F. BENZ, Sr.

UMBRELLA.

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947,671. Patented Jan. 25, 1910.

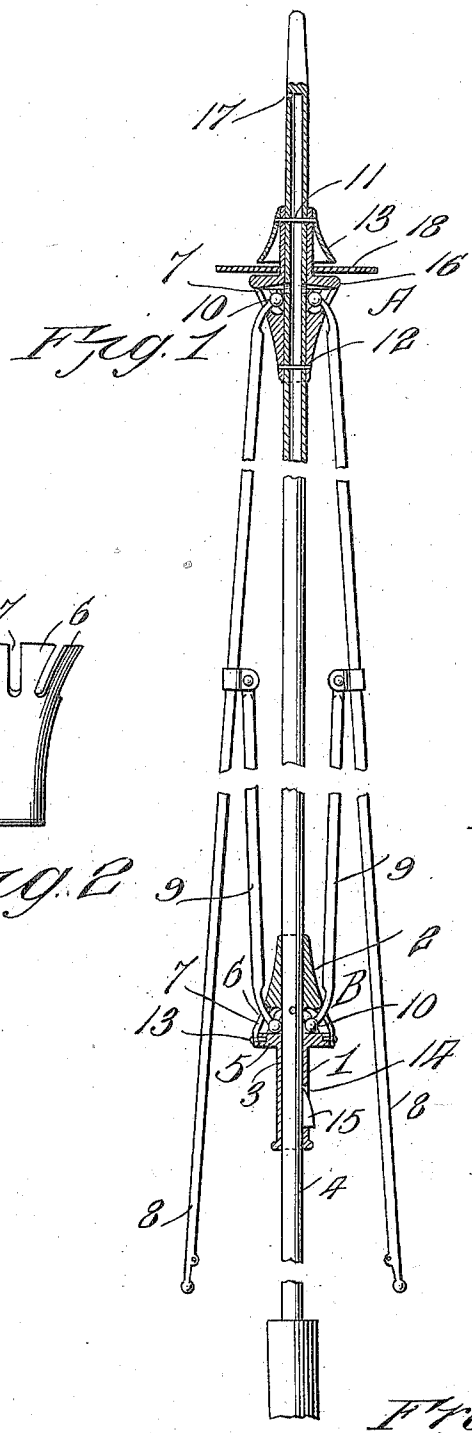


Fig. 1

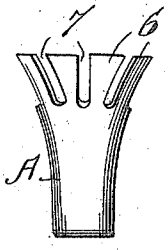


Fig. 2

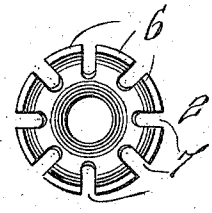


Fig. 3

Witnesses

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# UNITED STATES PATENT OFFICE.

FRED BENZ, SR., OF PATERSON, NEW JERSEY.

## UMBRELLA.

947,671. Specification of Letters Patent. Patented Jan. 25, 1910.

Application filed October 10, 1908. Serial No. 457,077.

*To all whom it may concern:*

Be it known that I, FRED BENZ, Sr., a citizen of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented new and useful Improvements in Umbrellas, of which the following is a specification.

The invention relates to an improvement in umbrellas and is more particularly directed to a construction adapted to provide a runner and notch designed to obviate the objection incident to the ordinary form of such parts.

The main object of the present invention is the provision of a construction permitting the formation of the runner or notch in which the ribs and stretchers are securely held without the use of the usual wire and without the usual weakening of such ribs and stretchers incident to the usual connection.

The invention will be described in the following specification, reference being had particularly to the accompanying drawings, in which:—

Figure 1 is a view in elevation partly in section illustrating my improvement. Fig. 2 is an elevation of the locking member. Fig. 3 is a plan of the same.

The present improvement is directed to a construction designed to form a notch A or runner B of an umbrella. The parts included in the construction are a collar member 1 and a fixing or locking member 2, both of which may be of any material or in any appropriate size. A collar member comprises a sleeve-like section 3 designed to encircle the umbrella rod 4, one end of the sleeve being formed with a laterally extending flange 5. The locking member is of approximately conical formation having a central bore whereby said member is adapted to fit the umbrella rod, the flaring or larger end of the member is interiorly cored out for a portion of its depth to leave a thin shell 6, which shell is longitudinally divided by a series of depressions 7, which depressions are approximately of equal width throughout their length and open through the free edge of the shell, as clearly shown in Figs. 2 and 3.

