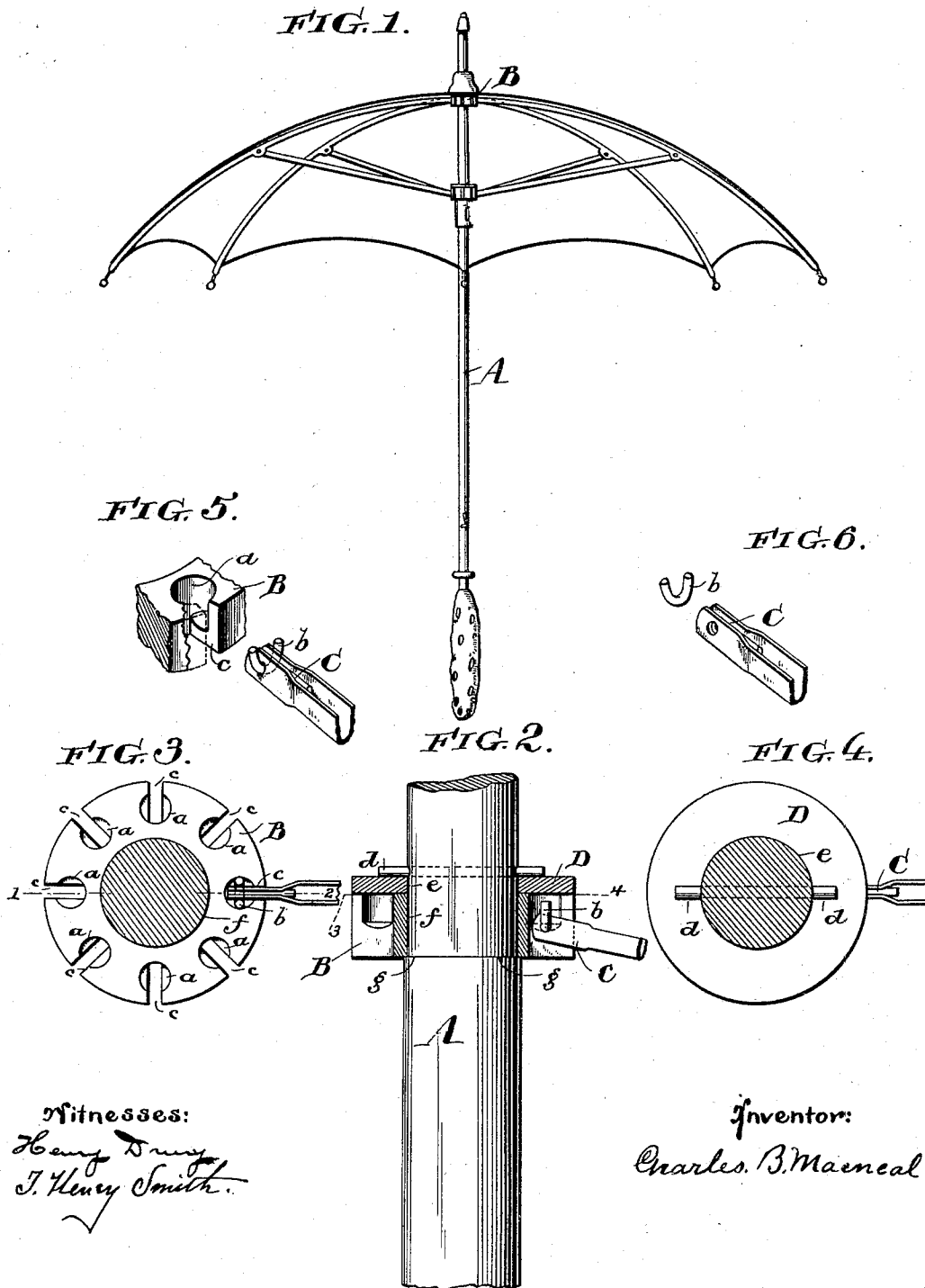


(No Model.)

C. B. MACNEAL.
UMBRELLA OR PARASOL FRAME.

No. 473,470.

Patented Apr. 26, 1892.



UNITED STATES PATENT OFFICE.

CHARLES B. MACNEAL, OF PHILADELPHIA, PENNSYLVANIA.

