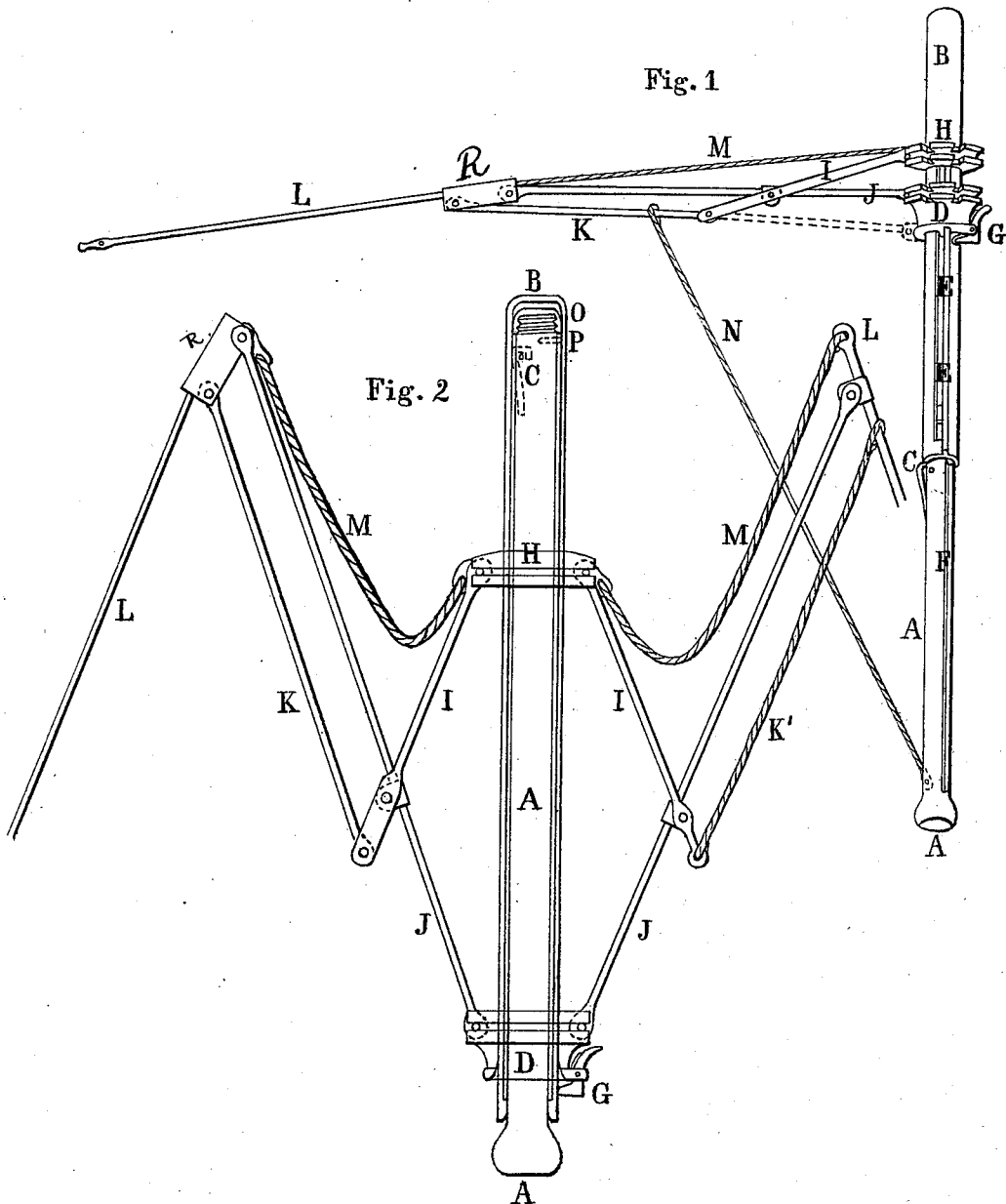


G. B. KIRKHAM.
FOLDING UMBRELLA.

No. 177,339.

Patented May 16, 1876.



WITNESSES:

A. L. Watson
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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN FOLDING UMBRELLAS.

Specification forming part of Letters Patent No. **177,339**, dated May 16, 1876; application filed May 12, 1875.

To all whom it may concern:

Be it known that I, GEORGE BYRON KIRKHAM, of 167 East 33d street, city of New York, county and State of New York, have invented an Improved Umbrella, of which the following is a specification:

The object of this invention is to produce an umbrella or parasol which, when extended, will be of the usual size and appearance, but which, when not in use, can be shut up very compactly and carried in the pocket or other convenient place.

In Figure 1 part of the frame of the umbrella is shown as it appears when fully extended. In Fig. 2 the frame is represented as nearly closed.

The covering is omitted in both figures, as it has no special novelty, and will be made in the same manner, and of the same materials—silk or cotton—as the coverings on ordinary umbrellas.

In Fig. 1, A is the stick or handle, which slides in and out of the tube B. When pulled out to the fullest extent it is held in position by the spring C. This spring C is so arranged that when the thimble D is pulled down to the lower end of the tube B the thimble will press the spring C in, and thus allow the stick A to be shoved up into the tube B. The thimble D, while sliding up or down on the tube B, is prevented from twisting by the guides E E—a ridge or groove on B—which fits into D, and causes it to run straight up or down. A projection on the lower end of the tube B fits into a groove, F, in the stick A, and prevents it, in like manner, from turning round or twisting.

It may not be necessary to employ these ridges and grooves E F in all cases, especially in the cheaper umbrellas, since the common umbrellas prove that the ribs and braces are generally sufficient to guide the lower thimble up and down correctly without twisting.

The thimble D when pushed up as high as it will go on B is held there by a spring-catch, G, which drops into a slot in the tube B made to receive it, and when the thimble D is down

to the lower end of the tube B the spring-catch G reaches over the end of the tube, and thus keeps the umbrella closed. About one-third of the way from the top of the tube B another thimble, H, is permanently fastened to it, Figs. 1 and 2. To this thimble H the short braces I I are secured. These short braces I I are hinged to the main braces J J and rods K K, and the two latter are hinged or pivoted to the short ribs L L by means of the double pivot clasps R R on the upper ends of L L.

The action of D sliding up the tube B extends the braces and ribs of the umbrella horizontally, and going down it shuts them up against the handle perpendicularly, thus closing the whole umbrella.

The rod K may be extended to the thimble D, as shown by the dotted lines in Fig. 1. Also, it may be substituted by a string or chain, as shown at K', Fig. 2.

M M are strings of the covering, to hold the cloth up between H and L.

A string, N, may be occasionally used in very large umbrellas to prevent them from collapsing.

A ferrule is screwed on the upper end of the stick A, as shown at O in Fig. 2, and, being too large to pass out of the lower end of the tube B, it prevents the stick from coming entirely out of the tube and getting lost. A pin, P, will answer the same purpose.

I claim—

1. The thimble D, in combination with the stick A, tube B, and spring C, constructed and arranged substantially as and for the purpose set forth.

2. The combination of the rods I J K L, pivoted clasp R, and string M, substantially as and for the purpose set forth.

3. The combination of the rods I J L, cord K', pivoted clasp R, and string M, substantially as and for the purpose set forth.

GEORGE BYRON KIRKHAM.

Witnesses:

A. L. WATSON,
H. M. PAIN.