

W. D. KIMBALL.
UMBRELLA.

No. 526,155.

Patented Sept. 18, 1894.

Fig. 1.

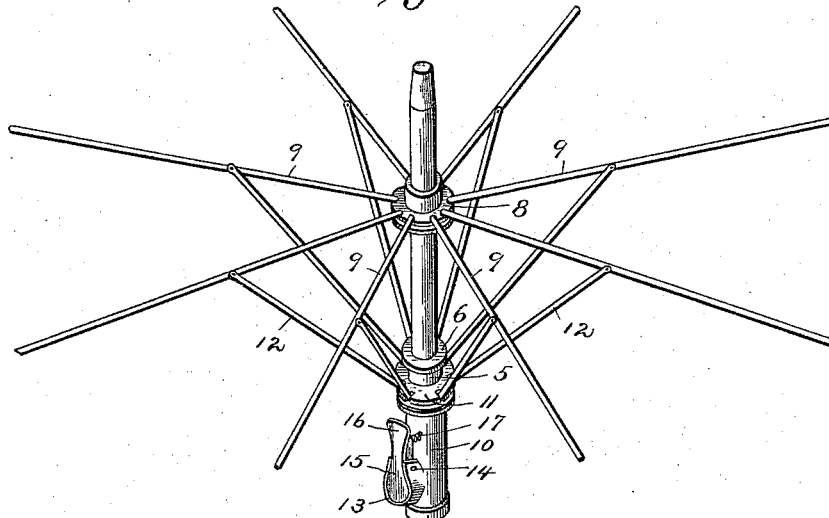


Fig. 2.

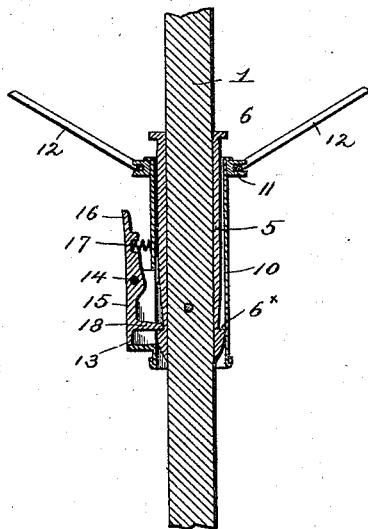
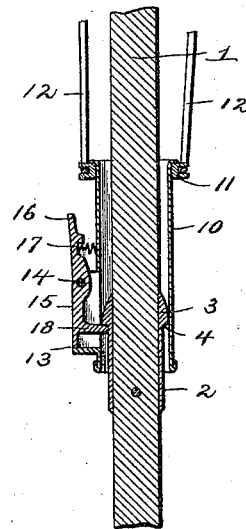


Fig. 3.



Inventör

Walter D. Kimball.

Witnesses

By *his* Attorneys.

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UNITED STATES PATENT OFFICE.

WALTER D. KIMBALL, OF EUSTIS, FLORIDA, ASSIGNOR OF ONE-THIRD TO
WILLIAM H. MILLER, OF SAME PLACE.

UMBRELLA.

SPECIFICATION forming part of Letters Patent No. 526,155, dated September 18, 1894.

Application filed December 12, 1893. Serial No. 493,496. (No model.)

To all whom it may concern:

Be it known that I, WALTER D. KIMBALL, a citizen of the United States, residing at Eustis, in the county of Lake and State of Florida, have invented a new and useful Umbrella, of which the following is a specification.

My invention relates to improvements in umbrellas, and has particular reference to improvements in the catches thereof of the runners; the objects in view being to produce a catch for retaining the umbrella open or closed the construction of the catch being such as to prevent any accidental disengagement and hence closing of the umbrella by pressure against the top thereof, as for instance, by a strong wind, and yet to obviate the necessity of employing a strong spring-pressed, difficult to manipulate catch; and finally, to reinforce the stick above and below the runner when the latter is in the position it occupies when the umbrella is open and the stick therefore subjected to strain.

Other objects and advantages of the invention will appear in the following description and the novel features thereof will be particularly pointed out in the claim.

Referring to the drawings:—Figure 1 is a perspective view of an umbrella-frame embodying my invention. Fig. 2 is an enlarged vertical sectional view through the upper portion of the stick and the runner. Fig. 3 is a similar view through the lower portion of the stick and the runner.

Like numerals of reference indicate like parts in all the figures of the drawings.

