

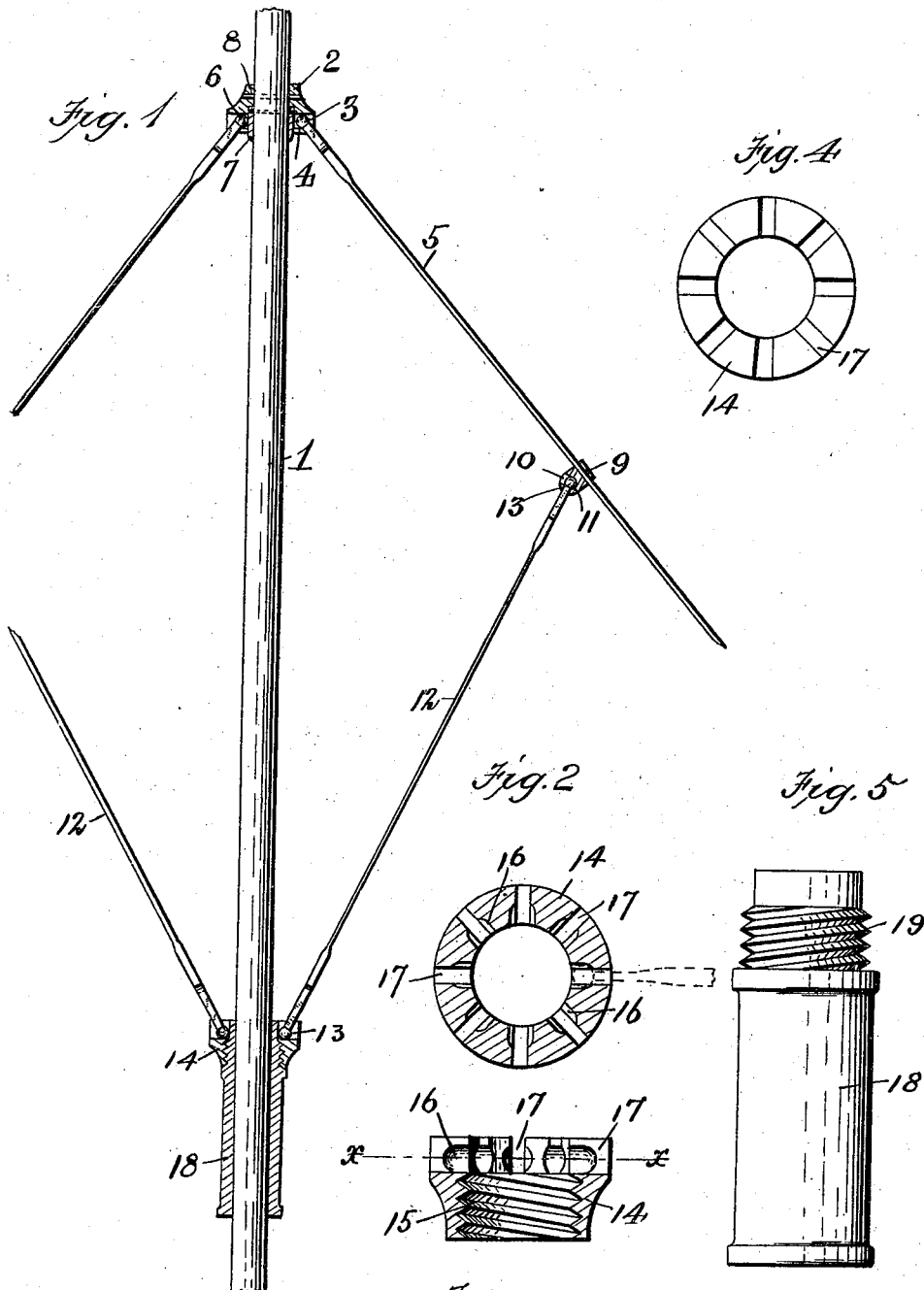
No. 649,253.

Patented May 8, 1900.

O. K. MUCKLEY.
UMBRELLA RUNNER.

(Application filed Oct. 23, 1899.)

(No Model.)



WITNESSES:
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UNITED STATES PATENT OFFICE.

ORIN K. MUCKLEY, OF HUNTINGTON, INDIANA.

UMBRELLA-RUNNER.

SPECIFICATION forming part of Letters Patent No. 649,253, dated May 8, 1900.

Application filed October 23, 1899. Serial No. 734,473. (No model.)

To all whom it may concern:

Be it known that I, ORIN K. MUCKLEY, a citizen of the United States, residing at Huntington, in the county of Huntington and State of Indiana, have invented new and useful Improvements in Umbrellas, of which the following is a specification.

My invention relates to umbrellas, parasols, and similar articles; and one object of the same is to produce a device of this character which may be quickly and easily repaired when broken and to provide means whereby the ribs may be connected to the notches in the cap or crown-piece without the usual wire which passes through perforations in the ends of the ribs and is objectionable owing to the fact that it is easily broken.

