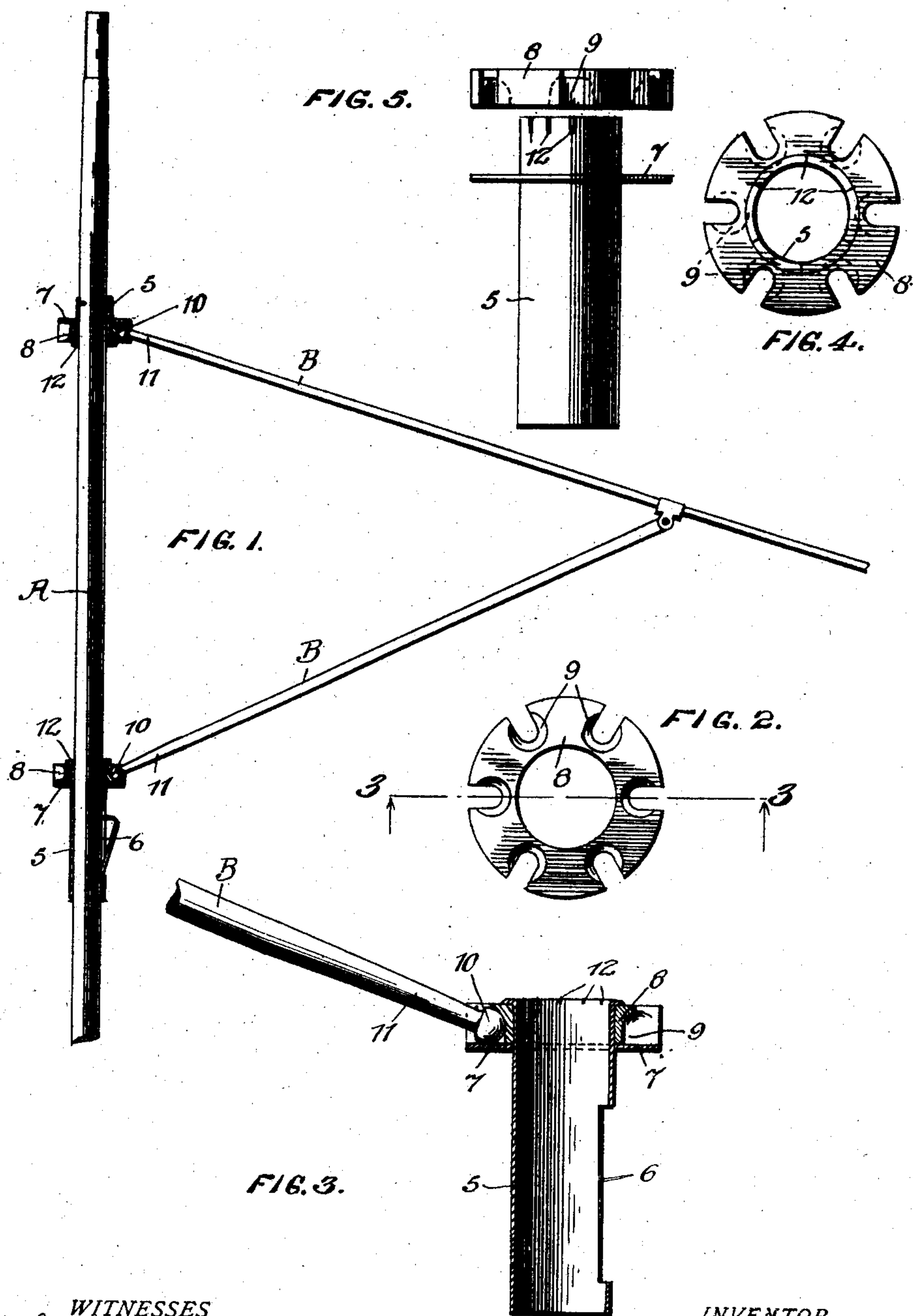


No. 883,503.