The stick 1 is provided adjacent to its handle or lower part with a tight fitting sleeve 2, the same having at its upper end a beveled rib 3, whose under side forms an abrupt annular shoulder 4. Below the shoulder the sleeve is plain and cylindrical.

The upper portion of the stick or that portion occupied by the runner when the frame is raised or the umbrella open is provided with a rigid cylindrical sleeve 5, and the same has formed at its upper end an external or superficial bead 6 forming a stop-flange. Near the lower end of the sleeve the same is slightly reduced forming an abrupt shoulder

6^x, and the said shoulder has its lower side externally reduced or beveled, as shown.

8 designates the upper stationary ring secured to the stick in the usual manner and of the ordinary construction, and from the same radiate the usual ribs 9.

The runner 10 is slightly less in length than is the sleeve and loosely fits over the same, so that when in position upon the sleeve the bead 6 thereof forms a stop-flange for the upper end of the runner and the lower end of the sleeve is below that of the runner, whereby the latter bears only upon the sleeve. The upper end of the runner is provided with the usual annular flange 11, from which radiate the braces 12 pivotally connected at their outer ends to the ribs.

The runner is provided at one side and below its center with an opening surrounded by an off-standing U-shaped guard flange 13, and between the outer edges of the flange of said opening there is pivoted, at 14, between its ends, a catch-lever 15, the same having its upper end terminating in a thumb-plate 16 between which and the runner a light coiled-spring 17 is interposed, one end of said catch-lever being shaped to normally register within the flange 13, that protects the lever from accidental injury and forms the pivotal support therefor. The lower inner side of this catch-lever is provided with a right angularly disposed head or lug 18, the same having a square lower portion provided with an upper beveled end or corner, so that when the runner moves upward upon the stick and over the sleeve the beveled portion will ride over the lower beveled end of the sleeve and when the head of the lever arrives above the abrupt shoulder 6^x the spring heretofore mentioned will cause the head of the lever to engage with said shoulder, and hence prevent a downward movement upon the part of the runner. It will be seen that when in this position the locking of the lever does not depend upon the spring but against a binding action of the lever against the sleeve, and the greater the force applied to the top of the umbrella, as in the act of closing the same, as for instance, when going against the wind and also under the normal spring tension of

the ribs, the greater will be the binding. On the other hand by a light pressure of the thumb against the thumb-plate 16 the spring will yield readily and permit of a disengagement of the head of the lever with the shoulder and the runner will glide down the stick and over the lower sleeve, engaging with the shoulder 4 of the latter and serving to secure the umbrella in a closed position. As is well known, one of the greatest strains to which an umbrella is subjected is at the point that the runner bears upon the stick, and it is therefore one of the prime objects of my invention to reinforce the stick at this point, so that sudden gusts of wind which twist the frame will not cause the runner to snap the stick at this point, but bearing upon the metal sleeve the pressure will be resisted successfully and no accident can occur thereby.

From the foregoing description in connection with the accompanying drawings it will be seen that I have provided a very simple construction of fastening means for umbrella frames, the same being capable of locking the frame either open or closed in an efficient manner and successfully against any strong winds or sudden gusts that may be met with; and that I have strengthened the stick at its weakest point against any sudden snapping.

Having described my invention, what I claim is—

The combination with an umbrella stick; of a rigid reinforcing metal sleeve fitted tight on the stick and provided at its upper

end with a stop flange 6, reduced or tapered adjacent to its lower end, and beveled below such reduced portion to form an abrupt catch shoulder, a runner loosely fitting the sleeve and shorter than the same so as to have no bearing on the stick at this point, said runner being provided at one side with an opening and an offstanding U-shaped guard flange surrounding the opening, an inverted catch lever pivotally mounted intermediate of its ends within said guard flange and shaped to register with said flange, which flange prevents lateral movement of the lever so that the pivot thereof is reinforced and prevented from loosening, the said lever being provided at one end with a right angularly disposed catch head or lug adapted to engage the catch shoulder of said sleeve, and at its other end with a thumb plate, and a spring interposed between the thumb plate of the catch lever and the runner, said catch head being held in binding engagement with said catch shoulder and prevented from disengagement therewith by the normal downward pressure exerted on the runner by the ribs and stretchers, irrespective of the action of the spring, substantially as set forth.

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

WALTER D. KIMBALL.

Witnesses:

GUY HUTCHINGS,
CARRIE J. HUTCHISON.