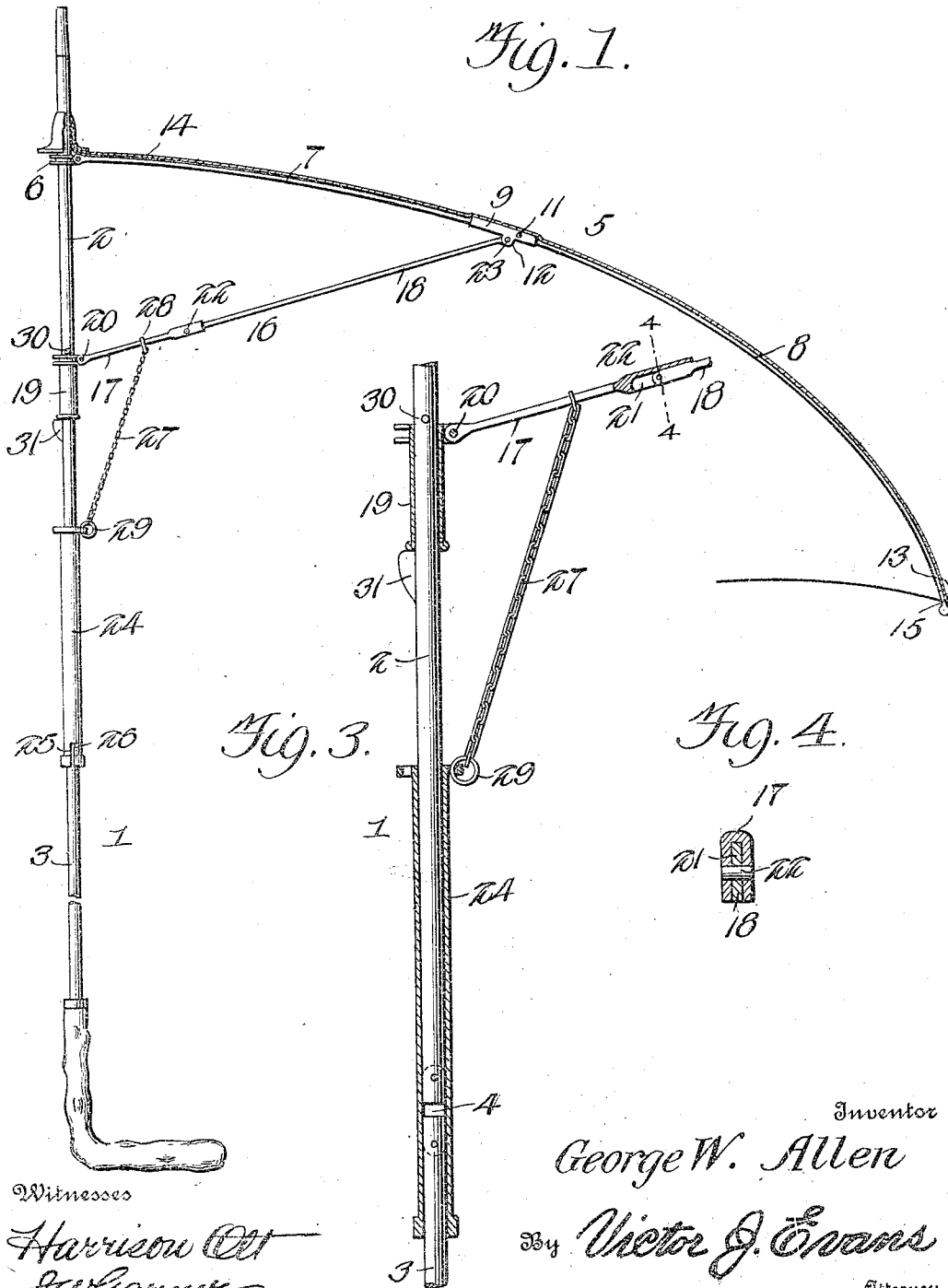


G. W. ALLEN.
FOLDING UMBRELLA.
APPLICATION FILED AUG. 3, 1912.

1,064,588.

Patented June 10, 1913.

