No. 897,195. PATENTED AUG. 25, 1908.

T. J. DAGUE.

FOLDING UMBRELLA.

APPLICATION FILED JUNE 5, 1907.

2 SHEETS—SHEET 1.

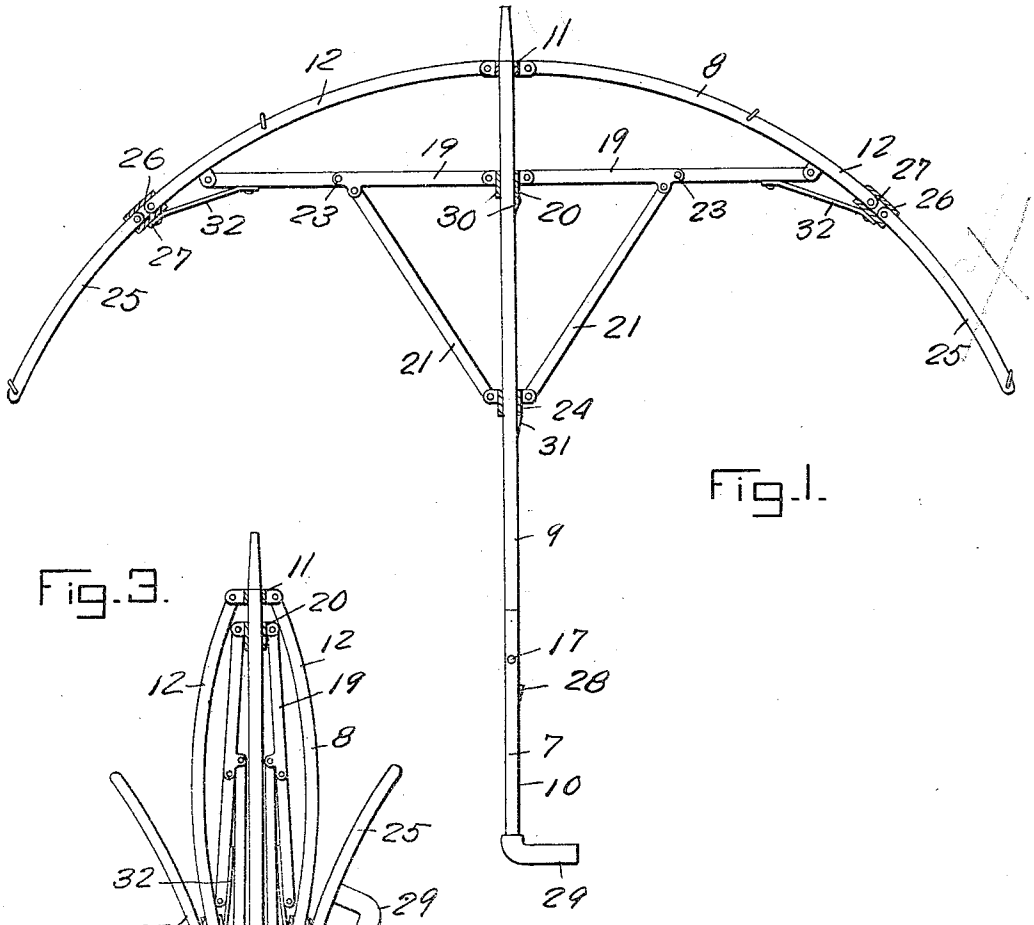


Fig. 1.

Fig. 3.

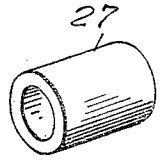


Fig. 4.

