W. A. DROWN, Jr.

Spring-Retainer for Umbrella-Runners.

No. 218,243. Patented Aug. 5, 1879.

Fig. 1

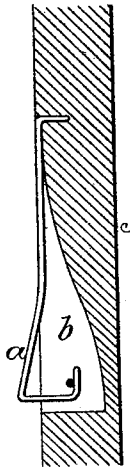


Fig. 4

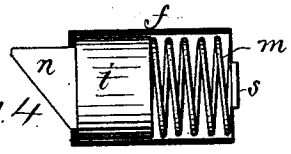


Fig. 5

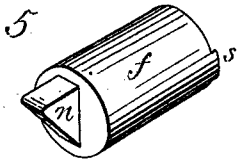
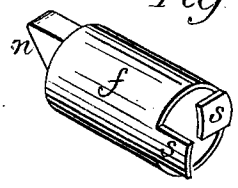


Fig. 6



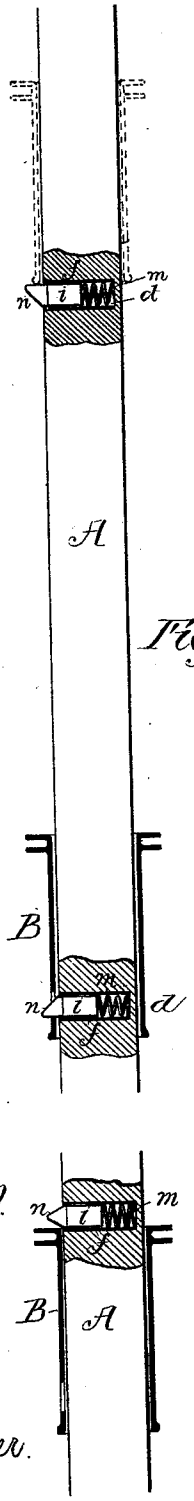
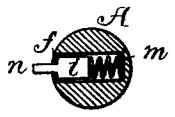


Fig. 2

Fig. 3



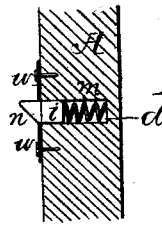


Fig. 7

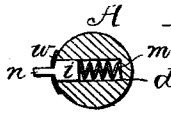


Fig. 8.

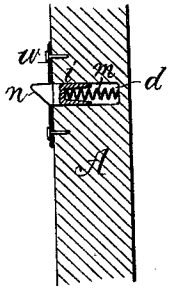


Fig. 9

Fig. 10.

Witnesses

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Harry Smith

Inventor

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UNITED STATES PATENT OFFICE.

WILLIAM A. DROWN, JR., OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SPRING-RETAINERS FOR UMBRELLA-RUNNERS.

Specification forming part of Letters Patent No. **218,243**, dated August 5, 1879; application filed May 23, 1879.

To all whom it may concern:

Be it known that I, WILLIAM A. DROWN, Jr., of Philadelphia, Pennsylvania, have invented a new and useful Improvement in Spring-Retainers for the Runners of Umbrellas or Parasols, of which the following is a specification.

My invention relates to an improvement in that class of retainers for umbrella-runners in which a spring-bolt adapted to a lateral opening in the stick is employed; the object of my invention being to provide a simple and economical means of retaining the spring-bolt within the opening in the stick. This object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawings, in which—

Figure 1 is a sectional view of a portion of an umbrella or parasol stick provided with an ordinary bent-wire retainer; Fig. 2, a sectional view of part of a stick provided with my improved spring-retainers; Fig. 3, a transverse section on the line 1 2, Fig. 2; Fig. 4, an enlarged sectional view of the spring-retainer and its casing removed from the stick; Figs. 5 and 6, front and rear perspective views of the spring-retainer and its casing; and Figs. 7, 8, 9, and 10, sectional views illustrating modifications of my invention.

The ordinary form of retainer for umbrella or parasol runners is shown in Fig. 1, and consists of a piece, *a*, of spring-wire, bent to the shape shown, secured at one end to the stick A, and adapted to a longitudinal slot, *b*, formed in said stick.

There are two objections to this form of retainers—first, the weakening of the stick by the formation of the long and deep slot therein, and, second, the difficulty of forming said slot and adapting the retainer thereto without the aid of machinery.

These objections have been overcome by forming lateral openings in the stick, and adapting spring-bolts to said lateral openings; but the means heretofore adopted for retaining said bolts in the openings have not been such as to render the device as cheap and practicable as such devices must be in order to insure their adoption.

In carrying out my invention I adopt the construction shown in the drawings; in Fig. 2 of which A represents the stick of an umbrella or parasol, in which are formed two lateral openings, *d d*, extending partly through the stick. To each of these openings is snugly fitted a short tube or casing, *f*, which contains a sliding bolt, *i*, and spring *m*, the front end, *n*, of the bolt being reduced in thickness, and projecting through a slot in the front end of the casing, against which abut the shoulders formed by reducing the bolt.

The portion *n* of the bolt is inclined on one edge and abrupt on the other, so as to yield when the runner B is moved in one direction, but so that after the passage of the runner the latter cannot return until the bolt has first been depressed. The bolt *i* and spring *m* are retained in the casing *f* by bending down lugs *s s*, formed on said casing, as shown in Figs. 3, 4, and 6.

The formation of the openings *d* in the stick A can be effected by means of any ordinary boring-tool, and these openings do not weaken the stick to such an extent as the usual longitudinal slot. Moreover, the casing *f*, carrying the spring-bolt, can be readily driven into the opening, and when in place presents a much neater and more attractive appearance than the bent wire.

It is not necessary in carrying out my invention that the casing *f* should be used in every case. For instance, in the modifications shown in Figs. 7, 8, and 9, the bolt *i* and spring *m* are adapted directly to the opening *d*, and are held in place therein by a retaining-plate, *w*, secured to the side of the stick, and slotted for the reception of the reduced end of the bolt.

Instead of engaging with a slot in the runner, as shown in Fig. 2, the spring-bolt may engage with the upper edge of the runner, as shown in Fig. 10, the end *n* of the bolt in such case being inclined in both directions, so that it will allow the runner to pass either up or down, the tension of the spring and the character of the incline being such, however, that a slight effort is required in order to elevate the runner.

I claim as my invention—

1. The combination of the stick A and run-

ner B of an umbrella or parasol with a spring-bolt, *i*, adapted to enter a lateral opening, *d*, in the stick, the bolt having a reduced end, inclined as set forth, and being held in the opening by a retaining plate or casing, slotted for the reception of the reduced end of the bolt, as set forth.

2. The combination of the casing *f*, having a slot in the front end and retaining-lugs *s* at the rear, with the spring *m* and the bolt *e*, having a reduced end, *n*, adapted to the slot in the front end of the casing, all substantially as specified.

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

WM. A. DROWN, JR.

Witnesses:

WILLIAM J. COOPER,

HARRY SMITH.