W. H. BELKNAP.
Umbrella-Runner.

No. 212,428. Patented Feb. 18, 1879.

Fig. 1.

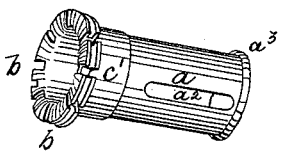
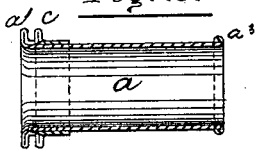
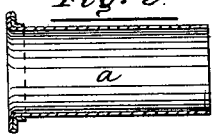


Fig. 2.



a' Fig. 3.



c Fig. 4.

Witnesses.
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per
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UNITED STATES PATENT OFFICE.

WILLIS H. BELKNAP, OF NEW YORK, N. Y.

IMPROVEMENT IN UMBRELLA-RUNNERS.

Specification forming part of Letters Patent No. **212,428**, dated February 18, 1879; application filed December 28, 1878.

To all whom it may concern:

Be it known that I, WILLIS H. BELKNAP, of the city of New York, county and State of New York, have invented certain new and useful Improvements in Umbrella-Runners, of which the following is a specification:

This invention relates to umbrella-runners, and has for its object to lessen the cost of manufacture and to reduce the size of the notched flange in which the ends of the stretchers are held to a minimum, thereby preventing any injury to the covering material by the flange, and allowing the umbrella to be folded in a smaller compass; but to describe my invention more particularly, I will refer to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of my improved umbrella-runner. Fig. 2 is a longitudinal section of the same. Fig. 3 is a sectional view of the main tube; and Fig. 4 is a sectional view of short outside tube.

The main tube *a*, which is the slide or body of the runner, is made of thin metal, and is formed at one end, as shown at a^1, by means of forming-dies or by spinning. It is flared outward and then folded back onto itself, so as to form a flange of two thicknesses of metal, the original end of the tube being thrown down onto the body of the tube forming the bottom of the groove a^4, in which the wire for holding the stretchers in the notches *b b* is placed, thus forming the upper half of the notched flange, as clearly shown at Fig. 3; and at Fig. 4 is shown how the lower half of the notched flange *c* is formed on the end of a short piece of tube, *c'*—that is, by first flaring out one end of it and then folding down said flare outwardly onto itself. The tube *c'* is made of thin metal, similar to tube *a*, but is of such a size as just to fit over the tube *a*, as seen at Figs. 1 and 2, and the two parts when so placed are secured together by solder or other suitable means, and the notches *b b* cut through the two parts of the flange.

The slot a^2 admits of the springs in the stick retaining the runner in place as ordinarily. The bottom of the main tube *a* is stiffened by the ring a^3, secured thereon, or by being bent round onto itself after the short tube *c'* is fastened in its place.

I am aware that umbrella-runners have been heretofore made by combining together separate pieces of wrought metal to form the notched rings in place of cast-metal ones; but by the combination of the two pieces of thin metal tube, formed up as before set forth and shown, I am enabled to greatly reduce the cost of manufacture and size of said articles; and

I claim—

In an umbrella-runner, the tube *a*, spun or drawn up at one end, so as to form the upper half, a^1, and the bottom of the groove a^4, of two thicknesses of metal, in combination with the tube *c'*, provided with the lower half, *c*, of the notched flange, formed, as described, of two thicknesses of metal, substantially as hereinbefore set forth.

In witness whereof I have hereunto set my hand.

WILLIS H. BELKNAP.

Witnesses:

WM. P. FERGUSON,

FRIEND A. RUSS.