

No. 850,445.

PATENTED APR. 16, 1907.

W. W. REAM.
UMBRELLA RIB HOLDER AND RUNNER.
APPLICATION FILED JULY 2, 1906.

Fig. 1.

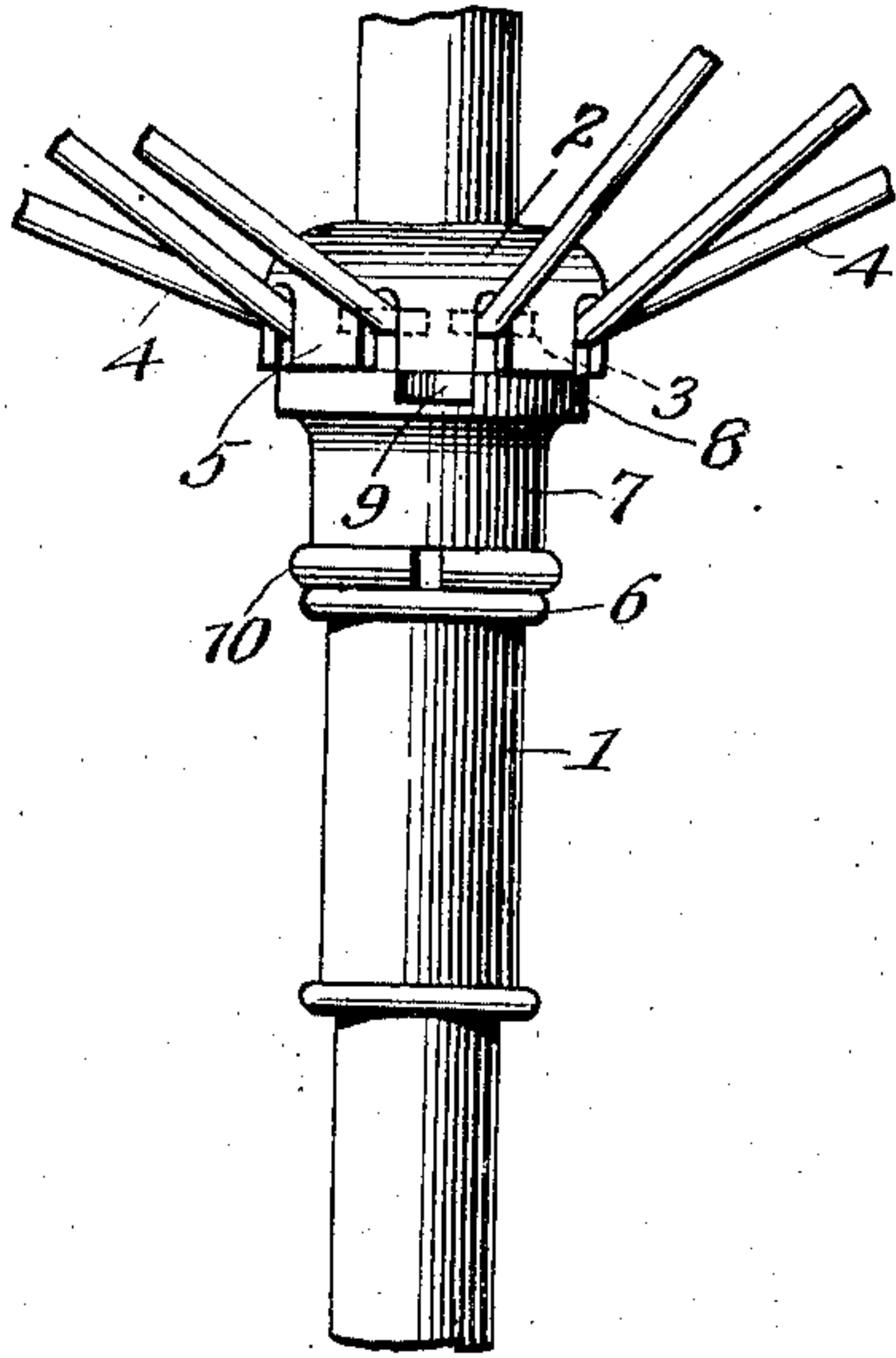


Fig. 2.

