

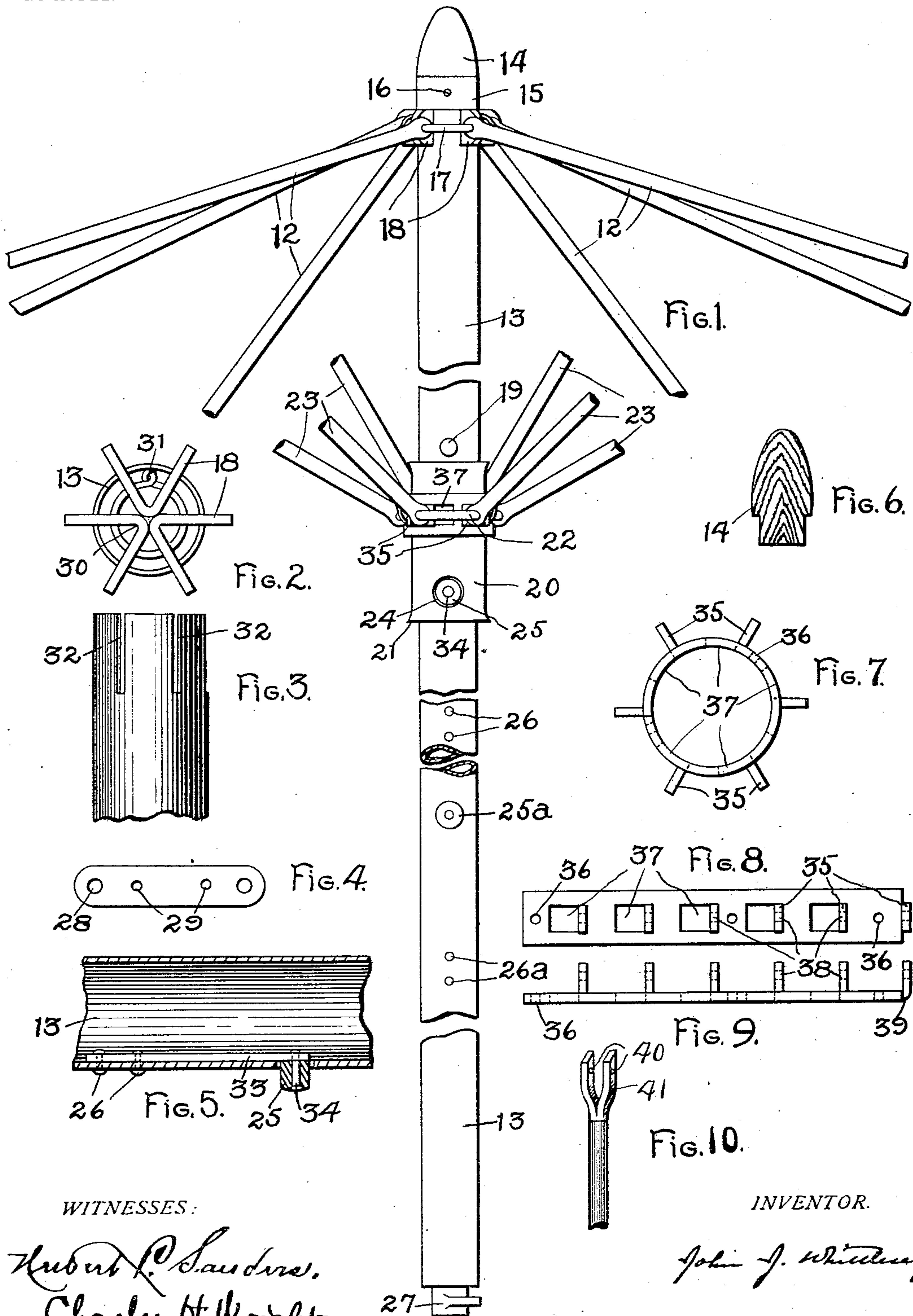
No. 750,924.

PATENTED FEB. 2, 1904.

J. J. WHITTLESEY.  
UMBRELLA.

APPLICATION FILED SEPT. 2, 1903.

NO MODEL.



WITNESSES:

*Hubert L. Sanders.*  
*Charles H. Wright.*

INVENTOR.

*John J. Whittlesey*



# UNITED STATES PATENT OFFICE.

JOHN J. WHITTLESEY, OF PITTSFIELD, MASSACHUSETTS.