2 SHEETS—SHEET 1.



Witnesses

Harrison Ott
J. Garner

Inventor

George W. Allen

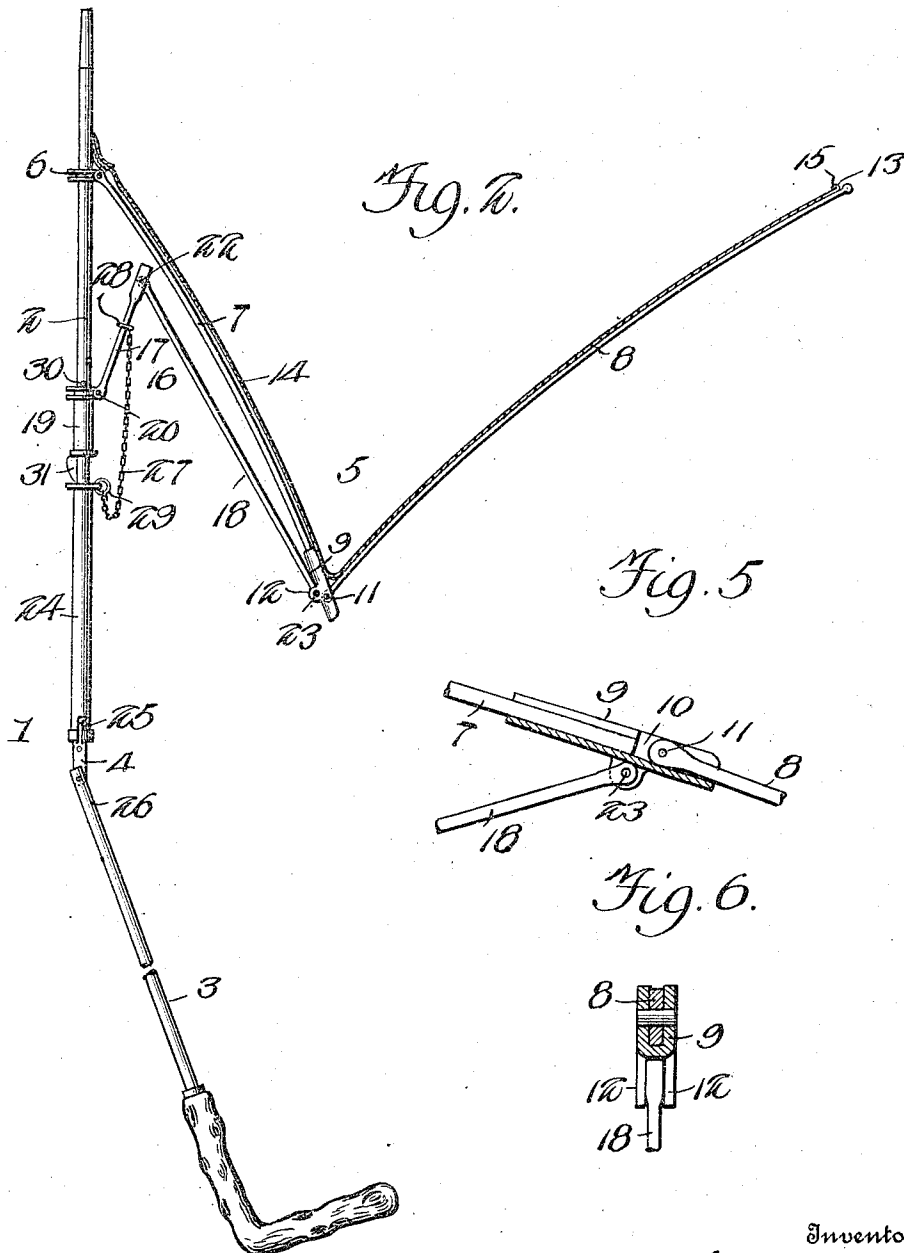
By Victor J. Evans

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UNITED STATES PATENT OFFICE.

GEORGE W. ALLEN, OF RUNGE, TEXAS.

FOLDING UMBRELLA.

1,064,588.

Specification of Letters Patent.

Patented June 10, 1913.

Application filed August 3, 1912. Serial No. 713,062.

To all whom it may concern:

Be it known that I, GEORGE W. ALLEN, a citizen of the United States, residing at Runge, in the county of Karnes and State of Texas, have invented new and useful Improvements in Folding Umbrellas, of which the following is a specification.

This invention is an improved folding umbrella and consists in the construction, combination and arrangement of devices hereinafter described and claimed.

The object of my invention is to provide an improved umbrella which embodies folding ribs and braces therefor and also embodies a staff composed of separable sections whereby the staff may be shortened when the umbrella is folded so that all of the parts of the umbrella may be very compactly disposed.

