runner, and a section detachably secured to the staff and bearing against the sleeve for locking the latter against longitudinal movement.

5. An umbrella including a staff, runner and ribs, said staff being provided with spaced longitudinal slots, a sleeve slidably mounted on the staff, a spring actuated locking member secured to the sleeve and having its opposite end disposed within the staff and provided with spaced locking lugs extending through the slots in the staff for engagement with the runner, and a removable tip piece detachably engaging the staff and bearing against the sleeve for locking the latter against longitudinal movement.

6. An umbrella including a staff, runner

and ribs, said staff being provided with main and auxiliary slots, a sleeve slidably mounted on the staff, a locking member secured to the sleeve and having one end thereof extended through the adjacent auxiliary slot and thence bent laterally within the staff and provided with spaced laterally extending lugs projecting through the main slots in said staff for engagement with the runner, a stop pin carried by the sleeve and engaging the upper auxiliary slot in the staff, and a tip piece detachably secured to the staff and adapted to bear against the sleeve for locking the latter against longitudinal movement.

7. An umbrella including a tubular staff, runner and ribs, said staff being provided with spaced longitudinal slots and having its interior walls threaded at one end thereof, a sleeve slidably mounted on the staff, a locking member having one end thereof secured to the sleeve and its opposite end disposed within the staff and provided with spaced lugs projecting through the slots in the staff for engagement with the runner, and a removable tip piece having a threaded end for engagement with the threads on the staff.

8. An umbrella including a staff, runner and ribs, a tubular member slidably mounted on the staff and forming a support for the ribs, a locking member adapted to engage the runner, and a removable tip piece adapted to bear against the tubular member for operating the latter to hold the locking member in the path of movement of the runner, said tubular member being adapted to release the locking member when the tip is removed and the runner actuated.

9. An umbrella including a staff, runner and ribs, a locking member adapted to engage the runner for supporting the umbrella in open position, means for moving the locking member to operative and inoperative positions, and means independent of the locking members and co-acting with the lock actuating means for preventing longitudinal movement of the latter.

10. An umbrella including a staff, runner and ribs, said staff being hollow and provided with a slot, a tubular member slidably mounted for longitudinal movement on the staff, a locking member having one end thereof secured to the tubular member and its opposite end disposed within the staff and provided with a locking lug projecting through the slot in said staff for engagement with the runner, and a removable tip detachably secured to one end of the staff and adapted to bear against the tubular member for locking the latter against longitudinal movement.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

GEORGE W. RUGG.

Witnesses:

GEORGE A. BALL,

DAVID GIBSON WALLACE.