Another object is to dispense with the wire which ordinarily secures the ends of the braces to the runner; and still another object is to obviate the necessity of forming perforations in either the ribs or the braces with a view to making a more substantial structure and at the same time to provide means as a substitute for the wires which will permit the umbrella to be readily repaired by any person without the use of special tools; and another object is to produce a device of this character which shall be simple in construction, of few parts, which cannot easily become disordered or broken, and which may be produced at a comparatively-small cost.

I attain these objects by means of the construction shown in the accompanying drawing, which forms a part of this specification, and in which like numerals of reference indicate like parts wherever they occur in the various views of the drawing.

The stick 1, which may be of ordinary construction, has secured near its upper end a notched cap or crown-piece 2, and formed in this cap is a series of ball-sockets 3, which communicate with the slots 4, through which the ribs 5 extend. The inner portions of the slots 4, next to the stick, are enlarged to permit the balls 6, formed on the ends of the ribs, to be inserted therein from the inner side of the cap. When the balls 6 have been placed in the sockets, they are prevented from accidental removal by the surface of

the stick, which closes the inner portions of the slots 4.

The cap 2 rests upon a shoulder 7, properly secured to the stick, and to hold the cap in place a pin 8 or similar means may be resorted to. When it is desired to remove the ribs or any one of them, this pin is withdrawn, and the ribs, braces, and runner may be removed from the top of the stick.

Secured to each rib at the required point is a socketed joint 9, which is provided with a slot 10, opening out at the top of the joint and communicating with a ball-socket 11. The braces 12 are each provided with a ball or enlargement 13 at their opposite ends to fit the socket 11 in the joint 9 and to rest in a socket in the runner or slide. This runner or slide is made in two parts, the upper portion being provided with sockets to accommodate the balls 13 and the other part consisting of a threaded sleeve which fits within the socket-piece and serves to hold the balls within the sockets. The socket-piece 14 is interiorly screw-threaded at 15 to fit the exterior screw-threads upon the upper end of the sleeve. Ball-sockets 16 are formed in the socket-piece, and slots 17, formed in the top of said socket-piece, extend from the sockets outward through the walls of the socket-piece. The balls 13 at either end of the braces 12 fit the sockets 16, and when the sleeve 18 is turned up within the socket-piece 14 the plain or smooth upper end portion above the threads 19 of the sleeve closes the inner openings to the sockets 16 and prevents the accidental withdrawal of the balls 13 on the braces 12. Should one of the braces 12 become injured or broken, a new one may be readily inserted without special tools, it only being necessary to turn the sleeve 18 out of the socket-piece a sufficient distance to release the ball 13 from its socket 16. The opposite end ball of the brace 12 may then be removed from its socket in the joint 9 by throwing the free end of the brace upward to a position which it never assumes in actual use. A new brace may then readily be secured in place.

In case it should be necessary to remove one of the ribs this may be done by withdrawing the pin 8 to remove the cap 2 suffi-

ciently beyond the end of the stick to insert a new rib, or, if found necessary, the stick may be entirely withdrawn from the crown-piece or cap and the runner when the pin or fastening 8 has been removed.

It will be noticed that the parts of my device may be easily and quickly assembled and that the braces 12 are interchangeable, it being immaterial which end is connected to the runner and which to the joint. Furthermore, the ribs are not weakened by the ordinary end perforations, but, on the contrary, are strengthened by the balls or enlargements and are uniform and durable.

It will be noticed that the sockets 16 in the socket-piece 14 are formed immediately under the swelled upper portion of said socket-piece and that the smooth upper end of sleeve 18 forces the balls 13 outward into the sockets. The result of this construction and arrangement is that when the sleeve 18 is turned out of the socket-piece a sufficient distance to release the balls any one of the braces may be detached by lifting the ball out of its socket by first pushing the brace inward toward the stick 1, the other braces being undisturbed and not displaced. This is a feature of some importance in an umbrella designed to be quickly repaired.

I am aware that certain changes in the details of construction may be made without departing from the spirit and scope of my invention. I do not, therefore, wish to be understood as being restricted to the precise details and structure shown.

Having thus fully described my invention, what I claim is:-

In an umbrella, a slide or runner consisting of a nut having ball-sockets formed in its enlarged upper end and interiorly threaded below the sockets, slots formed in the top and side wall of said nut, said slots communicating with the ball-sockets, braces having spherical ends seated in said ball-sockets, a sleeve having a smooth upper end and a threaded portion below it, said sleeve being fitted within the nut, the smooth upper end of the sleeve serving to confine the spherical ends of the braces within the ball-sockets, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ORIN K. MUCKLEY.

Witnesses:

B. H. B. GRAYSTON,
L. H. JACKMAN.