No. 786,471. PATENTED APR. 4, 1905.

T. WALLACE.

UMBRELLA FRAME.

APPLICATION FILED FEB. 5, 1904.

Fig. 1.

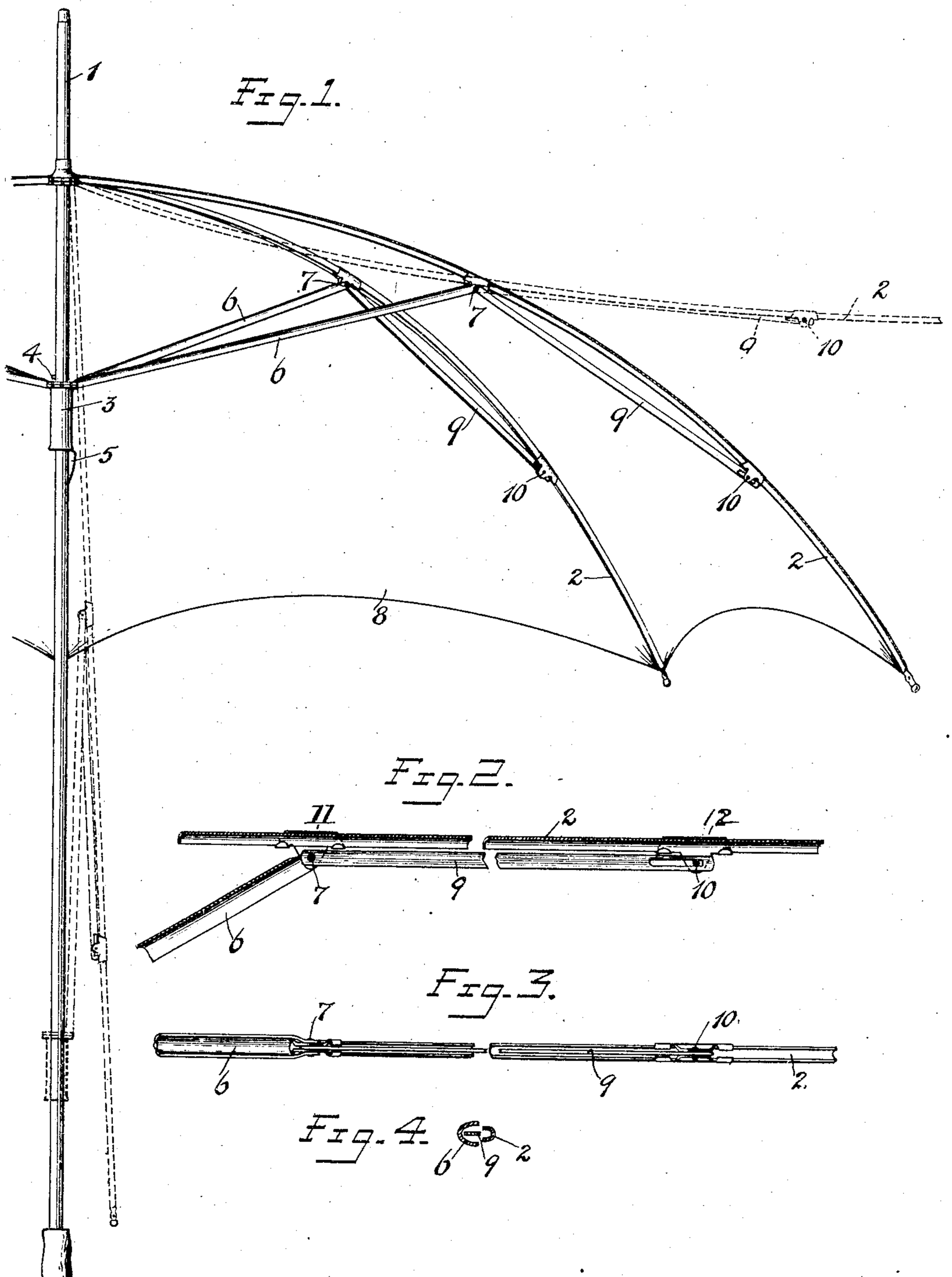


Fig. 2.

Fig. 3.

