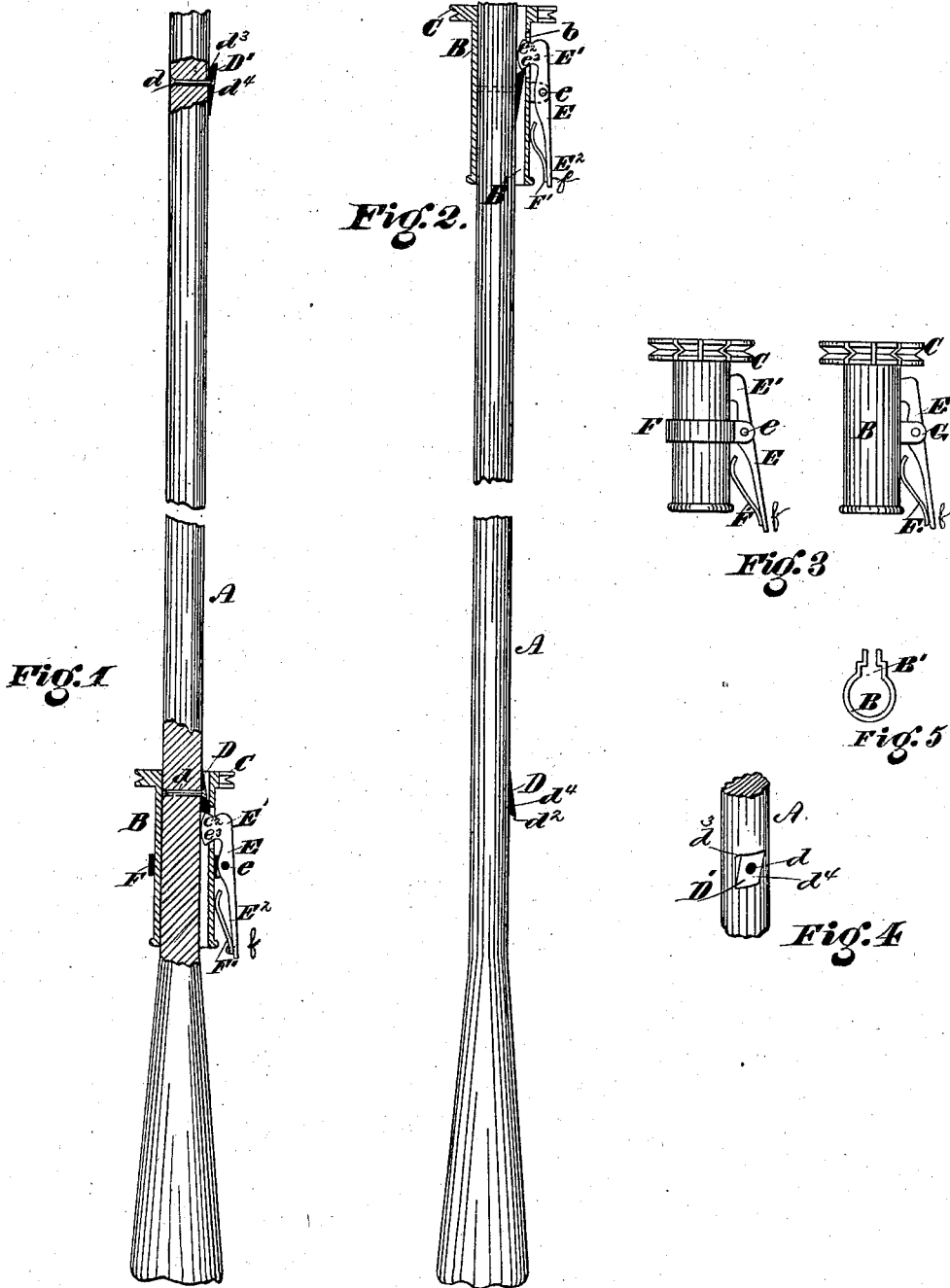


E. EVANS.
Umbrella.

No. 198.841.

Patented Jan. 1, 1878.



WITNESSES:
Saml. J. Van Stavoren

Edward Evans,
Jos. P. Connolly & Connolly Bros.,

INVENTOR.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

EDWARD EVANS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN UMBRELLAS.

