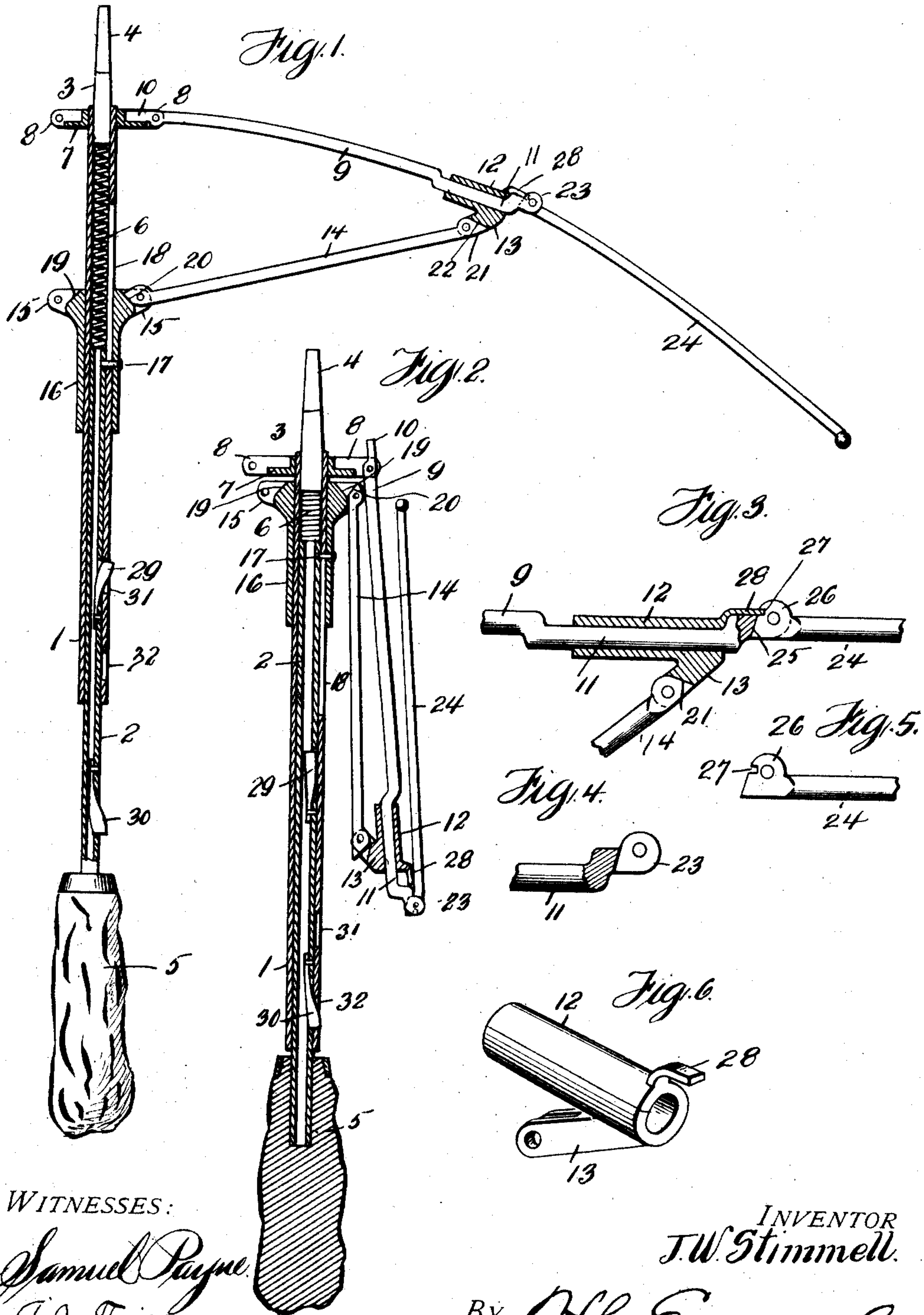


No. 864,572.

PATENTED AUG. 27, 1907.

J. W. STIMMELL.
FOLDING UMBRELLA.
APPLICATION FILED MAR. 6, 1907.



WITNESSES:

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JOHN W. STIMMELL, OF LAYTON, PENNSYLVANIA.

FOLDING UMBRELLA.

No. 864,572.

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed March 6, 1907. Serial No. 360,867.

To all whom it may concern:

Be it known that I, JOHN W. STIMMELL, a citizen of the United States of America, residing at Layton, in the county of Fayette and State of Pennsylvania, have invented certain new and useful Improvements in Folding Umbrellas, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to folding umbrellas, and its primary object is, to provide an umbrella of simple and inexpensive construction capable of being folded into small compass to adapt it to be packed in a trunk or valise.

A further object of the invention is, to provide a folding umbrella with a telescopic handle rod provided with a coil spring which serves to automatically open or raise the umbrella.

The construction of the improvement will be fully described hereinafter in connection with the accompanying drawing which forms a part of this specification, and its novel features will be defined in the appended claims.

