

U. G. STEINMETZ.

Umbrellas.

No. 158,994.

Patented Jan. 19, 1875.

Fig. 1.

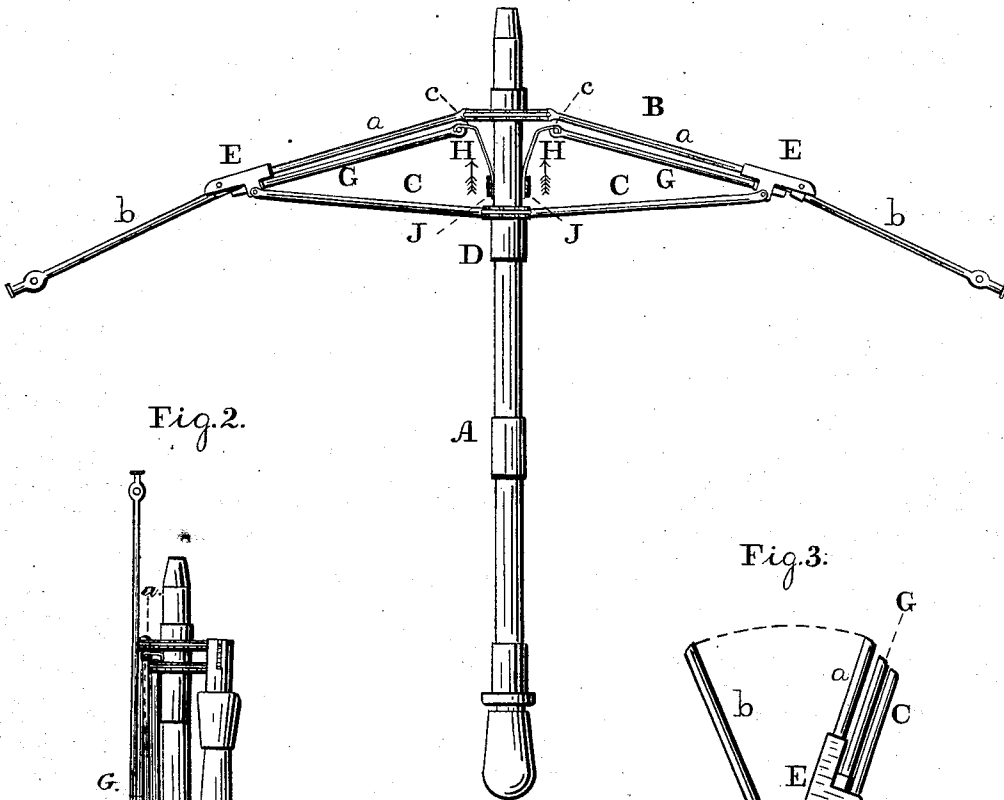


Fig. 2.

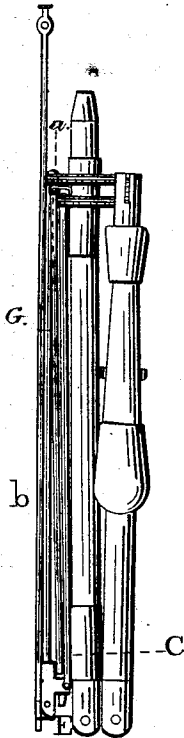


Fig. 3.

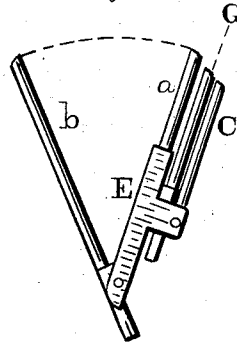
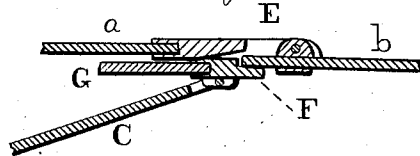


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

URIAH G. STEINMETZ, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN UMBRELLAS.