## UMBRELLA.

SPECIFICATION forming part of Letters Patent No. 750,924, dated February 2, 1904.

Application filed September 2, 1903. Serial No. 171,611. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN J. WHITTLESEY, a citizen of the United States, residing at Pittsfield, in the county of Berkshire and State of Massachusetts, have invented new and useful Improvements in Umbrellas, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The invention is fully described in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by the same reference characters in each of the views, and in which—

Figure 1 is a side view of an umbrella-frame made according to my invention with the stick 13 broken at four points and the ribs 12 and stretchers 23 broken off at convenient points near their respective attachments to the stick; Fig. 2, a plan view, on an enlarged scale, of the upper extremity of the stick 13 at a point where the rib-joints are brought out for attachment of the ribs; Fig. 3, a side view of the bare stick at the same point, also on an enlarged scale, showing slots 32, through which project the rib-joints 18, as shown in Fig. 2; Fig. 4, a front view of the rib-joints 18, Fig. 2, before being bent centrally, as at 30 in Fig. 2, and being the full size thereof, showing one set of holes 28 at the extremities for the passage of wire 17 in Fig. 1 and one set of holes of smaller dimension 29 near the center for the passage of wire 31 in Fig. 2; Fig. 5, an interior view of portion of stick together with a cross-sectional view of the runner-catch; Fig. 6, a plan view of a longitudinal section of plug forming the upper extremity of the umbrella-frame, the larger or conical end 14 corresponding with the visible portion of the plug numbered 14 in Fig. 1, the lower and smaller portion showing the part of said plug which is enveloped by the stick at the point numbered 15 of Fig. 1; Fig. 7, a side view of the runner-band, on an enlarged scale, showing the projecting arms 35 for stretcher attachment raised out of said band from points numbered 37, more clearly

indicated by the same numeral in Fig. 8; Fig. 8, a face view of the runner-band extended, showing the holes 36, through which are passed rivets to secure the band to the runner, also rectangular openings 37, from which the stretcher-joints 35 have been cut and bent back into a position at right angles to the surface of the band, as seen in Figs. 7 and 9; Fig. 9, an edge view of the same element, also extended and showing exactly the relative position of the stretcher-joints on the band and in particular a terminal joint 39, formed from one end of the band and bent into an upright position to correspond with the remaining joints, number 38 of Figs. 8 and 9 indicating holes in all of the joints for the passage of wire 22, as shown in Fig. 1; Fig. 10, a perspective view of one end of a rib or stretcher, showing their formation at point of attachment to their respective joints and being also on an enlarged scale.

In the practice of my invention I provide an umbrella-frame comprising a stick 13, ribs 12, and stretchers 23, the stick being provided at its lower end with a spurred pivot 27 and the opposite or upper end thereof being projected beyond the point of the connection of the ribs 12, as shown at 14 in Fig. 1. Said spurred pivot 27 is designed to fit in a socket provided for the purpose in the object on which the stick 13 is to rest and by means of the spur thereof to secure the umbrella in a stationary upright position.

The stick 13 is composed of a metallic tube, as shown in Figs. 1 and 2, one end of which is provided with an even number of slots (preferably six) of the same width and depth, as shown in Fig. 3, and at even distances apart, running parallel to each other and to the axis of the tube. Said slots 32 are provided for a like number of projecting arms forming the rib-joints 18, as shown in Fig. 2, which are constructed of flat pieces of metal, Fig. 4, of a width less than the depth of said slots 32, rounded at either end and bent centrally at 30 in Fig. 2, so that the centers or bent portions thereof may all meet at a common center within the tube, as shown at 30 in Fig. 2, while



the outer or rounded ends thereof may extend through the said slots 32, as above provided, and beyond the outer surface of the stick, Figs. 1 and 2. Each of said arms, six in number, as shown in Fig. 2, is provided with two holes 28 and 29 in Fig. 4, of which one, 28, is in that portion of the arm 18 which extends beyond the outer surface of the stick, and the other, 29, within the said stick or tube. Through all said last-mentioned holes 29 within the tube a wire is drawn and the ends thereof securely twisted together, as shown by number 31 in Fig. 2. Each of said arms or that portion thereof projecting beyond the surface of the stick in Figs. 1 and 2 is fitted or coupled with a rib-jaw 41, Fig. 10, which is made to inclose said projecting arm 18. The two portions of said rib-jaw 41 are provided each with a hole 40, through which, together with the outer hole 28 in said projecting arm 18, is drawn a wire, forming a hinge, which passes in like manner through all of said rib-jaws and projecting arms, as may be seen by 17 in Fig. 1, and whose ends are securely twisted together, as at 31, Fig. 2.