Specification forming part of Letters Patent No. **198,841**, dated January 1, 1878; application filed October 3, 1877.

To all whom-it may concern:

Be it known that I, EDWARD EVANS, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Umbrellas; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawing, which forms part of this specification, in which—

Figure 1 is a vertical transverse section of my invention. Fig. 2 is an elevation, partly in section. Fig. 3 is a detail elevation of the runner; Fig. 4, detail perspective, and Fig. 5 detail end view, of the runner.

My invention has for its object to provide an improved device for holding an umbrella in a closed and in an open condition, said device being intended as a substitute for the spring inserted in a kerf in the umbrella-stick, and entering a slot in the slide or runner usually employed.

My invention consists in the provision of a spring-lever of peculiar construction, pivoted to the runner below the notch, and passing through a slot in said runner, so as to engage with beveled stops or ratchets riveted to the umbrella-stick, as hereinafter more fully described.

Referring to the accompanying drawing, A designates an umbrella-stick, and B its slide or runner, having a notch, C, for the reception and retention of the ends of the stretchers. D D' are beveled stops or ratchets, fastened by rivets $d d$ to the stick A, in such positions that they will be alternately encircled by the runner B when the umbrella is closed and when it is opened. The position of the runner relatively to the ratchet D, when the umbrella is closed, is shown in Fig. 1, and the relative position of said runner and the ratchet D', when the umbrella is opened, is shown in Fig. 2.

E is a lever, pivoted at e , having its fulcrum either in a band, F, which encircles and is made fast to the runner B, or in a bifurcated lug, G, which projects from said runner. The head E¹ of said lever is made flaring, so as to present two beveled or inclined edges, $e^2 e^2$,

corresponding, respectively, with the short sides $d^2 d^2$ of the ratchets or stops D D'. F' is a spring riveted to the lever E at f , and operating to force the head E¹ of said lever through a slot, b , in the runner B, in order to effect engagement with the ratchets D and D'.

The operation is obvious, and as follows: The umbrella being closed, the retaining devices herein described will occupy the position illustrated in Fig. 1. To open the umbrella, the head E¹ of the lever E is raised out of engagement with the ratchet D by depressing the opposite end E² of said lever by the pressure of the user's thumb. The runner is then moved up on the stick a slight distance, when the thumb pressure on the lever may be relaxed, the upward motion of the runner on the stick being continued until the notch passes the ratchet D', the lever-head E¹ rising automatically on the incline or long side d^2 of said ratchet, and engaging with the under or beveled side d^3 of said ratchet, as shown in Fig. 2. To close the umbrella, the operation just described is repeated, with the variation of moving the runner down, instead of up, on the stick.

The advantages of the foregoing construction are briefly as follows: The provision of the ratchets D D' avoids the necessity of weakening the stick by sawing or cutting a kerf in it for the reception of the wire spring usually employed. By pivoting the lever below the notch, said lever does not interfere with the application of the stretchers to said notch and the insertion of the wire ordinarily employed for holding said stretchers and notch together. Said lever is also more easily accessible and operated when pivoted in the position described than it would be if it had its fulcrum on the notch B.

The runner B may be of a true cylindrical form, in which case its internal diameter must be at least equal to or slightly greater than the length of the rivets $d d$. By preference, however, said runner should have an internal diameter only great enough to permit it to slide easily upon the stick A, having, however, an offset or groove, B', to permit it to pass or clear the ratchets D D'.

What I claim as my invention is—

1. The ratchets or stops DD', (either or both,) having long inclined sides d^2 and short sides

d^2 d^3 , substantially as shown and described, in combination with the umbrella-stick A, as and for the purpose set forth.

2. The lever E, having flaring head E^1 , substantially as shown and described.

3. The runner B, having an offset or groove B' , in combination with the stick A and ratchets D and D' , substantially as shown and described.

4. The combination of stick A, runner B, having slot b , ratchets D D' , and spring-lever

E, having flaring head E^1 , and pivoted to said runner below the notch C, the several parts being constructed and arranged for operation substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 29th day of September, 1877.

EDWARD EVANS.

Witnesses:

SAML. J. VAN STAVOREN,
CHAS. F. VAN HORN.