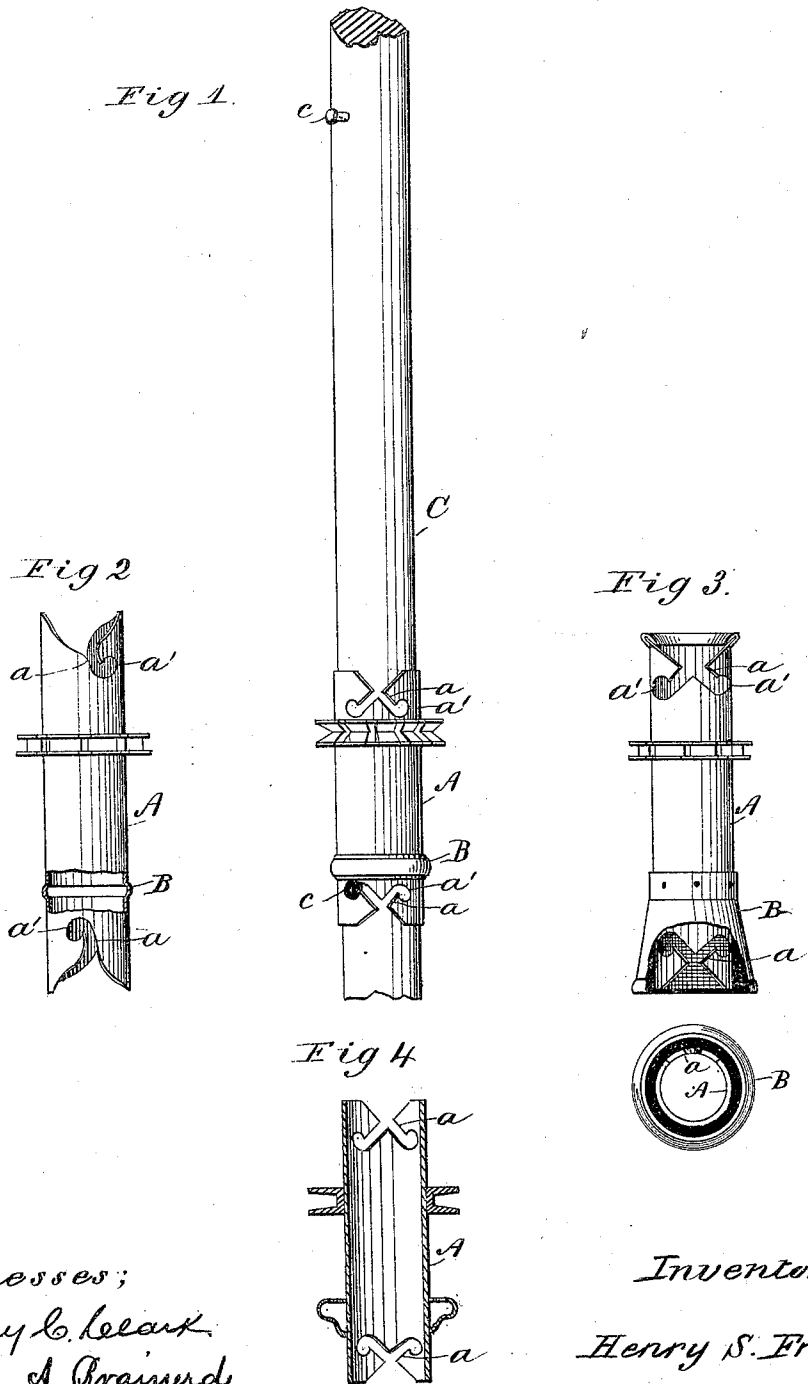


H. S. FROST.
UMBRELLA-RUNNER.

No. 172,416.

Patented Jan. 18, 1876.



Witnesses;
Harry C. Belant.
Chas. A. Brainerd

Inventor.
Henry S. Frost
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Attys..

UNITED STATES PATENT OFFICE.

HENRY S. FROST, OF WATERTOWN, CONNECTICUT, ASSIGNOR TO A. N. WOOLSON, OF SAME PLACE.

IMPROVEMENT IN UMBRELLA-RUNNERS.

Specification forming part of Letters Patent No. 172,416, dated January 18, 1876; application filed October 27, 1875.

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 is an improved runner, which is provided with a cam-slot of peculiar construction, adapted, in connection with a fixed pin, to hold the runner either in its raised or lowered position, and has also a raised ring, which, in consequence of its projection from the surface of the runner, enables the latter to be grasped by the thumb and finger without bearing upon or covering the cam-slot.

In the drawings, Figure 1 represents a view in elevation of a runner having a double cam-slot, and a raised ring, formed of auxiliary metal; Fig. 2, an elevation of a runner having a single cam-slot with the raised ring formed of the metal of the runner; Fig. 3, an elevation, partly in section, and a bottom-plan view, of a runner having a double cam-slot and a raised ring consisting of an auxiliary slide or thimble; and Fig. 4, a sectional elevation of a runner having a double cam-slot and raised ring formed of auxiliary metal.

To enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and manner of operation.

A represents a runner, which may be constructed generally of any proper form or size, but is essentially provided with the cam slot *a*, having the terminal recess *a'*. This slot may be single, as shown in Fig. 2, or double, as shown in Fig. 1. B represents the raised ring, preferably located near the lower end of the runner, which may be constructed in any proper manner, and be secured in any suitable way. If desired, it may be struck up from the surface of the metal itself, as shown in Fig. 2, when the quality of the metal will permit this operation, or it may consist of an auxiliary ring, of any suitable conformation, slipped upon the barrel and secured by riveting, swaging, or soldering, as shown in Figs.

1 and 4. If desired, also, it may be simply located near the cam-slot, as shown in Figs. 1, 2, and 4, or it may be made to overhang and cover the same, as shown in Fig. 3. C represents the umbrella-stick provided with fixed pins *c c*, as shown.

The operation will be readily understood.

The raised ring of the runner being grasped by the thumb and finger, it may be elevated until the terminal recess *a'* engages with the fixed pin *c*, the runner being properly guided in its final movement by the entering angles of the cam-slot. When in this position, the runner cannot be depressed by the reaction of the ribs and cover, because the terminal recess is caught over the pin, but by turning the runner slightly to the proper side, when it is desired to lower the same, the disengagement of this recess from the pin will release the runner and permit it to be moved. The runner, at the end of its downward movement is caused to engage with the lower fixed pin *c*, and be thereby secured in the same manner as above described.

By means of this construction the springs in the stick are dispensed with, the fixed pins being used as a substitute therefor.

By the employment of the raised ring, in connection with the cam-slot, the hand is furnished with a proper means of grasping the same, without bearing upon or covering the slot. If no provision were made for raising the grasping portion of the hand above the surface of the runner, the thumb or finger might rest upon the slot and come in contact with the pin.

By the employment of an auxiliary ring, also, the runner is suitably strengthened.

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

The runner described, provided above and below with the inclined cam-slot and double entering angles, and having also the elevated ring adapted to raise the grasping portion of the hand above the slot, as described.

This specification signed and witnessed this 22d day of October, 1875.

HENRY S. FROST.

Witnesses:

TRUMAN P. BALDWIN,
LEMAN W. CUTLER.