H. S. FROST.

UMBRELLA RUNNERS.

No. 180,710. Patented Aug. 8, 1876.

Fig 1

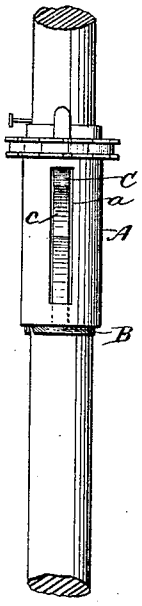


Fig 2

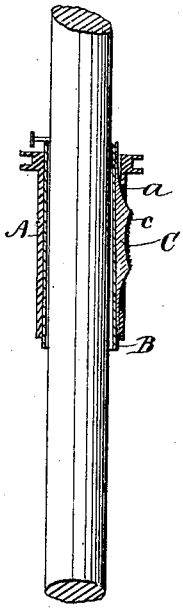


Fig 3

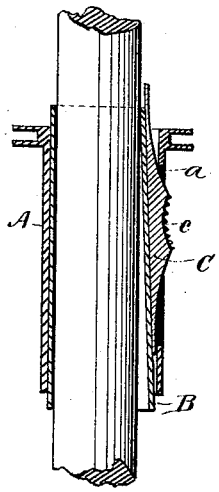


Fig 4

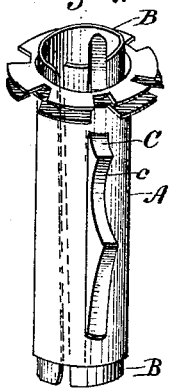


Fig 5

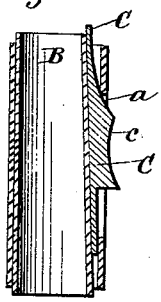
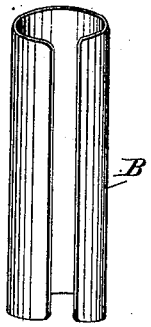


Fig 6.

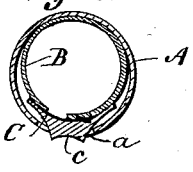


Witnesses;

Harry G. Clark.

Lon Bacon

Fig 7.



Inventor

Henry S. Frost.

by H. W. Beadle & Co.

his Attys.

UNITED STATES PATENT OFFICE.

HENRY S. FROST, OF WATERTOWN, CONNECTICUT.

IMPROVEMENT IN UMBRELLA-RUNNERS.

Specification forming part of Letters Patent No. **180,710**, dated August 8, 1876; application filed January 14, 1876.

To all whom it may concern:

Be it known that I, HENRY S. FROST, of Watertown, in the county of Litchfield and State of Connecticut, have invented a new and useful Improvement in Umbrella-Runners; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

This invention consists, mainly, in the combination, with the runner, of a sliding wedge-piece and an interior spring-plate, the construction being such that the runner may be secured to the stick in any desired position by simply forcing the wedge-piece between the cylinder of the runner and the interior plate, in consequence of which the latter is securely clamped to the stick, and the runner held by the friction of the parts.

In the drawings, Figure 1 represents a side elevation of my improved runner; Figs. 2 and 3, sectional elevation; Fig. 4, a perspective view of the same; Figs. 5 and 7, modified forms; and Fig. 6, view of interior cylinder detached.

To enable others skilled in the art to make and use my improved runner, I will now proceed to fully describe the same.

A represents the runner proper, which may be generally constructed in any proper manner. It is essentially provided, however, with an opening, *a*, as shown.

B represents an interior spring-plate, consisting, preferably, of a split cylinder rigidly secured at one side to the inner surface of the runner.

C represents an intermediate wedge-piece, the main portion of which lies in the slot *a* of the runner, and projects through the same, its ends being held by the bands at the ends of the runner, as shown. *c* represents a curved and serrated portion, by means of which it is adapted to be easily moved by the thumb. The lower face of this wedge-piece rests upon the free end of the interior spring-plate, as shown.

The operation of the runner is as follows: When the wedge-piece C occupies a central position in the slot *a* the runner may be freely moved in either direction upon the stick. When, however, the wedge-piece is so moved as to crowd the spring-plate against the stick, the runner is necessarily held against movement by the friction of the parts.

It will be understood that, in consequence of the rigidity of the bands of the runner, they cannot be moved by the action of the wedge, and hence the spring-plate must yield when pressure is exerted, and, consequently, press against and clamp the stick.

If desired, the construction may be so modified as to locate the slot and wedge-piece around the circumference of the runner, instead of in a longitudinal direction, as shown in Fig. 7. If desired, the wedge-piece may be constructed to act only at one end instead of both, as shown in Fig. 5.

The advantages of the described construction will be readily understood. No springs are required in the stick, and the runner, by a simple movement of the wedge-piece may be clamped in any desired position. The employment of an interior plate prevents the stick from being marred by the clamping action. If desired, the wedge-piece may be employed without the interior spring-plate; but this construction is objectionable because the stick is then liable to be marred.

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

1. In combination with the runner, the sliding wedge-piece, and interior spring-plate, substantially as described.

2. The runner described, having the longitudinal slot *a*, interior cylindrical spring-plate B, and sliding wedge-piece C, as described.

3. A runner provided with mechanism for clamping the stick, and also an interior plate for protecting its surface, substantially as described.

4. The sliding wedge-piece C, in combination with a slotted runner, as described.

This specification signed and witnessed this 7th day of January, 1876.

HENRY S. FROST.

Witnesses:

T. P. BALDWIN,

LEMAN W. CUTTER.