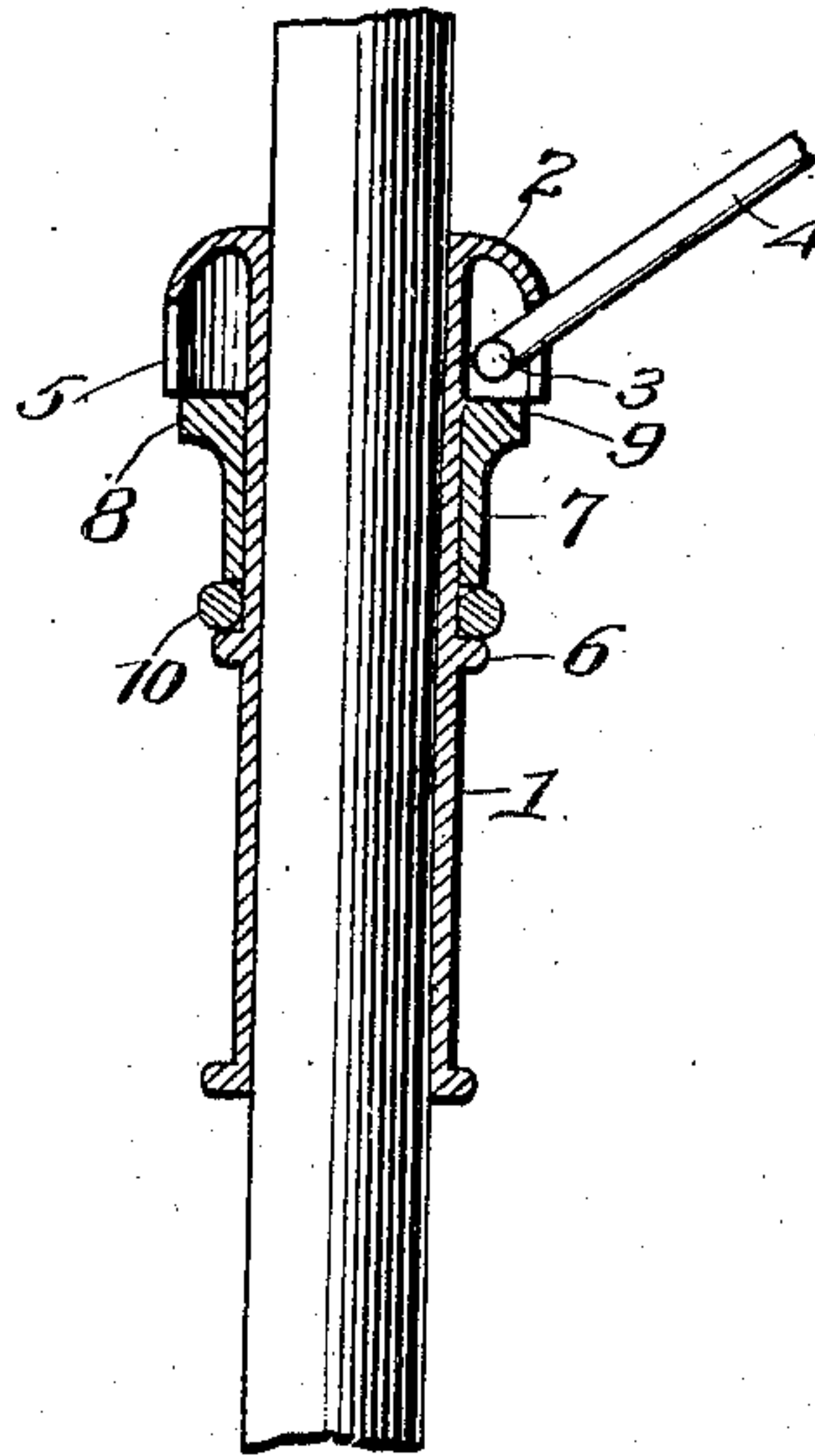


Fig. 3.