PATENTED MAR. 31, 1908.

H. C. WARFEL.  
UMBRELLA CROWN AND RUNNER.  
APPLICATION FILED DEC. 16, 1907.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

HENRY C. WARFEL, OF PHILIPSBURG, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO THOMAS G. McCAUSLAND, OF PHILIPSBURG, PENNSYLVANIA.

## UMBRELLA CROWN AND RUNNER.

No. 883,503.

Specification of Letters Patent.

Patented March 31, 1908.

Application filed December 16, 1907. Serial No. 406,672.

*To all whom it may concern:*

Be it known that I, HENRY C. WARFEL, a citizen of the United States, residing at Philipsburg, in the county of Center and State of Pennsylvania, have invented certain new and useful Improvements in Umbrella Crowns and Runners, of which the following is a specification.

My invention relates to an improvement in umbrellas and more particularly to the crown and runners thereof and the object of my invention is to form a permanent and durable construction, which may however, be released and the parts separated when it is desired to withdraw the head of a damaged or broken rib, or for other causes.

My invention further resides in the provision of a simple and inexpensive construction for accomplishing the above object, and in which a minimum number of parts are employed.

My invention further and specifically resides in the following features of construction, arrangement and operation to be hereinafter described with reference to the accompanying drawings, forming a part of this specification, in which like numerals are used to designate like parts throughout the several figures thereof, and in which,

Figure 1 is a broken detail sectional view of an umbrella stick and frame and showing my improved construction of crown and runner thereon, Fig. 2 is a plan view of one face of the slotted rib holding ring, Fig. 3 is a central vertical sectional view through a runner showing a rib extending therefrom, Fig. 4 is a plan view of the reverse face of the slotted rib holding ring to that illustrated in Fig. 2, and Fig. 5 is an elevation of the runner and its slotted rib holding ring ready for assembling.

In the practical embodiment of my invention I provide a tubular member 5 which in the case of the runner is provided with a longitudinal slot 6 through which the umbrella stick spring engages to hold the same in the open and closed position. The tubular member 5 is adapted for engagement about the stick A of an umbrella and is provided adjacent one end with a circular outstanding and rigid flange 7 and with slots 12 cut at its end adjacent said flange and longitudinally thereof.

The rib holding ring 8 is slotted through its circular face and is provided with enlargements 9 at one end of said slots in which the head 10 of an umbrella rib B is adapted to engage, said umbrella rib being provided with a tapering portion 11 adjacent its head 10, said tapering portion passing through the slots of the ring 8 when the head 10 is in operative engagement within the enlargements 9 of said slots. The ring 8, in assembling the device is inserted upon the end of the tubular member 5 adjacent its flange 7, with the enlargements 9 of the slots of said ring next to said flange after the heads 10 of the ribs B have been inserted therein. The slotted end of the tubular member 5 is then crimped outwardly, the material between the slots 12 being forced upon the outer face of the ring 8. It will thus be seen that a permanent and durable joint between the tubular member forming either the crown piece or runner and its slotted rib holding ring is effected, while a minimum number of parts are employed in making such connection. It will also be seen that the crimped end of the tubular member 5 may be pried up from the ring 8 and the same withdrawn or partially withdrawn without removing either the crown or runner from the umbrella, when it is necessary to remove a damaged or broken rib.

Having thus fully described my invention, I claim:

In a device of the character described, the combination of a tubular member forming the crowns and runners of umbrellas, having a circular ridged outstanding flange adjacent one end thereof, and provided with slots extending longitudinally from its end adjacent said flange and toward the same, and a rib holding ring adapted for insertion upon said end having slots in the circular face thereof provided with enlarged recesses at one end thereof for the reception of the head of an umbrella rib, said enlargements being next to said flange and said slotted ends of said tube being crimped upon the opposite face of said ring, substantially as described.

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

HENRY C. WARFEL.

Witnesses:

G. G. POTTS GROVE,  
ALLEN MALLEY.