Fig. 4.

Witnesses
Geo. V. Rasmussen

Inventor
Thomas Wallace
By his Attorney
R. Cunliffe.

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No. 786,471. Patented April 4, 1905.

UNITED STATES PATENT OFFICE.

THOMAS WALLACE, OF BROOKLYN, NEW YORK, ASSIGNOR TO WILLIAM N. STEVENSON, OF SOUTH ORANGE, NEW JERSEY.

UMBRELLA-FRAME.

SPECIFICATION forming part of Letters Patent No. 786,471, dated April 4, 1905.

Application filed February 5, 1904. Serial No. 192,070.

To all whom it may concern:

Be it known that I, THOMAS WALLACE, a citizen of the United States, residing at Brooklyn, in the county of Kings, State of New York, have invented certain new and useful Improvements in Umbrella-Frames, of which the following is a full, clear, and exact description.

My invention relates to improvements in umbrellas, parasols, and similar constructions, particularly to the frame.

The object of the invention is to reinforce and strengthen a frame for an umbrella or parasol, so as to effectually prevent distortion of the frame or buckling.

The invention consists, as will be seen from an inspection of the accompanying single sheet of drawings, in a frame having a reinforcing member for the rib which is brought into action when the rib is bent out of its normal position to reinforce and strengthen the same.

In the drawings, Figure 1 is a view showing portions of an umbrella-frame, two of the ribs being shown in full in their extended position, one rib being also shown in its dotted distorted position, and also a rib shown dotted in the closed position. Fig. 2 is a relatively enlarged view showing in cross-section those portions of the frame which more particularly embody my invention. Fig. 3 is a view of the under side of the same portions of the construction. Fig. 4 is a cross-sectional view of those portions of the frame shown in Figs. 2 and 3.

1 indicates a rod of suitable construction.

2 2 are ribs of U-shaped cross-section, as best seen in Fig. 4.

3 is a runner.

4 is a stop to prevent the runner being forced upward too far.

5 is a spring-catch of suitable construction for holding the runner with the umbrella in its open position.

6 6 are stretchers which are pivoted to the ribs at 7 7 and of U-shaped cross-section. (See Fig. 4.)

8 indicates a covering for the umbrella.

The details of construction of those parts thus far mentioned may be varied as desired.

9 9 are reinforcing-bars which are attached to the ribs 2 2 at their upper ends. These bars are preferably pivoted to the ribs at the same points 7 7 to which the stretchers are attached.

10 10 are pins carried by the ribs beyond the points of attachment 7 and preferably about half-way between the points 7 and the tips of the ribs. The pivots 7 and pins 10 are preferably carried by lugs 11 and 12, respectively, which are fixed on the ribs. The bars 9 9 coöperate with the pins 10 10, so as to prevent the rib from being buckled outwardly. Preferably these bars are slotted to engage the pins to permit a limited sliding movement when the umbrella is opened or closed. The presence of the bars does not interfere with the operation of the umbrella either in raising or closing. When a rib is bent outward for any reason—as, for instance, by the wind—the bar 9 is brought into operation to reinforce the rib, the end of the slotted portion coacting with the pin 10. Both the point of attachment 7 of the bar 9 and the pin 10 are located so that the bar lies a slight distance from the rib when in normal position, but substantially parallel thereto. The presence of this construction reinforces the frame, so as to effectively prevent the umbrella being blown wrong-side out, as is a common occurrence with ordinary constructions.

What I claim is—

In an umbrella-frame, a rod, a rib pivoted to said rod said rib being U-shaped in cross-section, a runner slidable on said rod, a stretcher pivoted at one end to said runner and at the other end to said rib, lugs on said rib one lug being at the pivotal connection of the stretcher the other being located nearer

the free end of said rib, a reinforcing-bar spanning the space between said lugs and connected thereto and located on the grooved side of the rib, one end of said reinforcing-bar being slotted and having a limited sliding movement on one of said lugs whereby the resisting capacity of the bar is brought into action to reinforce the rib when the latter is bent in either direction beyond its normally opened or closed position.

Signed at New York this 4th day of February, 1904.

THOMAS WALLACE.

Witnesses:

W. A. CURRAN,

L. VREELAND.