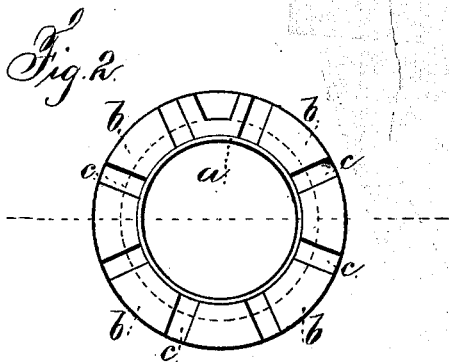
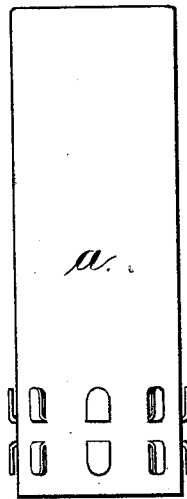
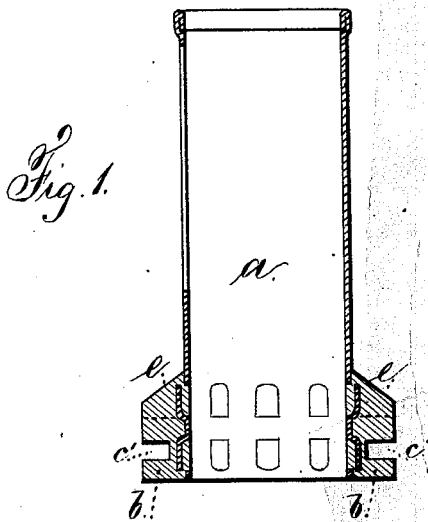


A. MILLIKEN.
Umbrella-Runner.

No. 206,034.

Patented July 16, 1878.



Witnesses
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UNITED STATES PATENT OFFICE.

ALONZO MILLIKEN, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN UMBRELLA-RUNNERS.

Specification forming part of Letters Patent No. 206,034, dated July 16, 1878; application filed June 17, 1878.

To all whom it may concern:

Be it known that I, ALONZO MILLIKEN, of Brooklyn, in the State of New York, have invented an Improvement in Runners and Top Notches for Umbrellas and Parasols, of which the following is a specification:

The notched rings receiving the ends of the ribs or stretchers in umbrellas and parasols have been made in various ways, principally of cast metal, fastened to the stick or soldered to the runner-tube.

In rings of this character, the tubular portion, being of cast metal, requires to be sufficiently thick to obtain the necessary strength at the notches; and to that extent the ribs or stretchers are removed from the stick or the tube of the runner, and the entire diameter of the notched-ring joint increased.

My invention is made for lessening the diameter of the notch-ring, increasing the strength, protecting the silk or covering of the umbrella from contact with the ends of the ribs or stretchers, and for lessening the cost of manufacture.

In the drawing, Figure 1 is a section, and Fig. 2 is an end view, of the runner with my improved notch-ring; and Fig. 3 is an elevation of the tube prepared to receive the notched ring.

The notch-ring is cast around a tube or cylinder of brass or other metal, so as to be complete in itself by simply casting the same. I employ type-metal or other suitable metal or alloy, and cast the same in a mold of the proper external shape to form the notched ring.

The tube *a*, of brass or other metal, is of a length adapted to form the runner or to receive the top notch-ring, and this is put into the mold, and the metal cast around the same.

There are small openings in the tube *a*, with burrs or fins pressed outwardly, around or into which the metal of the notch-ring is cast, so that the blocks *b b* between the notches *c* will be held firmly to the tube *a*, and at the same time the notches *c* extend to the surface of the tube *a*, so that it is unnecessary to employ cast metal at the bottoms of the notches. This allows for the diameter of the notch-ring being reduced as much as possible, because the wrought-metal tube *a* can be much thinner than cast metal and maintain the required strength.

It is to be understood that when there are

perforations in the tube, formed in raising the burrs or fins, a central core is required in the mold; and with the notch-ring, that is fastened to the stick, the ring or tube *a* does not require to extend as far down as the notches, but may have projections, around which the blocks *b* are cast.

The groove around the notch-ring at *c'* is for the wire that is threaded through the ribs or stretchers, and upon which they swing.

In runners where the ends of the ribs or stretchers project past the notch-ring the same are liable to wear the umbrella-cover. In order to prevent this, I cast the cap portion *e* with the blocks *b* of the notch-ring to cover the ends of the slots and the ribs or stretchers that are inserted in the slots, so that the fabric of the cover cannot come into contact with such ends, and at the same time the blocks *b* are firmly connected together, the parts being all cast in one.

I am aware that umbrella-ribs having eyes have been introduced into a mold, and the metal cast so as to run into the eyes. In this instance the top notch or runner is made in the act of manufacturing the umbrella by putting the parts together.

In my improvement the runner or top notch is separate from the other parts, and is complete in itself.

I claim as my invention—

1. A notch-ring for umbrellas or parasols, composed of a tube with surrounding cast-metal blocks, grooved for the reception of the joint-wire, and having the slots for the ends of the ribs or stretchers, substantially as set forth.

2. The metal tube *a*, having burrs or fins, in combination with the blocks *b* of the notch-ring cast around such burrs or fins, and secured by the same to the tube, substantially as set forth.

3. The notch-ring having the blocks *b* and cap *e*, that connects the blocks *b* and covers the ends of the slots for the ribs or stretchers, cast in one piece around the tube *a*, substantially as set forth.

Signed by me this 14th day of June, A. D. 1878.

A. MILLIKEN.

Witnesses:

GEO. T. PINCKNEY,
HAROLD SERRELL.