Witnesses

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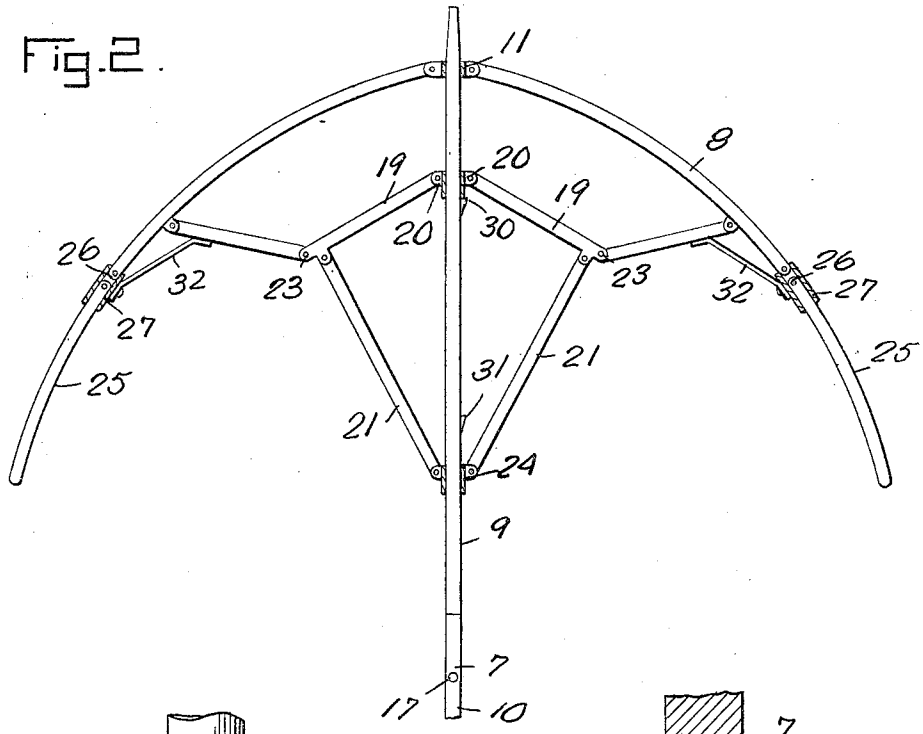
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2 SHEETS—SHEET 2.

Fig. 2.



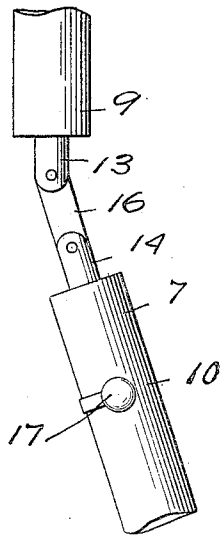
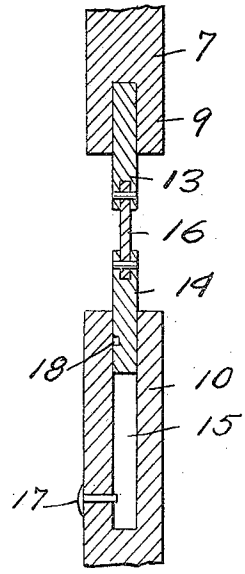


Fig. 5.

Fig. 6



Witnesses

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FOLDING UMBRELLA.

No. 897,195. Specification of Letters Patent. Patented Aug. 25, 1908.

Application filed June 5, 1907. Serial No. 377,390.

To all whom it may concern:

Be it known that I, THOMAS J. DAGUE, a citizen of the United States, residing at Doylestown, in the county of Wayne, State of Ohio, have invented certain new and useful Improvements in Folding Umbrellas; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention has reference to improvements in umbrellas, and it aims, generally, to provide a light, strong, and durable device of that class, which may be folded up into a small compass to render it of a convenient size to be carried in a suit-case or satchel.

More particularly, the invention resides in the provision of a sleeve slidably mounted upon each rib adjacent the joint between the sections thereof, and adapted to cover and uncover such joint, to permit or prevent breaking of the joint.

The invention further resides in the provision of a jointed umbrella staff, the two sections of which are connected in such a manner as to permit a free sliding movement of the runners to which the rib-supports and braces are pivoted.

The invention will be readily understood from a consideration of the following detailed description, and its preferred embodiment is illustrated in the accompanying drawings, in which like parts are designated by corresponding reference numerals in the several views.

Of the said drawings—Figure 1 is a vertical sectional view of an umbrella constructed in accordance with the present invention and shown in open or expanded position. Fig. 2 is a vertical sectional view of the umbrella, in partly closed position. Fig. 3 is a sectional view showing the umbrella folded. Fig. 4 is an enlarged perspective view of one of the sliding sleeves. Fig. 5 is an enlarged fragmental detail view of the joint between the handle sections, the latter being partly folded. Fig. 6 is a fragmental sectional view of said joint.

For clearness of illustration the umbrella cover, which is of the ordinary type, has not been shown in the several views.

In its practical embodiment the umbrella comprises a staff 7 and a series of ribs 8, pivoted at their upper ends thereto. The staff itself and the ribs are each jointed, the former consisting of an upper section 9 and a lower section 10, the upper section carrying adjacent its outer end a notch 11, to which the outer ends of the upper sections 12 of the ribs are pivoted. The lower end of the upper shaft section is provided with a depending tongue 13, which is fixed in a socket formed therein, in any preferred manner, while the lower section 10 of the staff is provided, at its adjacent end, with a similar tongue 14, which is slidable in a longitudinal socket 15, the depth of said socket being approximately equal to the combined length of said tongues. Each tongue has its outer end slotted, as shown, for the reception of the adjacent ends of a link 16, which is pivotally connected to each tongue at such point. It will therefore be apparent from the foregoing that when the two sections of the staff are brought together, the tongue 14 and the projecting end of the tongue 13, together with the link which connects said tongues, will be completely disposed within the socket 15 formed in the lower staff member, displacement of said parts from such position being prevented by the provision of a spring-catch 17, which works through an opening communicating with said socket, and is adapted to have its inner end engaged in a depression or seat 18, formed in the adjacent face of the tongue 14. It will be likewise apparent that upon the disengagement of said catch from the sliding tongue, the staff sections may be disjointed and the lower section folded upwardly against the upper section, owing to the link connection between the tongues.

