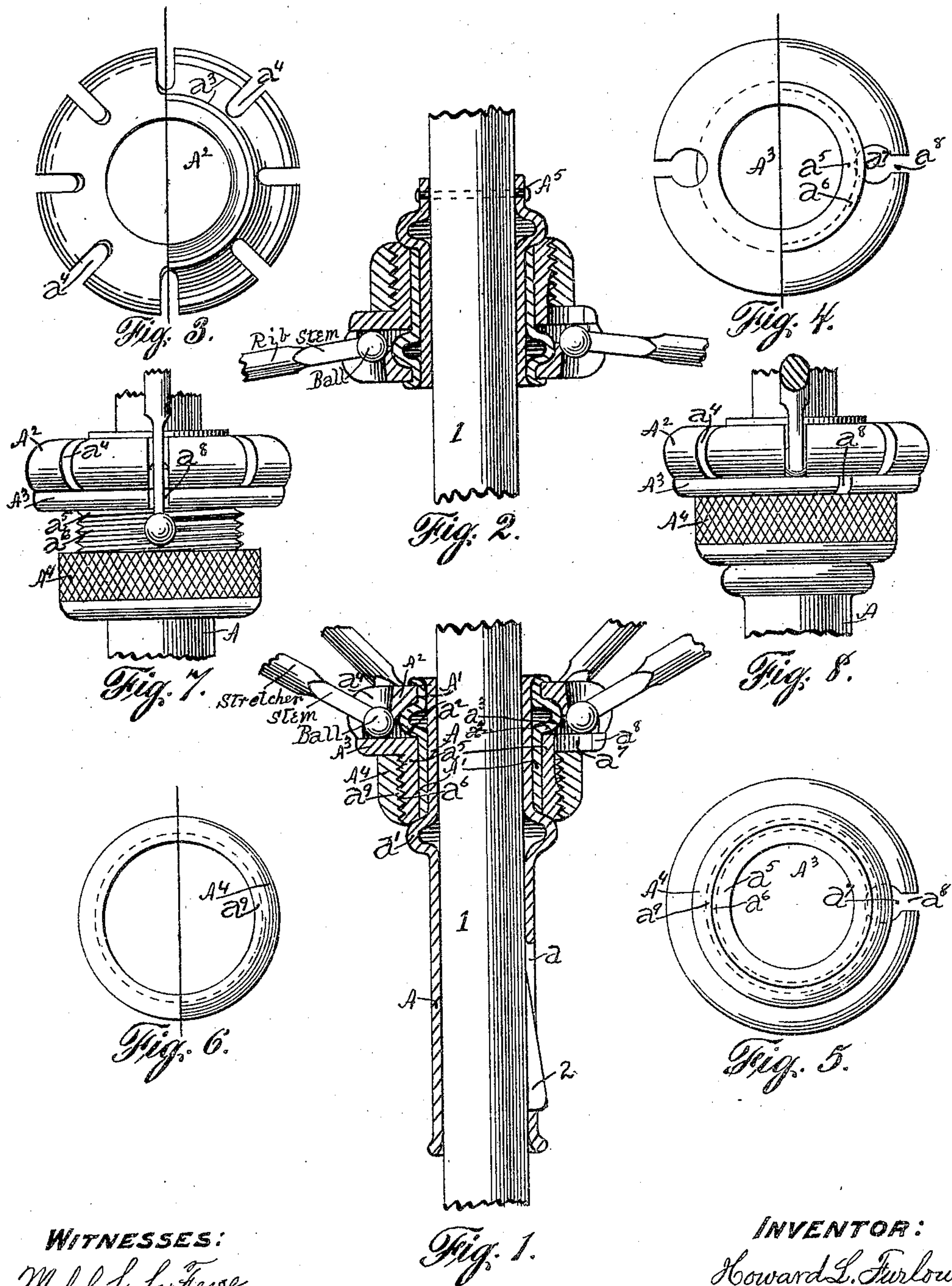


No. 820,295.

PATENTED MAY 8, 1906.

H. L. FURLOW.
WIRELESS UMBRELLA RUNNER AND UPPER NOTCH.
APPLICATION FILED JULY 22, 1905.



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HOWARD L. FURLOW, OF LANCASTER, PENNSYLVANIA.

WIRELESS UMBRELLA-RUNNER AND UPPER NOTCH.

No. 820,295.

Specification of Letters Patent.

Patented May 8, 1906.

Application filed July 22, 1905. Serial No. 270,875.

To all whom it may concern:

Be it known that I, HOWARD L. FURLOW, a citizen of the United States, residing at Lancaster city, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Wireless Umbrella-Runners and Upper Notches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in a wireless umbrella-runner and upper notch of that class in which the stretchers and ribs are secured in place by means of balls engaged between two disks or plates and the stems thereof movable up and down in slots formed in one of said plates.

The object of the invention is to provide a runner and upper notch wherein said stretchers and ribs may be inserted one by one without disturbing the rest.

The elements of the invention will severally and at large appear in the following description, and they will be separately or combinedly set forth or pointed out in the appended claim.

