G. K. GARRETT.

UMBRELLA.

APPLICATION FILED JULY 2, 1909.

946,122. Patented Jan. 11, 1910.

Fig. 1.

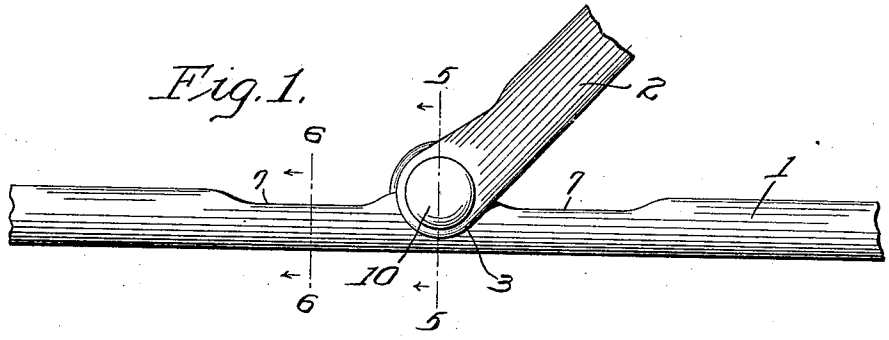


Fig. 2.

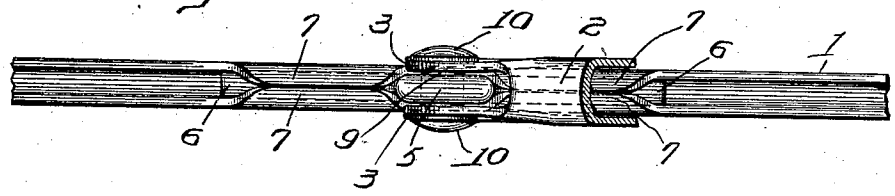


Fig. 3.

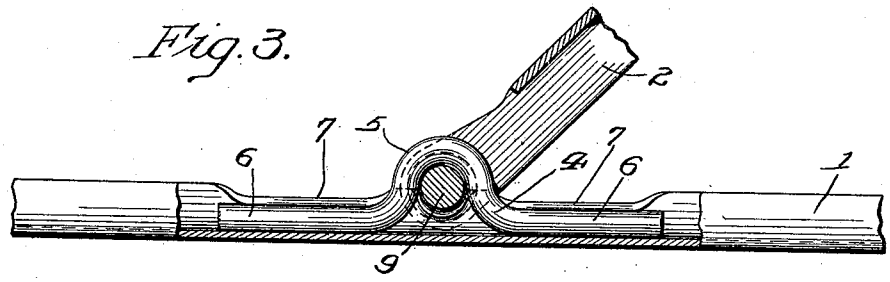


Fig. 4.

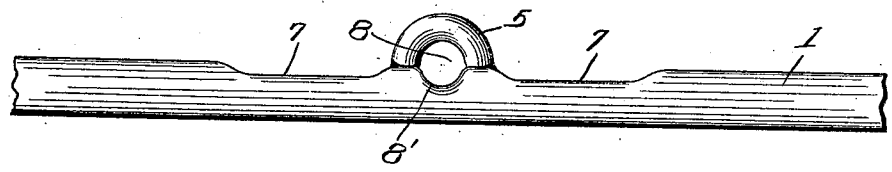


Fig. 5.

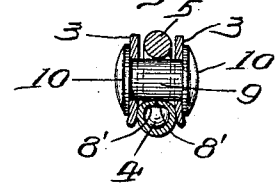
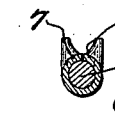


Fig. 6.



WITNESSES

H. J. Hartman.

A. J. Gardner.

INVENTOR

George K. Garrett.

BY Howard Pell.

ATTORNEY

UNITED STATES PATENT OFFICE.

GEORGE K. GARRETT, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO NATIONAL UMBRELLA FRAME COMPANY, A CORPORATION OF PENNSYLVANIA.

UMBRELLA.

946,122. Specification of Letters Patent. **Patented Jan. 11, 1910.**

Application filed July 2, 1909. Serial No. 505,540.

To all whom it may concern:

Be it known that I, GEORGE K. GARRETT, a citizen of the United States, and a resident of the city of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Umbrellas, of which the following is a full, clear, and complete disclosure, reference being had to the accompanying drawings, forming part of this specification.

The main objects of this invention are, to provide a simple and inexpensive joint between an umbrella rib and a stretcher, that will be compact, strong, and durable, and in which a relatively large rivet may be used for connecting the rib and stretcher without increasing the size of the joint or weakening the rib; to provide an umbrella rib or other grooved member with an eye of simple, strong, and durable construction to receive fastening means; to provide a pivoted connection between a rib and a stretcher in which the rib is not pierced by the pivot but retains its full original strength, and in which no portion of the joint projects from that side of the rib that comes into contact with the umbrella cover, thus avoiding the necessity of a protecting piece of material between the joint and the cover, and consequently improving the appearance of the umbrella and reducing its cost; to provide an improved "low" connection between a rib and a stretcher, or, in other words, a connection in which the axis of movement between the parts is relatively close to the longitudinal axis of the rib, thus adapting the connection to form a close rolling umbrella; and to provide other improvements as will appear hereinafter.

In the accompanying drawings, Figure 1 is a side elevation of an umbrella rib and stretcher connected in accordance with this invention. Fig. 2 a top plan view of the same; Fig. 3 a central longitudinal section of the same; Fig. 4 a side elevation of the rib with the stretcher removed; Fig. 5 a transverse section on line 5—5 of Fig. 1; and Fig. 6 a transverse section on line 6—6 of Fig. 1.