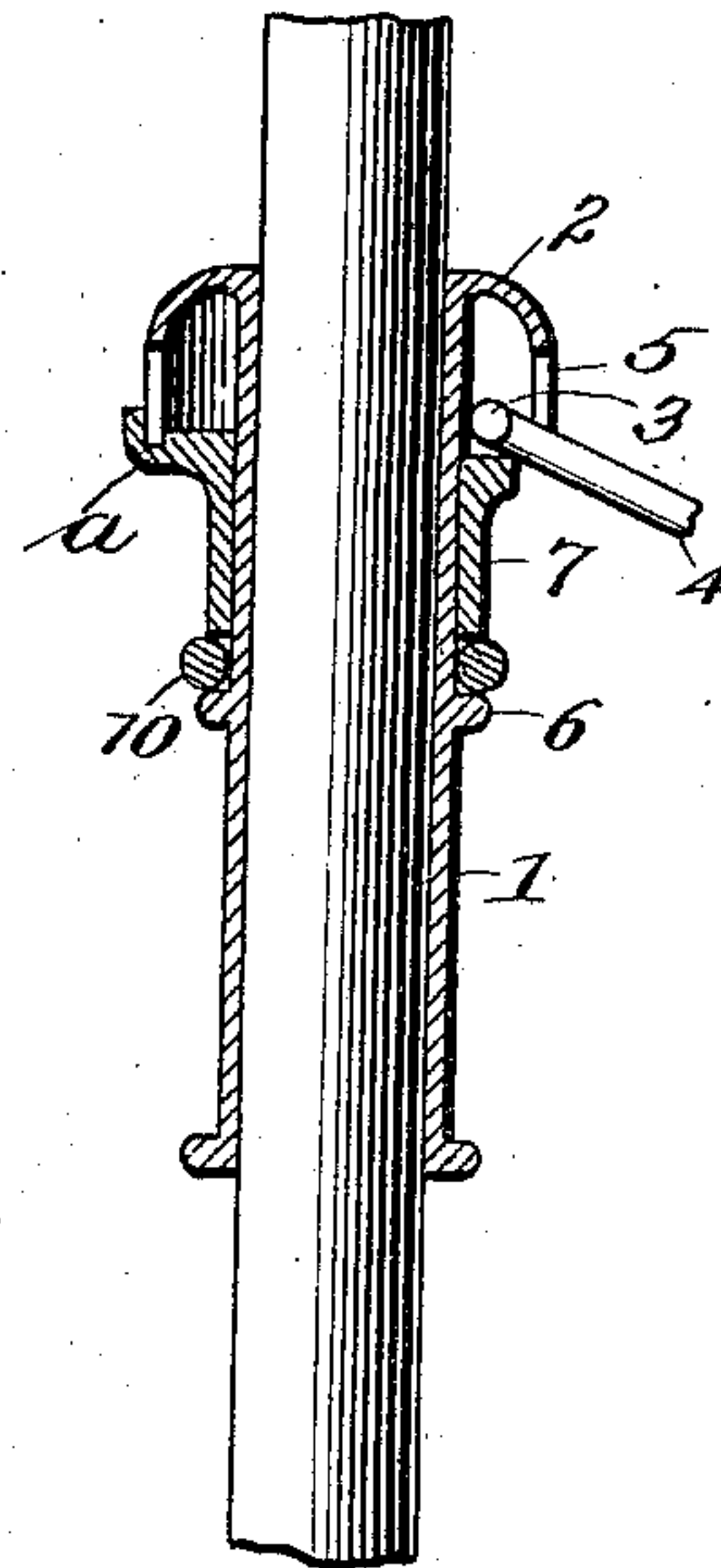


Fig. 4.