UMBRELLA OR PARASOL FRAME.

SPECIFICATION forming part of Letters Patent No. 473,470, dated April 26, 1892.

Application filed October 27, 1891. Serial No. 410,007. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. MACNEAL, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Umbrella and Parasol Frames; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in umbrellas and parasols, and more particularly to improvements in the construction of the upper extremity of the rib and the manner of securing the rib to the notch-ring.

My invention consists of improved ribs used in connection with a socketed radially-slotted notch, the heads of said ribs being furnished with wires passed through the holes at the ends of same, said ends having the usual strengthening or stiffening pieces and said wires being bent up in the form of a U, adapted to fit into the sockets snugly and bearing against the sides of said sockets and causing the ribs to be held in place securely.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the views.

Figure 1 represents an open umbrella-frame embodying the improvements. Fig. 2 shows a sectional elevation of the notch-ring on the umbrella-stick. Fig. 3 shows the top of notch-ring. Fig. 4 shows the top of cover-plate and locking-pin. Fig. 5 shows a part of the notch-ring with a socket and a portion of a rib detached. Fig. 6 shows an end portion of a rib and the U-shaped wire attachment for same.

A is the umbrella-stick.

B is my notch-ring.

C is a part of a rib.

D is the cover-plate for securing the ends of the ribs in the sockets.

a are the sockets in the notch-ring B.

b is the U-shaped wire attachment for ends of ribs.

c are the radial slots, which intersect with the sockets in the notch-ring.

d is the pin, which secures the cover-plate D to the umbrella-stick A over the sockets *a* in the notch-ring B.

e is the opening through the center of the cover-plate D, through which the umbrella-stick passes, and *f* is the same in the notch-ring B.

g is a small shoulder on umbrella-stick, on which the notch-ring B rests.

By the present mode of connecting the ribs of an umbrella with the notch-ring that portion is rendered the weakest portion of the frame, as the wire used quickly rusts and breaks, and the ribs being thereby loosened and released puncture and tear the cover.

It is the prime object of the present invention to render the top of the umbrella-frame the strongest portion and to so construct the connecting device and the notch-ring that the ribs may be expeditiously and conveniently placed in the ring and securely held in position.

In attaching the ribs to the notch-ring the flat parts of the ribs below the U-shaped heads are passed into the slots in the notch-ring and the ribs are drawn downward to force their U-shaped wire heads into the sockets and rest upon and bear against the sides of the sockets. The circular plate is forced down over the sockets, a small pin is inserted through the stick over the plate, and the ribs are securely imprisoned in the sockets. Thus it will be observed each rib is hinged to the notch-ring by a U-shaped wire pivotally attached to the end of the rib and forced into the socket, which it fits tightly. Consequently the ribs may be raised to their position in an open umbrella, and when the umbrella is closed they will lie close to the stick. It is also obvious that even should the head of a rib break off, and thus release the rib from the notch-ring, the cover-plate will prevent the loosened end from tearing or puncturing the cover, as said plate intervenes between the cover and the notch-ring.

While I specify an umbrella-rib pivotally connected with a socketed notch by a U-shaped wire attachment I wish it understood

that I may use the same connecting device between the runner and the stretchers, in which case the sockets of the runner are reversed and the retaining-cap fastened to the runner in any well-known manner.

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

1. An umbrella-rib provided at its upper extremity with a pivotally-connected U-shaped wire attachment forming a head adapted to fit tightly in a socketed notch, as and for the purpose specified.

2. In an umbrella, parasol, or like article, the combination, with a socketed notch-ring, of ribs having pivotal U-shaped wire attachments to their upper extremities to connect them tightly with the notch-ring, as and for the purpose specified.

3. In an umbrella, parasol, or like article, the combination, with a ring provided with a series of radial slots, having sockets formed in its upper surface, of ribs provided with U-shaped wire heads, upon which they hinge, which heads are tightly seated in the sockets of the ring, a cover-plate extending over the sockets and fastened to the umbrella-stick with a small pin inserted through said stick over the surface of said cover-plate, as and for the purpose specified.

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

CHARLES B. MACNEAL.

Witnesses:

HARRY DE SILVER,
T. HENRY SMITH.