Referring to the drawings, one embodiment of this invention comprises a corrugated or longitudinally grooved rib 1, substantially U-shaped in cross section throughout the greater portion of its length, and a corrugated or longitudinally grooved stretcher 2, substantially U-shaped in cross section and having a bifurcated end forming ears 3 which embrace the sides of the rib. The open side of the stretcher 2 is turned toward the open side of the rib 1 when the umbrella is in use, and the inside dimensions of the stretcher are greater than the outside dimensions of the rib, so that when the two parts are closed together the stretcher will incase the rib.

For connecting the rib 1 and the stretcher 2 a short piece of wire 4 is bent centrally or intermediate of its ends to form a loop 5, and the ends 6 of the wire are arranged longitudinally within the rib 1, the diameter of the wire being preferably substantially the same as the inside diameter of the rib so that the ends of the wire fit snugly within the rib. For holding the wire securely in position in the rib 1, the sides of the rib adjacent each end of the wire are turned inwardly to incase each end of the wire as at 7. Each end of the wire is thus tightly held in a cylindrical casing formed by the rib. The loop 5 of the wire 4 forms the outer half or portion of an eye 8, the inner portion of which is formed by bending inwardly the sides of the rib 1 opposite the loop 5, as at 8′, the opposite edges of the rib being thus brought into abutment centrally of the eye, and the inwardly turned portions of the sides of the rib forming the inner half of the eye being thus bent inwardly around the inner portion of the loop 5.

The stretcher 2 is connected to the rib 1 by means of a rivet 9, which extends through apertures provided therefor in the ears 3 of the stretcher and through the eye formed by the loop 5 and the inwardly turned sides of the rib, each end of the rivet being upset, as usual, to form a head 10 outside of the adjacent ear 3. By this means a relatively large rivet 9 may be used, supported by the relatively broad bearing surfaces of the eye 8, and a simple, strong, and durable joint is thus provided between the rib 1 and the stretcher 2.

Although only one form has been shown in which this invention may be embodied, it is obvious that many changes might be made in the construction illustrated without departing from the spirit of this invention or the scope of the appended claims.

Having thus fully described my invention, I claim and desire to protect by Letters Patent of the United States:

1. The combination with a rib having a longitudinal groove, of a wire provided intermediate of its ends with a loop and having its ends fitted within the said groove, the sides of the rib being bent inwardly around each end of said wire to hold the wire in position, and inwardly within the loop to form the inner portion of an eye, the outer portion of said eye being formed by said loop, a stretcher, and a pivot extending through said stretcher and said eye.

2. The combination with a rib, having a longitudinal groove, of a wire provided intermediate of its ends with a loop and having its ends fitted with said groove, the sides of the groove being bent inwardly around each end of said wire to hold the wire in position, and the sides of the rib being bent inwardly within said loop to form the inner portion of an eye, the outer portion of which is formed by said loop.

3. The combination with a rib having a longitudinal groove, of a wire provided intermediate of its ends with a loop and having its ends fitted longitudinally within said groove. the sides of the rib within the loop being bent inwardly into abutment to form the inner portion of an eye, the outer portion of which is formed by said loop.

4. The combination with a rib substantially U-shaped in cross section for part of its length, of a wire provided intermediate of its ends with a loop and having its ends fitted longitudinally within said rib, the sides of the rib being bent inwardly within the loop to form the inner portion of an eye, the outer portion of said eye being formed by said loop.

5. The combination with a corrugated rib, of a wire provided intermediate of its ends with a loop and having its ends fitted within said rib, the sides of said rib being bent inwardly to form the inner portion of an eye, the outer portion of said eye being formed by said loop.

6. The combination with a corrugated rib, of a wire provided intermediate of its ends with a loop and having its ends fitted within said rib, the sides of said rib being bent inwardly into abutment to form the inner portion of an eye, the outer portion of said eye being formed by said loop.

7. The combination with a rib having a longitudinal groove, of a wire bent intermediate of its ends to form a loop and having its ends fitted within said groove, the sides of said rib being bent inwardly adjacent each end of said wire to hold said wire in position, and the sides of said rib being bent inwardly into abutment within said loop to form the inner portion of an eye, the outer portion of which is formed by said loop, a stretcher having a longitudinal groove, and a bifurcated end forming ears embracing said rib, and a rivet extending through said ears and said eye forming a pivotal connection between said rib and said stretcher.

8. The combination with a rib having a longitudinal groove, of a wire bent intermediate of its ends to form a loop and having its ends fitted within said groove, the sides of said rib being bent inwardly adjacent each end of said wire to hold said wire in position, and the sides of said rib being bent inwardly into abutment within said loop to form the inner portion of an eye, the outer portion of which is formed by said loop, a stretcher having a longitudinal groove and a bifurcated end forming ears embracing said rib, and a rivet extending through said ears and said eye forming a pivotal connection between said rib and said stretcher, the open side of said rib being turned toward the open side of said stretcher when said rib and stretcher are in operation, and the inside diameter of said stretcher being slightly greater than the outside diameter of said rib, whereby said stretcher will incase said rib when the two parts are brought together.

In witness whereof, I hereunto set my hand this 30th day of June A. D., 1909.

GEORGE K. GARRETT.

Witnesses:

ALEXANDER PARK,

ADDISON IRWIN GARDNER.