The upper sections 12 of the ribs are further connected to the staff by a series of rib-supports 19, which are in turn jointed, the inner members thereof being hinged to a central runner 20, slidable upon the upper section of the staff, and the outer members to the upper rib-sections adjacent the lower ends thereof, the rib supports being in turn further connected with the staff by a series of braces 21, which are hinged at their upper ends to said rib-supports adjacent the joints 23 therein, and at their lower ends to the lower runner 24, which is likewise slidable upon the staff section 9.

The upper rib sections 12, which are pivotally connected at their inner ends to the adjacent ends of the lower rib sections 25 by hinges 26, are each provided at such point with a cylindrical sleeve 27, movable endwise thereupon into and out of position to

completely inclose the adjacent hinge 26. When, therefore, said sleeves are in the position above mentioned, the hinges 26 will be positively held against breaking, thus preventing the rib sections from being folded upon each other.

When the umbrella is used in the ordinary manner, and is in its closed position, the lower runner 24 will engage with a spring-catch 28, located adjacent the handle 29, with which the lower staff section is provided; the upper section of the staff is in like manner provided with a pair of similar catches 30 and 31, which engage with the runners 20 and 24, respectively, when the umbrella is in its open or expanded position.

In folding the umbrella the runner 24 is moved downwardly along the staff to break the joint 23 in the several rib-supports; the runner 20 is then moved upwardly along the staff section 9 towards the notch 11, when the several inner members of the rib-supports and the braces will be disposed against the upper staff section 9. The sleeves 27 will then move upwardly upon the rib sections 12 to uncover the joints 26, thus permitting the lower rib sections 25 to be folded directly against the corresponding upper rib section, which are in turn folded against the upper staff section. The joint between the upper and lower staff sections is then broken, as above described, and the lower section folded against the upper section, in which position the umbrella will occupy a sufficiently small space to enable it to be readily packed in a satchel or suit-case.

The sleeves 27 above referred to, are connected by braces 32 with the outer members of the corresponding rib-supports, so that the movement of the latter incidental to the opening and closing of the umbrella will effect the requisite movement of the sleeves. The ribs are preferably provided with eyelets through which the cover of the umbrella may be stitched to the ribs.

What is claimed, is—

1. In a folding umbrella, the combination, with a jointed staff, of a series of ribs pivoted thereto, each rib comprising an upper section and a lower section hinged together at their adjacent ends; a series of rib-supports pivotally connected at opposite ends with the upper rib sections and with the staff, each rib support comprising an inner member and an outer member hinged together at their adjacent ends; a sleeve slidably carried by one section of each rib and adapted for movement thereupon into and out of position to cover the hinge between said rib section and the other rib section; and a brace connected at opposite ends to each sleeve and to the outer member of the adjacent rib support, to effect the sliding movement of said sleeves when the umbrella is opened and closed.

2. In a folding umbrella, the combination, of a staff consisting of an upper section having a tongue fixed to its inner end, a lower section provided with a longitudinal socket at its inner end and having a tongue slidably fitted in said socket, a link pivoted to the outer ends of said tongues, and a spring-catch carried by the last-mentioned section for movement in an opening communicating with said socket, the inner end of said catch being adapted for engagement in a seat formed in the adjacent face of the sliding tongue when the latter is at the limit of its inward movement; a series of ribs pivoted to the upper section of the staff, each rib comprising an upper section and a lower section hinged together at their adjacent ends; a series of rib-supports pivotally connected at opposite ends with the upper rib sections and with the staff, each rib support comprising an inner member and an outer member hinged together at their adjacent ends; a sleeve slidably carried by one section of each rib and adapted for movement thereupon into and out of position to cover the hinge between said rib section and the other rib section; and a brace connected at opposite ends to each sleeve and to the outer member of the adjacent rib support, to effect the sliding movement of said sleeves when the umbrella is opened and closed.

In testimony whereof, I affix my signature, in presence of two witnesses.

THOMAS J. DAGUE.

Witnesses:

WILLARD JENIOR,

OMER W. BAYSINGER.