

(No Model.)

R. WAPLES, Jr
UMBRELLA.

No. 569,569.

Patented Oct. 13, 1896.

Fig. 1.

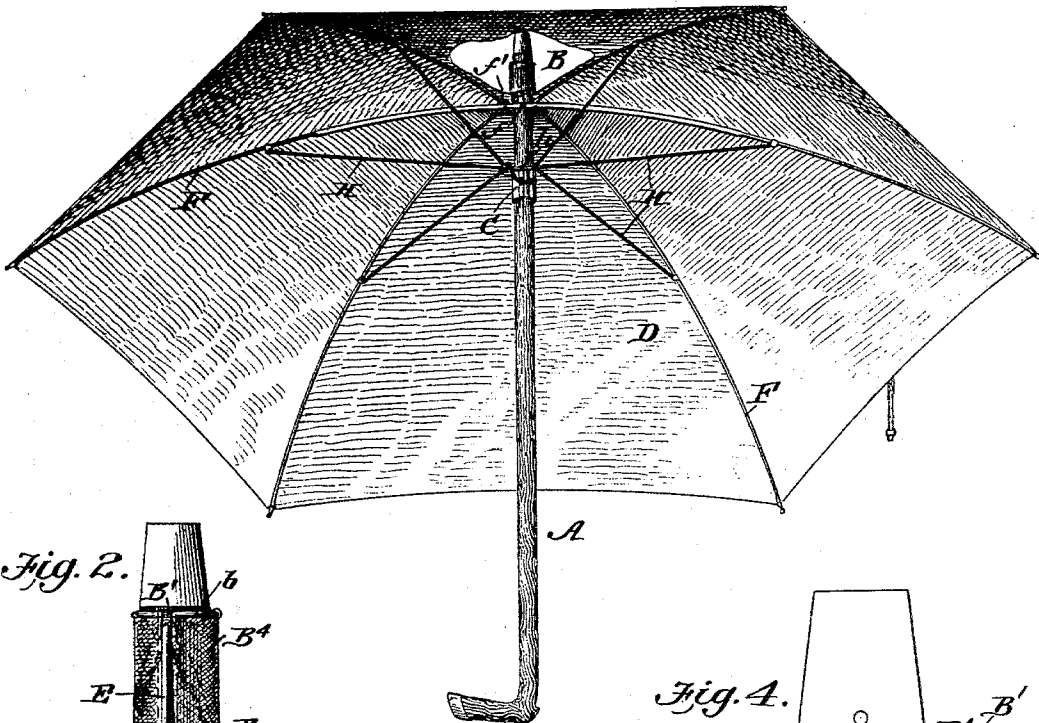


Fig. 2.

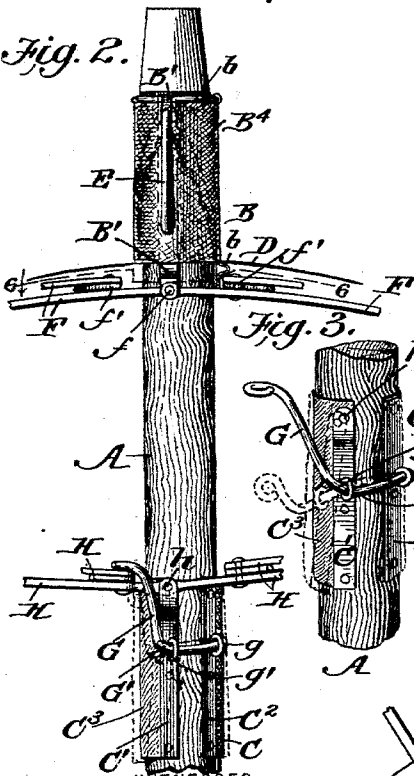


Fig. 3.

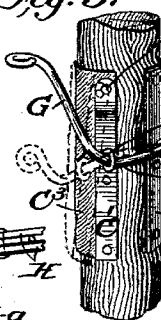


Fig. 5.

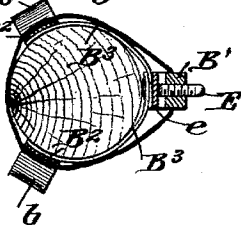


Fig. 4.

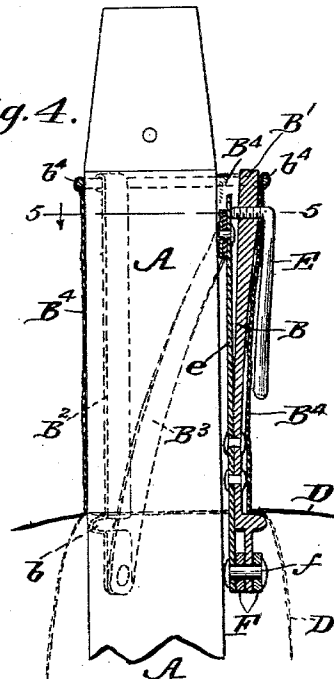
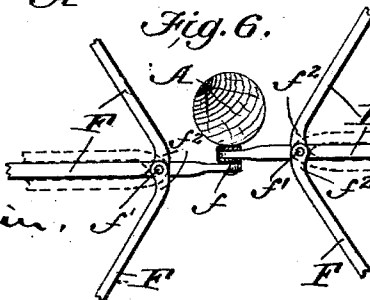


Fig. 6.



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UMBRELLA.

SPECIFICATION forming part of Letters Patent No. 569,569, dated October 13, 1896.

Application filed June 12, 1896. Serial No. 595,303. (No model.)

To all whom it may concern:

Be it known that I, RUFUS WAPLES, Jr., of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Umbrellas, of which the following is a specification.