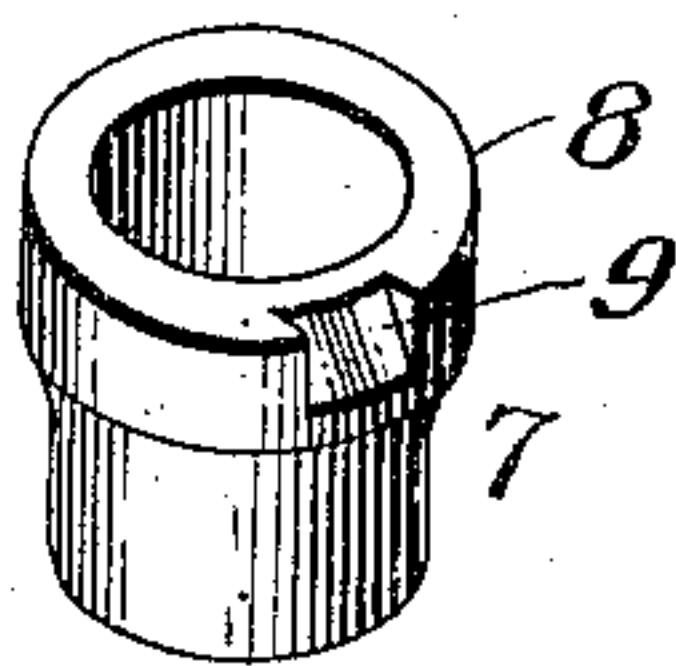


Fig. 5.

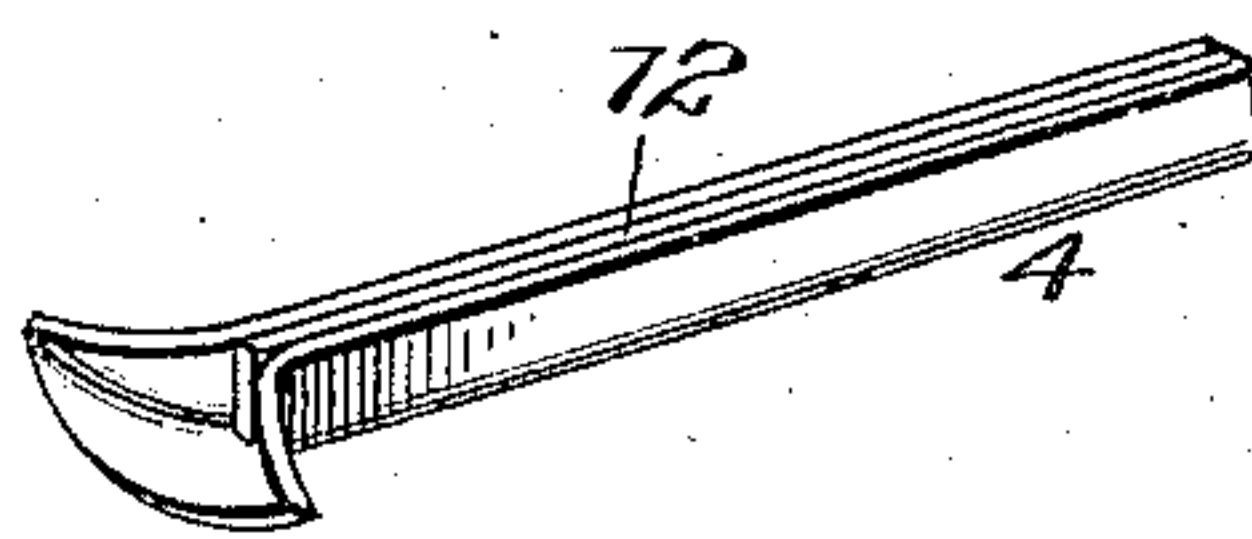
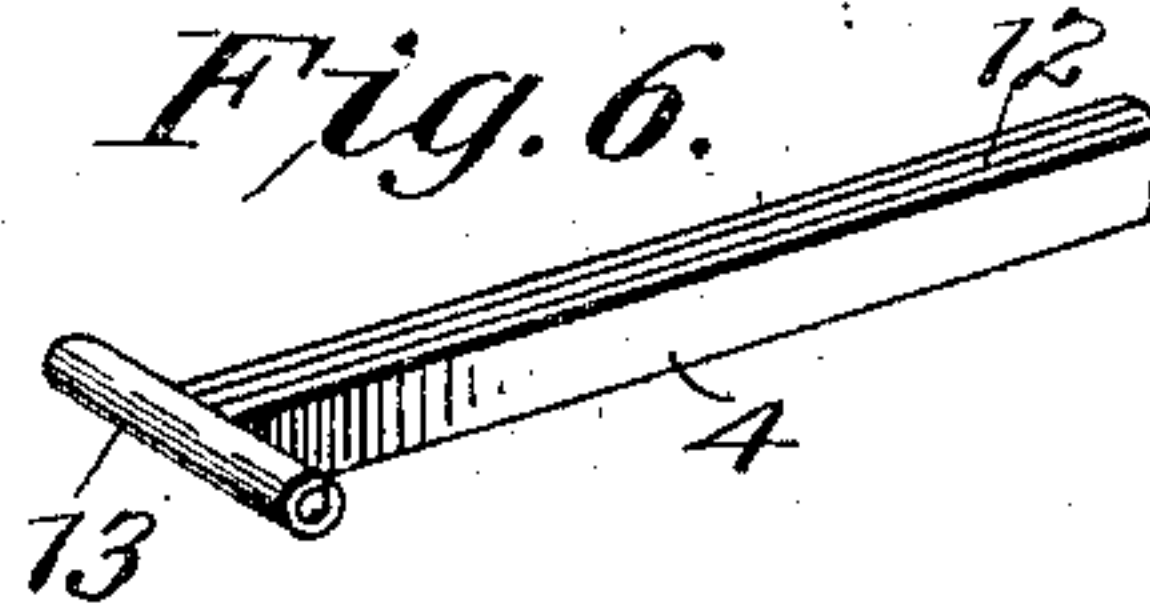


