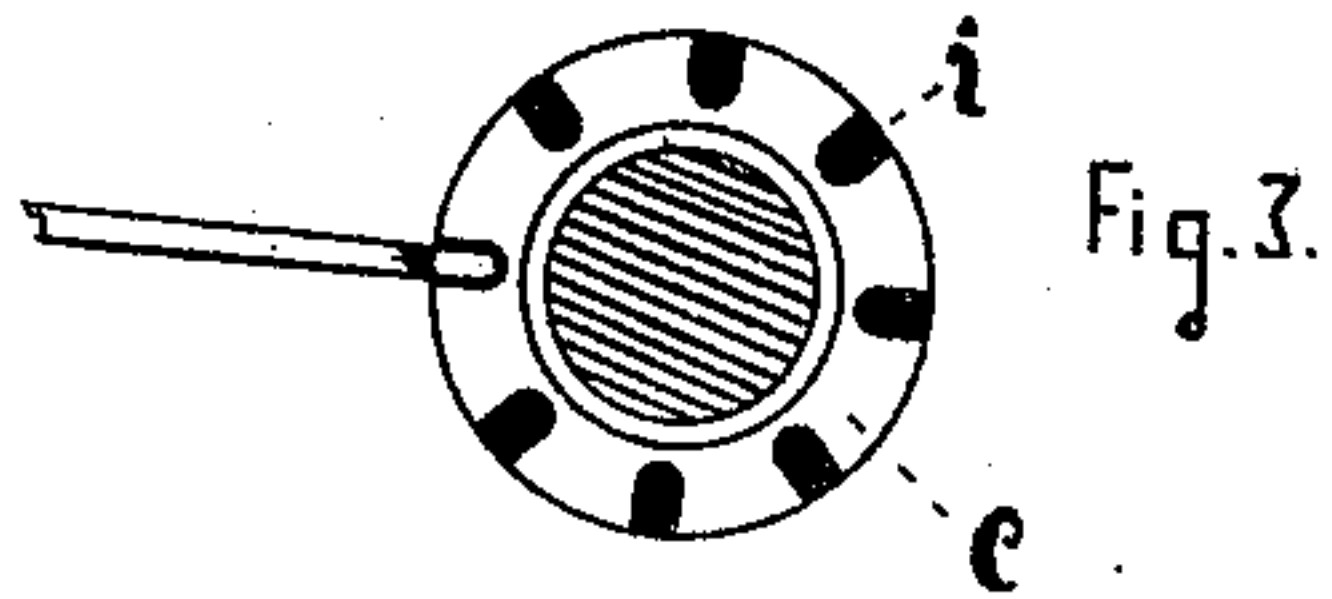
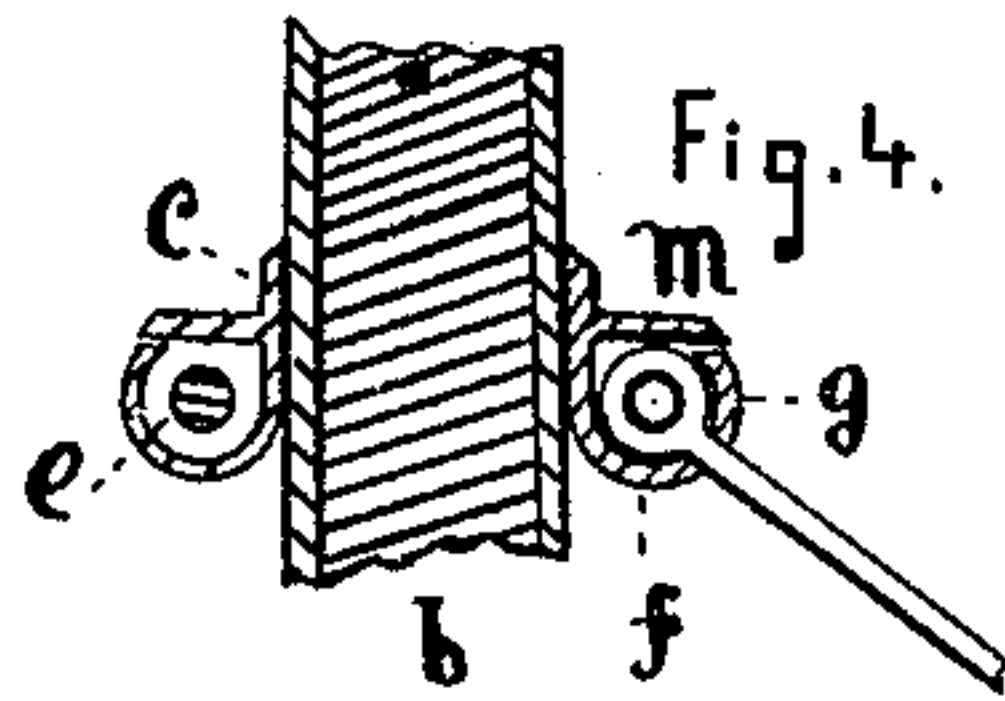