The purposes of the invention are attained by the mechanism, devices, and means illustrated in the accompanying drawings, with similar reference characters to designate like parts throughout the several views, in which—

Figure 1 is a side elevation of a portion of an umbrella-stick, showing a vertical section of a runner in position thereon and the stretchers with their ball ends in place. Fig. 2 is a similar elevation of the upper portion of the same stick with a vertical section of the upper notch in position thereon, showing the ball ends of the ribs in place. Fig. 3 is a direct and inverted plan of a disk or plate, showing the ball-seating groove and the stem-engaging slots as they appear when said disk is detached from Fig. 1. Fig. 4 is a direct and inverted plan of the ball-retaining disk or plate as it appears when detached from Fig. 2. Fig. 5 is an inverted plan of the ball-retaining plate with the securing-ring screw in place as they appear when detached from Fig. 1. Fig. 6 is a direct and inverted plan of the securing-ring screw as it appears when detached from Fig. 5. Fig. 7 is a full side elevation of the runner, showing the ball and stem as they appear when passing into posi-

tion, with the securing-ring screw partially loosened; and Fig. 8 is a similar elevation of the same runner with the ball and stem passed into position, the retaining-plate covering the slots, and the securing-ring screw screwed home, completing the runner.

In the construction of the runner referred to in the opening paragraph hereto is a tubular body A, movable up and down on the umbrella-stick 1 and held in place by a spring-catch 2, movable in and out through a slot a , formed in the lower portion of the tube. At the required point in the upper portion of the tube is formed a circular rib a' , on which rests the lower end of a tube A' and having in the upper portion thereof a circular rib a^2 . Surrounding the tube A' and in engagement with said rib a' is a circular disk or plate A^2 of the required dimensions, having formed in its lower surface a circular groove or recess a^3 for seating the balls of the stretchers, yet to be described, and having formed through the side edges thereof slots a^4 , allowing freedom of up-and-down motion to the stems of said stretchers when passed into position. In engagement with the under surface of the plate A^2 is a circular disk or plate A^3 , called the "ball and stretcher retaining" plate, having at its center a downwardly-projecting tube a^5 , with the bore thereof in engagement with the outer surface of the lower portion of the tube A' and below its rib a^2 and the lower end of the tube a^5 in engagement with the rib a' of the runner-tube A and having formed in its outer surface an external screw-thread a^6 , to be engaged by the internal screw-thread of a securing-ring screw, yet to be described, while at the desired point through the body of the plate is formed a circular aperture a^7 for the passage of the balls before mentioned into position within the ball-seating groove a^3 , and opening from said aperture through the peripheral edge of the plate is formed a slot a^8 for the passage of the stems of the stretchers, allowing said stretchers one by one to be inserted into operating position therein and to be again so removed therefrom. To hold the plate A^3 in place, is the before-mentioned securing-ring screw A^4 , having its upper end in engagement with the under surface of said plate and provided with an internal screw-thread a^9 in engagement with the external screw-thread a^6 of the tube a^5 , and when screwed home thereon said ring-screw serves to hold the plate A^3 in position, serving to securely bind the ball-seating plate

A² and the retaining-plate A³ together, securing the balls and the stretchers thereto attached operatively in position, thus completing the runner. It will here be remarked
 5 that the upper end of the runner-tube A should remain straight to permit the tube A', with its surrounding rib a', to be inserted in place, the retaining-plate, with the tube a⁵, having been placed in position, as shown, and
 10 when so placed in position said tubes A and A' have their upper ends outwardly turned and hammered in place; but said ends may be soldered to secure them together, holding the several parts, the plate A², and the retaining-plate A³ downwardly in place, and
 15 the securing-screw A⁴ having an internal diameter, so as to allow it to pass freely over the circular rib a', all of which is best shown in Fig. 1. It will also be remarked that in the
 20 construction of the upper notch (illustrated in Fig. 2) the same parts are used, but oppositely disposed, placing the securing-ring screw above instead of below, holding the balls with the stems of the ribs in place, and
 25 the tube A being cut off at the required distance from its circular rib a', leaving a portion of the runner-tube thereabove, through which portion a rivet-pin A⁵ serves to secure the completed notch in place to the stick 1,
 30 all as shown.

The invention having thus been ascertained and described and the manner in which its functions are performed fully shown and set forth, what is considered new,
 35 and desired to be secured by Letters Patent, is—

In a wireless umbrella-runner, in combination, the umbrella-stick 1 provided with the spring-catch 2; the tube A sleeved upon
 40 said stick and having in the lower portion thereof the slot a to be engaged by said catch,

and having at the required point above said slot a the surrounding circular rib a'; the tube A' having the surrounding circular rib a² sleeved upon the upper portion of said tube
 45 A with the lower end thereof seated on top of the rib a'; the retaining-plate A³ with the central downwardly-projecting tube a⁵ sleeved upon the convex surface of the tube A' and having its lower end in engagement
 50 with the top surface of the rib a' and the upper end thereof at its juncture with the top surface of the plate A³ in engagement with the under surface of the rib a², with the external screw-thread a⁶ in the convex surface
 55 of the tube a⁵, and the ball-receiving aperture a⁷ through the body of the plate A³ with the stem passing slot a⁸ opening through the peripheral edge thereof; the plate A² surrounding the tube A' with the upper portion
 60 thereof in engagement with the top surface of the surrounding rib a² and its under surface in engagement with the top surface of the plate A³, and having the ball-seating groove a³ with the stem-engaging slots a⁴
 65 opening through the peripheral edge thereof, as shown, with the stretcher-balls seated in said groove and their stems in engagement with said slots; and the securing-ring screw with the internal screw-thread a⁹ in engagement
 70 with the external screw-thread a⁶ of the tube a⁵ and screwed home thereon, thus completing the runner, all substantially as described and for the purpose hereinbefore set forth.

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

HOWARD L. FURLOW.

Witnesses:

CHAS. E. LONG,
 DANL. H. HERR.