In the accompanying drawings:—Figure 1 is a sectional view of a portion of an umbrella constructed in accordance with my invention, showing the same open. Fig. 2 is a similar view, showing the same in the act of being folded. Figs. 3 and 4 are detail views. Fig. 5 is a detail longitudinal sectional view, showing a point between the members of one of the ribs and also showing the outer end of one of the outer brace members pivoted thereto. Fig. 6 is a detail transverse sectional view of the same on a plane coincident with the pivot of the lower rib member.

The staff 1 of my improved folding umbrella is made of separable sections, two of said sections respectively indicated at 2—3 being employed in the form of my invention here shown. These sections are detachably connected together by a link 4, the ends of which are arranged in slots with which the said sections are provided and pivotally connected to said sections.

The ribs 5 are pivotally connected to a notch 6 of the usual construction, which notch is secured on the upper section 2 of the staff near the upper end thereof. Each rib comprises an upper member 7 and a lower member 8, the said members being pivotally connected together, the joint between said members being formed by a member 9 which is U-shaped transversely to provide a channel 10 in its outer side, the lower end of the rib member 7 being clamped between the said walls of the member 9 at the upper end of the channel and the upper end of the rib member 8 being pivoted in the

lower portion of the said channel and between the side walls of said member 9 by a pin 11, as shown. Each joint member 9 is also provided on its inner side with a pair of ears 12. When the ears are in extended position, the upper portions of the lower members 8 lie in the bottoms of the channels 10 but said channels and the pivotal connection between the joint members 9 and the lower rib members 8 enable the said rib members 8 to be folded up close to the upper members 7, as will be understood, so that the umbrella is adapted to be compactly folded. Each rib member 8 is provided at its outer end with a ring 13.

The cover 14 is secured at its center to the staff in the usual manner and at its periphery to the outer end of the rib members and in order to prevent the umbrella from being turned inside out by the wind when the umbrella is raised I provide a cord 15 which runs around the umbrella at the rim, passes through the rings 13 and, hence, connects the outer ends of all the ribs together.

The braces 16 for the ribs are each composed of an inner member 17 and an outer member 18. The inner members 17 have their inner ends pivotally connected to a runner 19 which is slidable on the upper member of the staff. Such pivot connections are indicated at 20 and each inner brace member has its outer end formed with a channel 21. Each outer brace member 18 has its inner end pivotally mounted in the channel of the inner member, the pivot of the outer brace member passing through the side walls formed by said channel, and the outer end of each brace member is pivotally connected between the pair of lugs 12 of the associated rib joint member 9 as at 23. Hence, the braces are flexibly jointed and are foldable.

A tubular runner 24 is also provided which is arranged to move longitudinally on the upper member of the staff and when the staff members are in line with each other may also be moved down so as to receive the upper portion of the lower staff member and anchor the joint between the staff members so as to stiffen the joint and lock the staff members together in extended position. This runner 24 has a bayonet slot 25 at its lower end which may be engaged with a stud 26 that projects from the lower member of the staff to lock the runner member in place to secure the staff. Connecting ele-

ments, here shown as chains 27 are also employed, which have their upper ends connected to the inner members 17 of the braces 16 as at 28 and their lower ends connected to the upper end of the runner 24 as at 29.

The runner 19 has its upward movement limited by a stop 30 which projects from the upper member of the staff and may be closed in such position by means of a spring catch 31 of the usual construction. When the umbrella is hoisted, the runner 24 is moved downwardly to lock the members of the staff together at the joint and to also tighten the chains 27 to prevent the braces 16 from folding. To close the umbrella, the runner 24 must be moved upwardly to slacken the flexible connections 27 and, hence, permit the braces to fold up and lower the ribs. The ribs may then be folded and the staff may also be folded so as to dispose the umbrella very compactly.

I claim:—

An umbrella embodying a staff having members provided with a flexible joint

whereby the staff may be folded, a foldable rib comprising upper and lower members pivotally connected together, the upper member being pivotally connected at its upper end to the staff, a runner on the staff, a foldable brace comprising inner and outer members pivotally connected together and also respectively and pivotally connected to the runner and to the jointed rib, a supplemental runner arranged on the staff and a flexible connection between the supplemental runner and the inner brace member, the length of the said flexible connection being such as to enable the supplemental runner to cover and stiffen the joint between the staff members and cause the brace to be straightened and to support the rib in open position.

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

GEORGE W. ALLEN.

Witnesses:

B. L. BAKER,

HUGH McROBERTS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."