My invention is an improvement in umbrellas, and particularly in that class of umbrellas known as "umbrellas and canes," in which the umbrella proper may be applied to and removed from the handle or cane, but certain features of my present improvement are applicable to the conventional form of umbrella, as will be understood from the following description.

The invention consists in certain constructions and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a perspective view, partly broken away, of an umbrella embodying my improvements, the cover being partly broken away to show the top or upper support. Fig. 2 is a detail side view, partly broken away, showing the upper and lower supports and parts of the handle, ribs, and stretchers. Fig. 3 is a detail view of the lower support on a handle. Figs. 4 and 5 illustrate the upper support, and Fig. 6 is a detail sectional view on about line 6 6 of Fig. 2.

The handle A may be an ordinary cane, such as usually sold on the market, or may be specially made for the purpose, in which event it may be made hollow to form a sheath for the umbrella proper when removed from the handle and properly collapsed; but one of the purposes of my invention is to provide an umbrella construction which can be applied to an ordinary cane or staff, as shown. In carrying out this feature of my invention I provide an upper support B for holding the ribs and a lower support C for holding the braces, and also devices by which said supports may be held detachably to the handle. These holding devices are in the nature of clamps carried by said supports and operating to bind the same firmly to the handle, so they will be held thereto and yet can be easily removed. The "upper support" B, which is so termed for convenience of reference, comprises a frame composed of a main bar B',

bars B², and struts B³, which may be secured to the bar B' or to the strip *e*, presently described. These bars B' B² are provided near their lower ends with bosses *b*, forming a shoulder upon which the cover D may bear. A textile or other suitable connection B⁴ extends around and joins the bars B' B², being suitably secured to said bars, and a cord *b*⁴ is usually secured within the upper edge of the connection B⁴, as shown in Fig. 4. The clamp of this support B includes a set-screw E, threaded through the bar B' and bearing, preferably, against a yielding strip *e*, secured at one end to the bar B', so the screw E when turned in will cause the strip *e* to bear against the handle and force the bar B' out, tightening the support B upon and clamping it to the handle. Manifestly it requires but a turn or so of the screw to either clamp or release the support from the handle.

The bar B' is extended at its lower end, as is the spring-strip *e*, and the ribs F F are pivoted thereto at *f*, as shown most clearly in Fig. 4.

The lower support C is made, preferably, in the form of a divided sleeve having side strips or plates C' C², united by a flexible connection C³, and a clamp-bar G, swiveled at *g* to the plate C², and having a cam portion G', operating through an eye *g'* on the strip C', so that when the portion G' is turned down, as shown in dotted lines, Fig. 3, the holder will be expanded, while the turning of the clamp-bar to the full-line position, Figs. 2 and 3, will tighten and clamp the support C upon the handle, the clamp-bar G being held in clamped position by catching its free end over one of the braces, as shown in Fig. 2.

The braces or stretchers H H are pivoted to the support C, preferably to the strip C', at *h*, as shown in Fig. 2.

In general structure and in the manner of supporting their inner ends the ribs F and braces and stretchers H are alike, and the description of the construction of the ribs, as shown in Fig. 6, will answer for both.

In this class of umbrellas it is evident that difficulties arise from the joints between the ribs and braces and their supports, and one object of my invention is to reduce the number of such joints, which I do, as shown in

Fig. 6, by arranging the ribs in groups, one of the ribs, which may be termed the "main" rib, being secured at f to the support, and the other ribs of such group being secured to the said first rib at f' near the point where the latter is secured to its support. This construction is desirable and advantageous in that it avoids the multiplicity of joints with the rib-support and simplifies the connections therewith.

In order that the ribs of the groups may fold alongside each other, I prefer to form a slight bend at f'' in the side ribs adjacent to the joint f' , as shown in Fig. 6.

In practice I arrange the pivots f and h in line, as shown in Fig. 2, and make the angles of the corresponding braces and ribs coincide so the umbrella may be properly raised and lowered, it being desirable, if not absolutely necessary, that such angles should agree, in order to secure a smooth and easy operation of the parts.

It will be noticed that the ribs and the braces or stretchers are in certain respects constructed and connected alike, and both the ribs and the braces may be included in the term "frame-rods."

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

1. In an umbrella, the combination with a frame-rod and a support to which said rod is pivoted at its inner end, of a rod or rods secured at their inner ends to the said first rod at a point adjacent to the point at which said first rod is pivoted to the support substantially as shown and described.

2. An umbrella comprising a support and frame-rods and having its frame-rods arranged in sets each set being composed of a main rod pivoted at its inner end to the support, and a rod or rods pivoted at their inner ends to said first rod near the inner end of

said first rod substantially as shown and described.

3. The umbrella herein described comprising the central supports, the ribs and braces pivoted at their inner ends to their respective supports, and ribs and braces secured at their inner ends to said pivoted ribs and braces near the inner ends of the latter all substantially as shown and described.

4. An umbrella having its ribs arranged to expand in two opposite sets connected together and its braces arranged in similar sets connected together, the ribs and braces being related and means for securing the umbrella to the stick substantially as and for the purposes set forth.

5. In an umbrella substantially as described the rib-support, comprising the frame having the bar, a yielding strip at the inner side of said bar a clamp-screw turned through the bar and bearing against the strip and the connection secured to said frame and adapted to encircle the handle substantially as set forth.

6. In an umbrella, the rib-support comprising the frame having the bars provided with bosses forming a shoulder upon which the cover may bear, the connection secured to said frame, the strip arranged along the inner side of one of the frame-bars and the clamp-screw bearing against said strip all substantially as shown and described.

7. In an umbrella the brace-support comprising the divided sleeve having side strips or plates united by a flexible connection and a clamp-bar swiveled to one of such side plates and having a cam portion, and an eye on the other side plate all substantially as and for the purposes set forth.

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Witnesses:

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