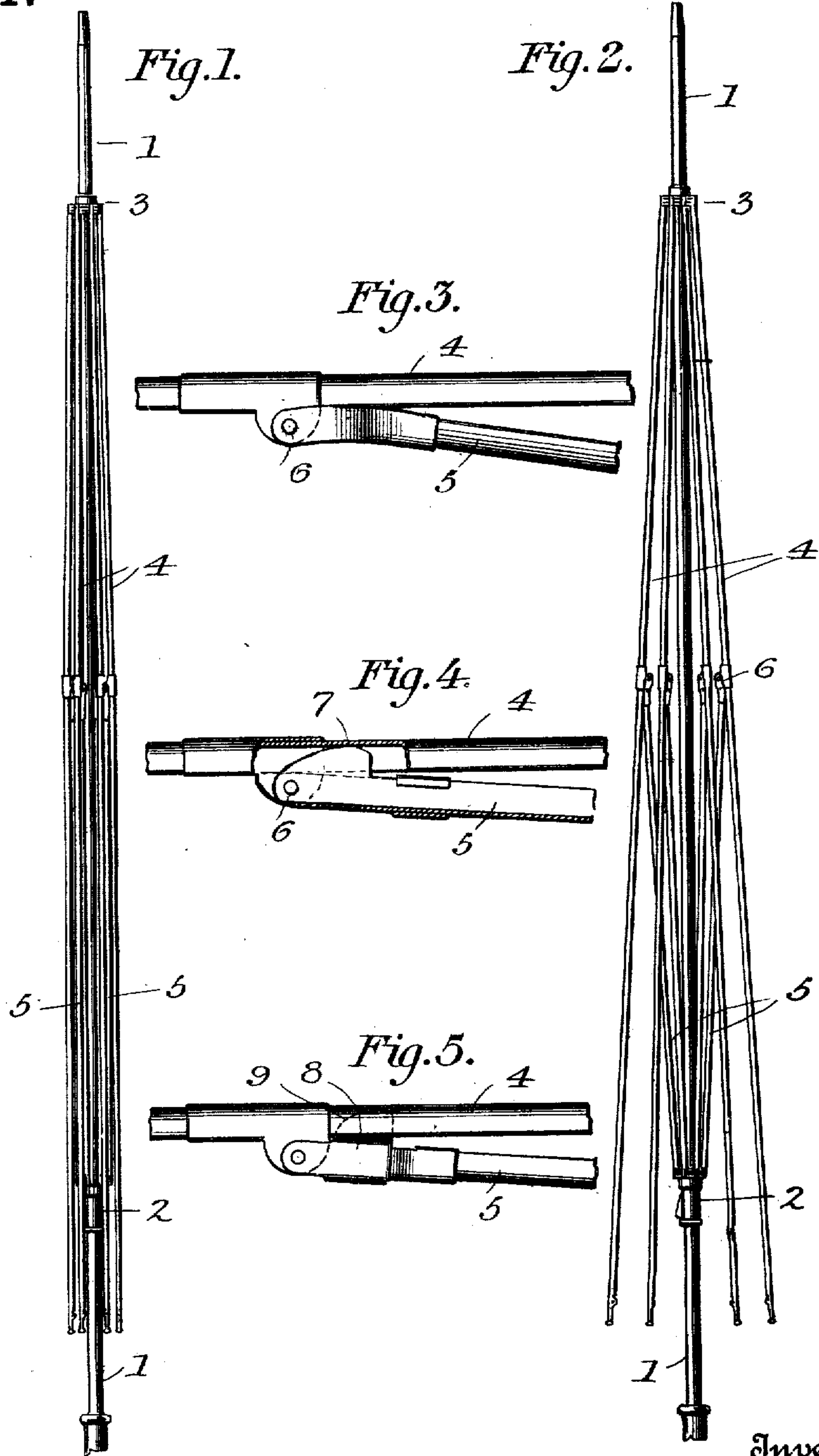


J. ROSE.
 UMBRELLA FRAME.
 APPLICATION FILED DEC. 8, 1908.

912,491.

Patented Feb. 16, 1909.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES ROSE, OF LANCASTER, PENNSYLVANIA.

UMBRELLA-FRAME.

No. 912,491.

Specification of Letters Patent.

Patented Feb. 16, 1909.

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To all whom it may concern:

Be it known that I, JAMES ROSE, a citizen of the United States, residing at Lancaster, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Umbrella-Frames, of which the following is a specification.

This invention relates to umbrella frames.

The object of the invention is to provide an umbrella frame of such construction that the ribs thereof shall normally be held in such positions that their interference with each other shall be prevented.

Further the object is to provide an umbrella frame of such construction that the ribs and stretchers shall automatically free themselves from the stick of the umbrella and from adjacent ribs and stretchers when released from the retaining band by which the parts are usually confined when the umbrella is not in use.

Further, the object is to provide an umbrella frame of such construction that the parts thereof shall automatically separate from each other when released from a retaining band, and which shall be capable of being as closely bound as a frame of usual construction.