Specification forming part of Letters Patent No. **158,994**, dated January 19, 1875; application filed December 3, 1874.

To all whom it may concern :

Be it known that I, **URIAH G. STEINMETZ**, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Folding Umbrellas; and I do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand, make, and use the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of the framework of an umbrella embodying my invention. Fig. 2 is a similar view, the parts being folded. Fig. 3 is a side view, enlarged, of a detached part. Fig. 4 is a longitudinal section thereof.

Similar letters of reference indicate corresponding parts in the several figures.

My invention relates to a folding umbrella, the ribs of which are sectional. One section is fixed to a stock and the other section is pivoted thereto. A spring-actuated slide plays in the stock, and holds the sections extended as one. To the same stock the stretcher of the umbrella is pivoted. It also consists in a folding umbrella having sectional ribs, which are locked by slides connected to arms rigidly secured to the stick or staff of the umbrella, and operated by a sliding band, actuating the inner ends of the arms. It also consists in so constructing the springs of the slides that the movements of the runner will not be interfered with.

Referring to the drawings, A represents the stick or staff of an umbrella; B, the ribs; C, the stretchers, and D the runner to which the stretchers are connected. The stick A will be jointed or formed in sections, and, when extended, may be locked by sleeves or other appliances, as are well known. Each rib B is formed in sections, *a b*, which are jointed to each other, so that one section may be folded on the other, as shown in Fig. 2. The section *a* is secured to one end of a stock, E, and to the other end thereof is jointed the section *b*, and the corresponding stretcher C is jointed to said stock E. In the stock E is fitted a slide or bolt, F, which is adapted to come against the end of the section *b*, and press the

same against the stock, so as to form a rigid joint between the section and stock, and thus lock the two sections *a b*. The slide F is connected to an arm, G, which passes upwardly aside of the section *a* toward the stick or stem A, and is connected to a spring, H, which is secured to the stick A. The several springs H are arranged around the stick, and their upper ends project laterally, as at *c*, so that, when said springs are drawn in against the stick by a sliding band or sleeve, J, (shown in section, Fig. 1,) the springs will permit the passage of the runner D to its full extent without interfering with the proper folding of the umbrella.

The operation is as follows: When the umbrella is open, as in Fig. 1, and it is desired to fold the same, the runner D is released from its fastening and moved down, so as to relieve the locking-slide F of pressure of the stretchers; then invert the umbrella, operate the band J, so that the arms G are drawn toward the stick. This withdraws the slides F from under the inner ends of the sections *b*, and the latter then drop and fold on the sections *a*. Now, slide the runner D toward the top ferrule of the umbrella, and the ribs move in toward the stick. On disjoining the stick A and folding the sections thereof the various parts are in compact form, as shown in Fig. 2, in which but one rib, B, stretcher, and slide, with intermediate parts, are shown.

In order to open the umbrella, lock the sections of the stick and hold the umbrella upright, whereby the sections *b* of the ribs fall; partly move down the runner, and draw in the slides F by means of the arms G, whereby the sections *b* seek their proper position against the stocks E; then let go the arms, whereby the slides engage under the inner ends of the sections *b*, and hold them locked against the stocks E; now, move the runner to its proper position, and the ribs are fully stretched, after the manner of an ordinary umbrella.

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

1. The section *a*, fixed to one end of the stock E, and the section *b*, pivoted to the other end thereof, in combination with the spring-actuated slide F, playing in said stock, and

the stretcher G, pivoted thereto, substantially as and for the purpose set forth.

2. The combination, with the sectional ribs B and stretchers C, of the sliding arms G, carrying at their outer ends the locking-slides F, and having their inner ends fixed to the stick A, and the sliding band J, actuating said inner ends, substantially as and for the purpose set forth.

3. The combination, with the sectional ribs B, stretchers C, slides F, and arms G, of the springs H, connected to the stick A and formed with the lateral projections c, substantially as and for the purpose set forth.

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Witnesses:

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