

(No Model.)

A. W. LEIGH.
RIB HOLDER FOR UMBRELLAS, &c.

No. 552,581.

Patented Jan. 7, 1896.

Fig. 1.

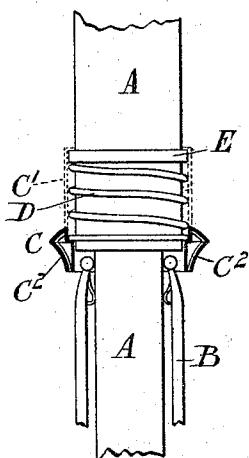


Fig. 3.

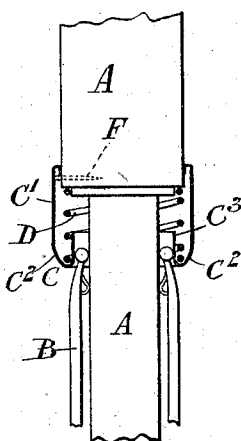


Fig. 4.

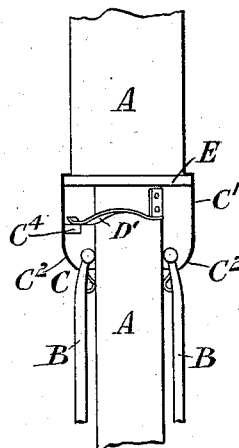
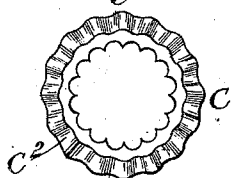


Fig. 2.



Witnesses:

H. K. Boulter

O. Thorthrup.

Inventor:

Arthur W. Leigh,

By O. K. Boulter,

Attorney

UNITED STATES PATENT OFFICE.

ARTHUR WILLIAM LEIGH, OF LONDON, ENGLAND.

RIB-HOLDER FOR UMBRELLAS, &c.

SPECIFICATION forming part of Letters Patent No. 552,581, dated January 7, 1896.

Application filed July 19, 1894. Serial No. 517,960. (No model.) Patented in England November 8, 1893, No. 21,256.

To all whom it may concern:

Be it known that I, ARTHUR WILLIAM LEIGH, a subject of the Queen of England, residing at London, England, have invented certain new and useful Improvements in Rib-Holders for Umbrellas and the Like, (for which I have obtained Letters Patent of Great Britain, No. 21,256, dated November 8, 1893,) of which the following is a specification.

This invention relates to rib-holders for umbrellas and the like and will be best understood by reference to the accompanying drawings, which show the rib-holder and some modifications in section and in elevation, like letters representing like parts throughout the drawings.

Referring first to Figures 1 and 2, A represents the umbrella-stick, B the ribs, and C the rib-holder which is constructed as a complete ring pressed upon the ribs by the spiral spring D, preferably contained within the cylindrical portion C' of the holder. The spring D obtains a bearing at the end nearest to the ribs upon the ring C, and at the opposite end upon the ring E secured to the umbrella stick or handle A in any convenient manner. The face C² of the ring C upon which the rib ends strike when the ribs are closed by the hand is preferably curved or beveled, as shown, so that by forcing the ribs inward toward the stick the ring C will be forced outward against the pressure of the spring D, and when the ribs have passed the ring C and assumed the position shown in Fig. 1, the ring will, under the influence of its spring, return to its lowest position, and thus cover the rib ends, as clearly shown in Fig. 1. With this arrangement, which is also embodied in the devices hereinafter described, it is only necessary to use one hand which closes the ribs in toward the stick in order to secure them by the holder. As an important part of this invention I corrugate the portion C² of the ring C, as indicated in the end view, Fig. 2, one corrugation being provided for each rib, so that the ribs will automatically take equal distances apart when being closed in, an arrangement which avoids the difficulty experienced with common rib-holders where the ribs lie together in groups

instead of being evenly spaced around the stick. The inside of the rib-holder C is corrugated, as indicated in Fig. 2, so as to retain the ribs in their proper positions. 55

The cylindrical portion C' is not indispensable and it is for that reason that it is represented in dotted lines in Fig. 1. When it is omitted some stop other than the ring E may be provided. I prefer, however, to provide the portion C', as by closing in the spring D a more finished appearance is obtained. 60

In Fig. 3 the arrangement is substantially similar to that of Fig. 1, but the shape of the holder C is a little different and the ring E is dispensed with, the back end of the spring D' taking a bearing against the handle A, which in this case is of larger diameter than the stick. The end of the ring C' is turned inward at C³, thus providing an annular space in which the helical spring D can lie, and protecting the spring from the rib ends. 70

In Fig. 4 the helical spring is replaced by a small plate-spring D' which may be riveted onto the stick of the umbrella and takes a bearing upon a lug C⁴ inside the cylindrical portion C' of the holder. The holder cannot slip down below its proper position. This is prevented by the back end of the cylindrical portion C' of the holder being turned in or beaded, so as to engage, as in Fig. 1, with the ring E against which the back end of the spring bears, in Fig. 3 against one or more pins F provided for the purpose, and in Fig. 4 against the ring E which, however, in this example, as distinguished from Fig. 1, is not required for the spring. 85

What I claim, and desire to secure by Letters Patent, is—

1. A device for holding the tips of the ribs of an umbrella against the stick when closed up the same comprising a sliding cup surrounding the stick and having a downwardly projecting flange provided upon the exterior with a set of guides for the tips of the ribs, as specified. 95

2. In a device for holding the ribs of umbrellas and the like, the combination with the stick, of a ring adjustable thereon and having an inclined surface against which the ends of the ribs are adapted to strike, said surface being corrugated exteriorly, and a 100

spring acting upon said ring to automatically force the same over the rib ends in the manner described for the purpose specified.

3. In a device for holding the ribs of umbrellas or the like, the combination with the stick, of a ring adjustable thereon and having an inclined surface against which the ends of the ribs are adapted to strike, said ring having its inclined surface corrugated exteriorly, and being provided with grooves interiorly to receive the rib ends, and a spring

acting upon the ring to automatically force the same over the rib ends in the manner and for the purpose specified.

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

ARTHUR WILLIAM LEIGH.

Witnesses:

ALFRED J. BOULT,
HARRY B. BRIDGE.