That portion of the slotted end of the stick which extends above or beyond the rib-joints 18, Fig. 1, is closely enveloped with a metallic ring or band 15 in Fig. 1, while the open and exposed end of said stick or tube is fitted with a plug 14, of wood or other substance, which is securely fastened in its place by means of a rivet 16, Fig. 1, passing through said ring 15, the stick, and the lower or smaller end of the plug itself.

Mounted on the stick 13 is a runner 20 in Fig. 1, curved outwardly at either end, as shown at 21, and whose central portion is provided with a band or clamp, as shown in Fig. 1, with projecting arms for stretcher-joints 35 in Figs. 1, 7, and 8, cut out of the band and being a part of the same and turned up at one end, as shown at 39, Fig. 9, in number equal to the number of stretchers, and said arms or joints 35 are perforated each with a hole 38 for riveting the arms 35 to the jaws 41 of the stretcher by means of a wire 22, Fig. 1, passed through the holes 40, Fig. 10, in said jaws and through the holes 38 of the arms or joints 35, as may be seen by number 22, Fig. 1, and the ends of said wire 22 so passed in like manner through all of said stretcher-jaws and arms or joints are firmly twisted together, as in the manner heretofore described of the rib-joints and indicated by number 31 of Fig. 2. Said runner 20, Fig. 1, is also provided near the lower end thereof with a round hole 24 for the admission of a circular spring button or catch 25 and 25<sup>a</sup>, Figs. 1 and 5, projected above the surface of the stick at either limit of movement of said runner 20 and by means of which said buttons 25 and 25<sup>a</sup> and hole 24 the runner is properly secured and registered at either of its said limits of movement, and

said runner 20 is further prevented from passing entirely over the spring-button 25 at the upper limit of movement by means of a small pin 19 embedded in the surface of the stick, and thereby offering interference to the further passage of said runner in an upward direction, and the two circular spring buttons or catches 25 and 25<sup>a</sup>, Figs. 1 and 5, provided in the stick for the purpose of securing the runner 20 at either of its limits of movement by-registering with the hole 24 in said runner are similar in all respects and are each composed of a flat steel spring 33, Fig. 5, inclosed within the stick 13, one end of which is secured to the inner surface of said stick 13 by means of rivets 26 passing through holes provided in both parts at a predetermined point, and to the other end of said spring 33 is attached a circular metallic button projecting through a round hole provided for the purpose at a predetermined point in the wall of the stick 13 (see Fig. 5) and above the surface thereof, and said spring 33 and said button 25 are secured together by means of a rivet 34, passed through the center of said button 25 and the end of said spring 33, and said two buttons 25 and 25<sup>a</sup> are placed one at either limit of movement of runner 20, and so as to correspond and register with the hole 24 thereof, as above described.

My improved umbrella-frame is simple in construction and operation, comparatively inexpensive and elastic, while combining to a superior degree strength with lightness in weight; and it will be apparent that changes in and modifications of the construction described may be made without departing from the spirit of my invention or sacrificing its advantages.

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

1. An umbrella-frame the stick of which consists of a metallic tube having at one end a plurality of slots, parallel to each other and to the axis of the tube, of like dimensions and at even distances apart, which serve as mortises to receive the rib-joints of the frame, substantially as shown and described.

2. An umbrella-frame the stick of which consists of a metallic tube provided at one end with a plurality of attachable rib-joints formed of metallic bars fastened together at a common center within the stick or tube and projecting through slots in the wall thereof beyond and at right angles to the outer surface of the stick or tube, substantially as shown and described.

3. An umbrella-frame the stick of which is provided with a runner mounted thereon, the central portion of whose outer surface is closely enveloped by a metallic band having projecting arms or joints at even distances apart and supplied with eyes for attachment



to the stretchers of the frame, all but one of  
said arms or joints being raised out of the  
band and the remaining arm or joint being  
formed from one of the contiguous ends there-  
5 of, substantially as shown and described.

In testimony that I claim the foregoing as  
my invention I have signed my name, in the

presence of the subscribing witnesses, this  
22d day of August, 1903.

JOHN J. WHITTLESEY.

Witnesses:

HERBERT P. SANDERS,  
CHARLES H. WRIGHT.