S. C. BURNHAM.

FOLDING UMBRELLA.

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1,175,597.

Patented Mar. 14, 1916.

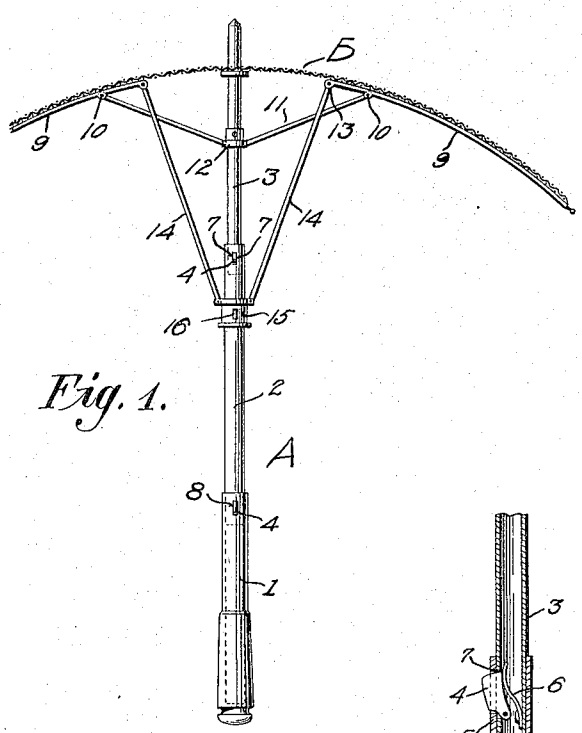


Fig. 1.

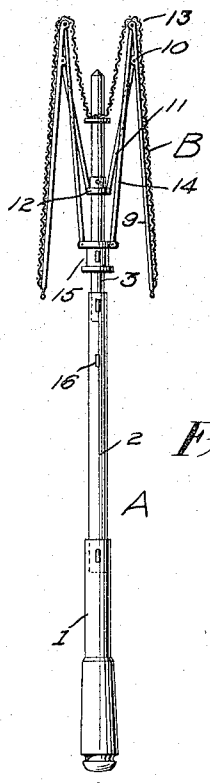


Fig. 2.

Fig. 5.

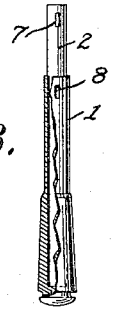


Fig. 3.

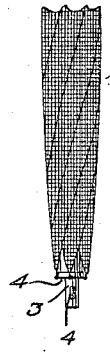


Fig. 4.

WITNESSES

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FOLDING UMBRELLA.

1,175,597. Specification of Letters Patent. Patented Mar. 14, 1916.

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To all whom it may concern:

Be it known that I, SHEPARD C. BURNHAM, a citizen of the United States, and a resident of Dixon, in the county of Lee and State of Illinois, have invented a new and Improved Folding Umbrella, of which the following is a full, clear, and exact description.

This invention relates to folding umbrellas and has for its general objects to improve and simplify the construction and operation of umbrellas of this type so as to be of durable and substantial design, comparatively simple and inexpensive to manufacture, and capable of being easily and quickly folded and unfolded.

A more specific object of the invention is the provision of a novel arrangement of bows and braces whereby the umbrella can be folded into a very small space, the rod of the umbrella being made in telescoping or detachable sections so that when the umbrella is not in use the total length will be reduced to a minimum.

With such objects in view, and others which will appear as the description proceeds, the invention comprises various novel features of construction and arrangement of parts which will be set forth with particularity in the following description and claims appended hereto.

In the accompanying drawing, which illustrates one embodiment of the invention and wherein similar characters of reference indicate corresponding parts in all the views, Figure 1 is a sectional view of an umbrella with its bows in open position; Fig. 2 is a similar view with the bows folded; Fig. 3 is a detail view of the handle of the umbrella; Fig. 4 is a side view of the umbrella body folded and detached from the handle; and Fig. 5 is an enlarged sectional view of the spring catches for holding the runner and for holding the sections of the handle rod.

Referring to the drawing, A is a handle rod of an umbrella which is composed of a handle section 1, an intermediate section 2 and a tip section 3. These fit one in another in an order reverse to that mentioned, the sections 1 and 2 being tubular. On the lower end of the section 3 and section 2 are spring-actuated catches 4 which protrude out of the recesses 5 by reason of the tension of backing springs 6, and these catches are adapted respectively to engage in openings 7 and 8 in the upper ends of the intermediate and handle sections. By releasing these catches the sections of the handle rod can be taken apart, and if desired the intermediate section 2 can be housed in the section 1.

The cover B of the umbrella is supported by bows 9 that extend from the edge of the cover inwardly in radial relation but terminate short of the handle rod to which they are not directly connected. Each bow 9 is pivotally connected at 10 with the outer end of a brace 11, the braces 11 being pivotally connected with a collar 12 fixed on the tip section 3. The pivot points 10 are disposed outwardly from the inner ends of the bows, and such inner ends are pivotally connected at 13 with the actuating braces 14, which braces 14 cross the braces 11 and extend downwardly from the bows 10 and are pivotally connected with a runner 15. This runner 15 is pulled downwardly from the section 3 to the section 2 when the umbrella is to be opened, and when fully open the runner engages with a spring catch 16 carried by the upper part of the intermediate section 2. In pushing the runner 15 upwardly from the position shown in Fig. 1 to that shown in Fig. 2, the umbrella is closed or folded. The closing movement causes the inner ends of the bows to swing upwardly about the pivots 10, and also causes the braces 11 to swing inwardly and upwardly and lie close around the handle rod, as do also the bows and actuating braces 14. In closing, the cover B folds on a circular line coincident with the inner ends of the bows. By reason of this double brace arrangement the umbrella will be held firmly in open position without danger of turning inside out, and at the same time the opening and closing movement is rendered easy.

From the foregoing description taken in connection with the accompanying drawing, the advantages of the construction and method of operation will be readily understood by those skilled in the art to which the invention appertains, and while I have described the principle of operation, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative and that such changes may be made when desired as fall within the scope of the appended claims.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent:

1. An umbrella comprising a handle rod, a cover having its central portion fixedly secured to the handle rod adjacent the tip thereof, a runner slidable on the handle rod, ribs secured to the cover and extending inwardly from the periphery thereof to points short of the handle rod, braces pivotally connected with the inner ends of the ribs and also connected with the runner, and braces pivotally connected with the ribs at points outwardly from their inner ends and pivotally connected with the handle rod at a point between the runner and the cover, the first mentioned braces being so related to the second mentioned braces that all the braces converge toward the handle end of the handle rod when the umbrella is open, and the first mentioned braces cross the second mentioned braces.

2. A folding umbrella comprising a handle rod, a cover fixedly secured to the handle rod adjacent the tip thereof, ribs of less length than the radius of the cover and extending from the periphery toward and terminating short of the center of the cover, a set of long braces hingedly connected directly with the inner ends of the ribs, a runner slidable on the handle rod and to which the braces are pivotally connected, each brace being a single piece, and short braces connected with the handle rod at a fixed point spaced from the cover and between the cover and runner, and also pivotally connected with the ribs at points outwardly from their inner ends, and each short brace being a single piece and extending across the adjacent long brace.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SHEPARD C. BURNHAM.

Witnesses:
JOHN H. DOLAN,
A. H. HANNEKER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."