For use with the improved notch and runner the ends of the ribs 8 and stretchers 9 designed to coöperate with the notch and runner are laterally curved and formed with terminal ball ends 10, that portion of the rib or stretchers included in the curved section having a thickness approximately corresponding with the width of the depression 7, while the ball end has a diameter exceeding the width of the depression. In securing the parts in position as a notch the collar is secured in proper place on the rod by a transverse pin 11, the holding member being then slidably applied on the rod and moved into a position adjacent the flange 5 on the collar, the notched end of the locking member being arranged next the flange. The ribs 8 are then applied by inserting the respective ribs in the respective depressions, after which the locking member is moved so that the open ends of the depressions are closed by the flange of the collar, said locking member being secured in this position by a pin 12 passed transversely through said member and the rod. The side walls of the depression 7 thus guide the ribs in movement in the opening and closing of the umbrella, the ball ends of the ribs effectively preventing displacement of said ribs under any usual strain to which the parts may be subjected.

In the use of the parts to form a runner the collar is applied in position on the rod and the locking member is arranged above and in proximity to the collar, the notched end of said member being arranged toward the flange of the collar. The ball ends of the stretchers are secured in the respective notches of the locking member after which said member and collar are secured together by pins or rivets 13 passed through the free edges of the shell sections formed by the notches 7 and taking into the edge of the flange 5. The notch and runner differ, therefore, only that in the former both the collar and locking member are secured directly to the rod, while in the latter the collar and locking member are secured together in a manner to avoid interference with the necessary sliding movement of the runner.

The sleeve 3 of the collar forming the runner is provided with an aperture 14 to receive the locking catch 15 of the umbrella rod, whereby the umbrella may be held in elevated or closed position in the usual manner. To prevent any possibility of water finding its way into the shell of the locking member forming the notch and remaining there with the result of rusting the parts I form the hollow umbrella rod in part in alinement with the shell section of the locking member with openings 16, and also ad-

jacent the ferrule end of the rod I form the wall with an outlet opening 17. Any water finding its way into the shell of the locking member will thus be discharged through the hollow rod and out through the opening 17.

As a protection for the umbrella cover I secure about the sleeve 3 of the collar forming the notch and immediately over the flange 5 of said collar a disk-like protector 18, preferably constructed of rubber or similar waterproof material, having a diameter exceeding that of the flange, and when the parts are in applied position bearing snugly against the flange. This protector remains inside the umbrella between the metallic parts and the cover so that if the umbrella is closed while wet the dampness of the cloth will not affect the metal with the possibility of deterioration of the cloth. Furthermore, if by any accidental displacement one of the ribs should contact with the protector the material thereof will act to prevent the end of said rib from piercing the cover proper.

The improvement as described provides a simple and effective means for securing the ribs and stretchers in place in a manner to practically prevent the possibility of their becoming displaced. This result is gained primarily from the fact that by the fastening described the ribs and stretchers are not reduced as in the ordinary connection, by which reduction the parts are weakened and more liable to rupture in use. Furthermore, the parts are particularly adapted for refitting a broken rib with ease and certainty, as will be understood.

The material of which the novel parts herein described are constructed is not important, as I contemplate the use of any material which will provide the desired strength and rigidity.

Having thus described the invention what is claimed as new, is:—

1. An umbrella structure including a rod, a notch secured thereon and comprising a collar member and a locking member including a sleeve extension, a cap piece encircling and secured to the sleeve extension, and an independent protecting disk encircling the sleeve extension below the cap piece.

2. An umbrella structure including a rod, a notch secured thereon including a collar member and a locking member, said collar member being formed with a disk end and a sleeve extending above the disk and encircling the rod, a cap piece secured on the sleeve, and a flexible protecting disk encircling the sleeve between the cap piece and the disk of the collar member.

3. An umbrella notch comprising a collar member and a locking member, said locking member being formed with a series of spaced concentrically disposed sections between which the rib ends are adapted to be inserted, a collar member including a sleeve to encircle the umbrella rod, and a disk end having a diameter equaling the diameter of the upper end of the locking member, whereby when said locking member and collar are in place the disk engages the free ends of the sections to prevent displacement of the rib ends, the corresponding diameter of the disk and coacting end of the locking member avoiding projection beyond the outer surfaces of the sections of the locking member.

4. An umbrella runner comprising a conical locking member adapted for sliding movement on the umbrella rod, said locking member being formed with a plurality of spaced sections to provide stretcher receiving notches between them, a collar member having a disk end of a diameter corresponding to the interior diameter of the locking member, whereby said disk in the connection of the parts is designed to seat within the free ends of the sections, and means for securing each section to the edge of the disk.

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

FRED BENZ, Sr.

Witnesses:

Isaac H. Garrabrant,

Edward Mohrle.