A further object is to provide an umbrella frame having the parts so formed as to automatically separate when released from a retaining band, and wherein no objectionable projections, liable to injure the cover or detract from the appearance of the article shall be presented when the umbrella is closed and the parts thereof confined.

With these objects in view the invention consists of the novel construction and arrangement of parts, substantially as hereinafter described and claimed.

The invention is illustrated in the accompanying drawings in which:

Figure 1 is a side elevation of an umbrella frame containing my invention with the cover thereof removed, showing the positions of the parts when closely confined by a retaining band; Fig. 2 is a side elevation of an umbrella frame, with the cover thereof removed showing the positions assumed by the parts when the umbrella is closed and the parts thereof are not confined by a retaining band; Fig. 3 is a fragmentary view showing a portion of an umbrella rib and the preferred form of stretcher used in con-

nection therewith, the parts being enlarged; and Figs. 4 and 5 are views of modified forms of stretchers.

In the illustration, 1 represents an umbrella stick having arranged thereon a runner 2 of any desired construction which is to be retained by spring catches on the stick to retain the parts of the umbrella in either an open or a closed position. Connected to the stick by a notch ring 3 are a number of ribs 4 which may be solid or of the common paragon type. The ribs are connected to the runner by stretchers 5, which as usual are each pivotally connected at one end to a rib and at the other to the runner.

In umbrellas as ordinarily made, there is always a tendency when closed, for the ribs and stretchers to interfere with each other or with the stick. When this occurs and pressure is brought on the runner to raise the umbrella the cloth forming the cover is subjected to unnecessary wear and strain frequently resulting in its being torn. When the ribs and stretchers are in engagement with each other or with the stick the parts are liable to become bent or broken according to the amount of pressure applied on the runner to raise the umbrella.

To avoid possibility of injury to the parts, my improved frame is so made that when the parts are closely confined they are placed under tension and when released are held in positions separated from each other. One, and the preferred means of accomplishing this, is by so forming the end of each stretcher adjacent to the point where it is pivotally connected to a rib that the stretcher normally is held to prevent its extending parallel to the rib. As shown in Fig. 2, the stretcher is bent slightly from the point 6 at which it is pivotally connected to the rib, forming a slightly projecting portion on the outer face of the stretcher which when the parts are brought closely together bears against the rib and puts both the rib and stretcher under slight tension for a considerable portion of the length of each. The bend given the stretcher is preferably in the form of a curve beginning at the pivot point 6, so that no sharp projection tending to produce a defined protrusion on the outer face of the rib is formed.

When the parts formed as described are

released from confinement the tension under which they are placed is sufficient to effectually separate the parts and prevent possibility of entanglement.

5 From an understanding of the invention it will be apparent that various means for obtaining the desired tension may be employed. For instance, as shown in Fig. 4, one end of each stretcher may have formed
10 with it a projection 7 which when the stretcher is moved to be substantially parallel with the rib to which it is connected, will come into contact with the rib and impart to it a slight bend. Again, as shown in
15 Fig. 5, a plate 8 may be bent upon and secured to one end of each stretcher. The ends of the plate are in line with each other and are formed with curved faces 9 which when the parts are closely folded are
20 brought against a rib and serve to put both the rib and stretcher under slight tension.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

25 1. In an umbrella frame ribs and stretchers connected together, each stretcher having a bend beginning at a point of connection forming a projecting portion which is brought against the ribs when the parts
30 are closely confined thereby putting them under tension, substantially as described.

2. In an umbrella frame ribs and stretchers connected together, each stretcher hav-

ing a simple curve beginning at the point of connection forming a projecting portion 35 which is brought against the rib when the parts are closely confined thereby putting them under tension, substantially as described.

3. In an umbrella frame ribs and stretchers pivotally connected, each stretcher having its outer end curved forming a projection on the side adjacent to the rib adapted to place the members under tension, substantially as described. 45

4. In an umbrella frame ribs and stretchers connected together, each stretcher having a projecting portion beginning at the point of connection, which projection is brought against the rib when the parts are 50 closely confined thereby putting them under tension, substantially as described.

5. As a new article of manufacture, an umbrella stretcher having a single bend beginning at the point where it is adapted to 55 be connected to a rib, whereby a projecting portion is formed on its outer face, which portion will bear against a rib when the stretcher is brought in close proximity to a rib. 60

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

JAMES ROSE.

Witnesses:

DAVID BAIR,
JOHN H. MYERS.

It is hereby certified that in Letters Patent No. 912,491, granted February 16, 1909, upon the application of James Rose, of Lancaster, Pennsylvania, for an improvement in "Umbrella-Frames," an error appears in the printed specification requiring correction, as follows: In line 27, page 2, the article "a," second occurrence, should read *the*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 2nd day of March, A. D., 1909.

[SEAL.]

C. C. BILLINGS,
Acting Commissioner of Patents.