Fig. 7.



Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM W. REAM, OF VOGANSVILLE, PENNSYLVANIA.

UMBRELLA RIB-HOLDER AND RUNNER.

No. 850,445.

Specification of Letters Patent.

Patented April 16, 1907.

Application filed July 2, 1906. Serial No. 324,475.

To all whom it may concern:

Be it known that I, WILLIAM W. REAM, a citizen of the United States, residing at Vogansville, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Umbrella Rib-Holders and Runners, of which the following is a specification.

This invention relates to new and useful improvements in umbrellas, and more particularly to the means whereby the stretching-ribs are secured or attached to the runner.

The invention has primarily for its object the provision of novel means whereby the parts may be assembled or disengaged to facilitate repairs.

The invention also has for an object the provision of novel heads for the ribs, said head being integral therewith.

Finally, an object of this invention is to produce a device of the character noted which will possess advantages in points of simplicity, efficiency, and durability, proving at the same time comparatively inexpensive to produce.

With the foregoing and other objects in view the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail reference will be had to the accompanying drawings, forming part of this specification, wherein like characters denote corresponding parts in the several views, in which—

Figure 1 is a view in elevation, illustrating the invention applied to a fragment of an umbrella-staff. Fig. 2 is a vertical sectional view showing the staff in elevation. Fig. 3 is a similar view showing the rib in a different position. Fig. 4 is a perspective view of the sleeve. Figs. 5 and 6 are perspective views showing the ribs in different stages of construction, the latter being complete. Fig. 7 is a perspective view illustrating the retaining-wire.

In the drawings, 1 denotes a runner which operates in the usual manner, and to the upper portion of this runner is attached a cupped cage 2, which receives the heads 3 of the stretcher-ribs 4, the spaced fingers 5 of the cage being free. The manner of connecting this cage 2 on the upper end of the runner 1 so as to permit the sleeve 7 being placed in position on the runner is not material to the efficient working of the device, but is largely

a matter of convenience in the process of manufacture. I make the cage 2 a cup with a central opening in its top to slip over the tube of which the runner 1 is formed and after placing the sleeve 7 on the runner slip the cage 2 in position and braze it fast. However, it might be screw-threaded or the runner-tube expanded like tubes are fastened in boiler-heads, or the upper end of the tube 1 turned over into a flange or bead on top of the cage 2, thus firmly holding the same in its position on top of the runner 1.