In the drawing:—Figure 1, is a central longitudinal section of an umbrella handle, together with one rib and a stretcher embodying the invention, with the parts in their open or raised position. Fig. 2, is a similar view showing the parts in their folded position, Fig. 3, is a sectional view on an enlarged scale of a part of one of the ribs and stretchers, Fig. 4, is a detail sectional view of a part of one section of the main rib, Fig. 5, is a side elevation of a part of the outer rib section and, Fig. 6 is a detail perspective of the sleeve connecting the stretcher and rib.

The handle rod comprises two hollow telescopic sections 1 and 2, the outer section 1 being closed at its upper end by a plug 3 provided with a ferrule 4.

A handle 5 is secured to the lower end of the inner tubular section 2, and between the upper end of the inner section 2, and the plug 3 is interposed a coil spring 6.

Secured to the upper end of the outer handle-rod section 1 is a notch 7 provided with a plurality of perforated radial arms 8 between which are pivotally secured the inner ends of main rib sections 9. These ribs terminate in lugs 10 which rest upon the notch 7 when the ribs are in their raised position.

The outer end of each of the rib sections 9 is formed with a downward bend or off-set 11, upon which is slidably mounted a sleeve 12 provided with depending lugs 13 between which is pivotally secured the outer end of a stretcher 14. The inner end of the stretcher is pivotally secured between perforated lugs 15 projecting from the upper end of a runner 16 secured by a pin 17 to the inner tubular section 2 of the handle-rod, said pin extending through a longitudinal slot 18 formed in the outer handle-rod section 1.

The upper end of the runner 16 between the lugs 15

is beveled as shown at 19 to provide seats for the beveled inner ends 20 of the stretchers and the outer ends 21 of the stretchers are beveled to abut the correspondingly beveled surfaces 22 of the lugs 13.

The outer end of each of the rib sections 9 is provided with a perforated eye 23 to which is pivotally secured a rib section 24, the abutting faces of the sections being beveled as shown at 25 to limit the downward movement of the section 24, but permitting the latter to fold upward as illustrated in Fig. 2.

The inner end of each of the rib sections 24 is provided with a head 26 formed with a notch 27 to receive a lug 28 projecting from the sleeve 12 when the ribs are in their open or unfolded position.

Within the inner section 2 of the handle-rod are secured two oppositely disposed latches 29 and 30 extending through slots in said section 2, and adapted to respectively engage slots 31 and 32 in the outer handle-rod section 1. When the umbrella is raised the latch 29 engages within the slot 31, as shown in Fig. 1, and when the umbrella is folded the latch 30 engages within the slot 32 as shown in Fig. 2.

The utility and operation of the improvement will be readily understood. To fold the umbrella the latch 29 is pressed inward, and the inner handle-rod section 2 is forced upward compressing the spring 6 and engaging the latch 30 in the slot 32. This upward movement of the section 2 raises the runner 16 to the position shown in Fig. 2 and moves the sleeve 12 to disengage its lug 28 from the slot 27 of the rib section 24 after which said section may be folded to the position shown in Fig. 2.

To open the umbrella it is only necessary to press the latch 30 inward when expansion of the spring 6 will force the outer handle section outward and at the same time unfold the ribs and stretchers.

It will of course be understood that the notch 8 and runner 16 are provided with a sufficient number of lugs to accommodate the required number of ribs and stretchers to form a complete umbrella, and I would have it understood that the invention includes all such modifications in the details of construction as may fall within the terms and scope of the claims.

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

1. In a folding umbrella, the combination with an umbrella stick, a notch carried thereby, and a runner on the stick provided with lugs, and having beveled surfaces at its outer end between said lugs, of ribs, each rib comprising an inner section and an outer section, the inner section being pivoted at its inner end to the notch, and having lugs on said inner end which engages the notch when the rib is in a raised position, said inner section of the rib having an offset adjacent its outer end, a sleeve mounted for sliding movement on said offset and having an outwardly projecting tongue, the outer rib section being pivoted at its inner end to the outer end of the inner rib section and having a notch to receive the tongue of said sleeve, and a

5 stretcher pivotally connected to the sleeve and to said
runner having a beveled inner end to engage the beveled
surface on the runner and having a beveled outer end to
engage a beveled surface on the sleeve when the rib is
in a raised position.

10 2. In a folding umbrella, an umbrella stick comprising a
tubular outer section provided with a slot and a telescoping
inner section, a plug or tip-section fixedly mounted in the
outer end of the outer section, a runner slidable on the
outer section, a pin connecting said runner to the inner
section and movable in the slot of the outer section, a
notch carried by the outer section, a folding rib connected
at its inner end to said notch, a stretcher connecting said
rib with the runner, and a coiled spring in the outer sec-
15 tion between the plug or tip-section and the inner end of
the inner section, as and for the purpose described.

3. In a folding umbrella, a folding rib therefor com-
prising an inner section and an outer section pivotally
secured together to fold one upon the other, the inner sec-
tion having an offset adjacent its outer end, and a sleeve 20
mounted for sliding movement on the offset and having a
tongue adapted in one position of the sleeve to engage in a
notch provided therefor in the inner end of the outer
section to hold the sections of the rib in an extended
position. 25

In testimony whereof I affix my signature in the pres-
ence of two witnesses.

JOHN W. STIMMELL.

Witnesses:

JOHN H. CURRIN,
GEORGE W. RIPPE.