Loosely mounted, on the runner and positioned between the cage 2 and the bead 6 is a sleeve 7, which when held up against the cage confines the ribs or the heads of the ribs therein and holds the same against displacement, and it is also the intention of the invention to have said sleeve confine the ribs within the cage when it is at the limit of its movement in an opposite direction or abutting the bead 6.

The upper edge of the sleeve is provided with an annular flange 8, which has formed therein the recess 9, the bottom of said recess being inclined upwardly. This sleeve is not only movable on the runner longitudinally, but rotates therearound, and when it is desired to remove a rib said recess is positioned beneath said rib, and the sleeve is withdrawn to contact with the bead 6, when said rib will be free to be withdrawn. Thus it can be seen by this arrangement any one of the ribs may be moved independently of the other. To hold the ribs positively against displacement, a wire 10 is coiled about the runner between the bead 6 and the lower edge of the sleeve 7. This wire is not resilient, but must of necessity possess a certain amount of flexibility whereby it can be easily applied or readily removed.

It has been found in practice that the strain of the stretching-ribs on the fingers of the cage is so great as to bend the same, and in order to obviate this great disadvantage it has been found well to enlarge the flange *a* of the sleeve, as illustrated in Fig. 3, and to provide said flange with a circular recess, in which the free portions of the projections will extend when said sleeve is in its operative position or at the limit of its upward movement. By this arrangement the greater portion of the strain of the stretcher-ribs is distributed to the sleeve and will, it is thought, be readily appreciated.

Although it is not essential that any spe-

cific form of head should be supplied to the ribs, it has been found in practice well to employ such as is illustrated in the drawings, wherein is employed a laterally-extending head 13, which head is formed by rolling the end portion of the rib to form such head. By this means the head is formed integral with the rib and its strength and durability is greatly enhanced.

10 In the construction of the head it might be well to state that the rib is U-shaped and near the under portion is provided with a flat reinforcing-strip 12. The extreme portion of the rib is then flattened out, as shown in Fig. 5, and then rolled up upon itself to form a lateral head 13.

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

20 1. In combination, a runner, a cage at one end of the runner, a bead formed on the runner intermediate its length, a sleeve loosely mounted on the runner between the bead and cage, a flange on the end of the sleeve adjacent the cage, a recess in the upper edge of the flange and a split ring embracing the runner intermediate the sleeve and the bead.

2. In combination, a runner, a cage at one end of the runner, a bead formed on the runner intermediate its length, a sleeve loosely mounted on the runner between the bead and cage, a flange on the sleeve adjacent the cage, a recess on the upper edge of the flange, said

recess having its bottom inclined and a split ring embracing the runner intermediate the sleeve and the bead. 35

3. In combination, a runner, a bead formed on the runner intermediate its length, a sleeve loosely mounted on the runner between the bead and cage, a flange on the end of the sleeve adjacent the cage, a recess in the flange and a split ring embracing the runner intermediate the sleeve and the bead. 40

4. In combination, a runner, a cage at one end of the runner, a bead formed on the runner intermediate its length, a sleeve loosely mounted on the runner between the bead and cage, a flange on the end of the sleeve adjacent the cage and a split ring embracing the runner intermediate the sleeve and bead. 45

5. In combination, a runner, a cage at one end of the runner, a bead formed on the runner intermediate its length, a sleeve loosely mounted on the runner between the bead and cage, a flange on the sleeve, said flange having a recess in its upper edge, a split ring embracing the runner intermediate the sleeve and the bead, said flange being also provided with a groove to receive the ends of the cage. 50

In testimony whereof I affix my signature in presence of two witnesses. 55

WILLIAM W. REAM.

Witnesses:

CHAS. E. LONG,
J. W. MEMINGER.