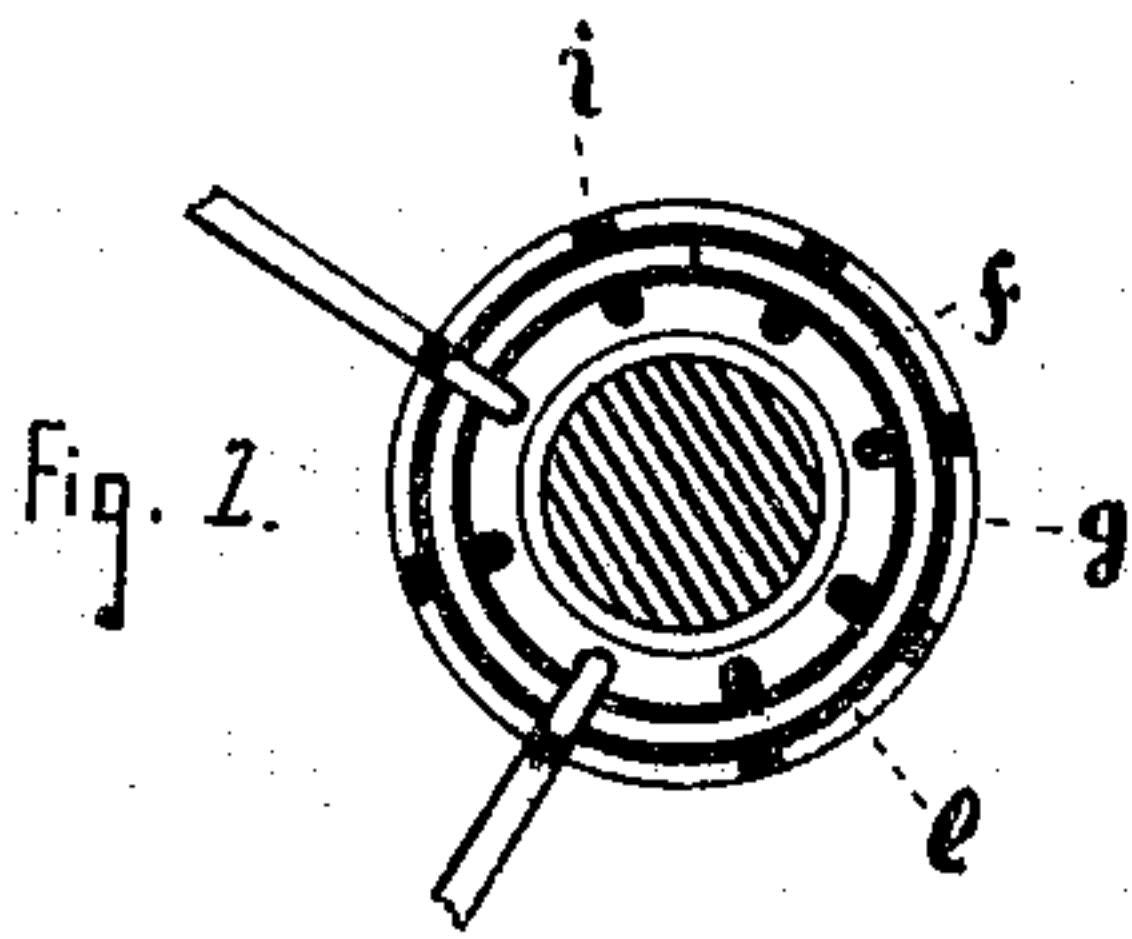
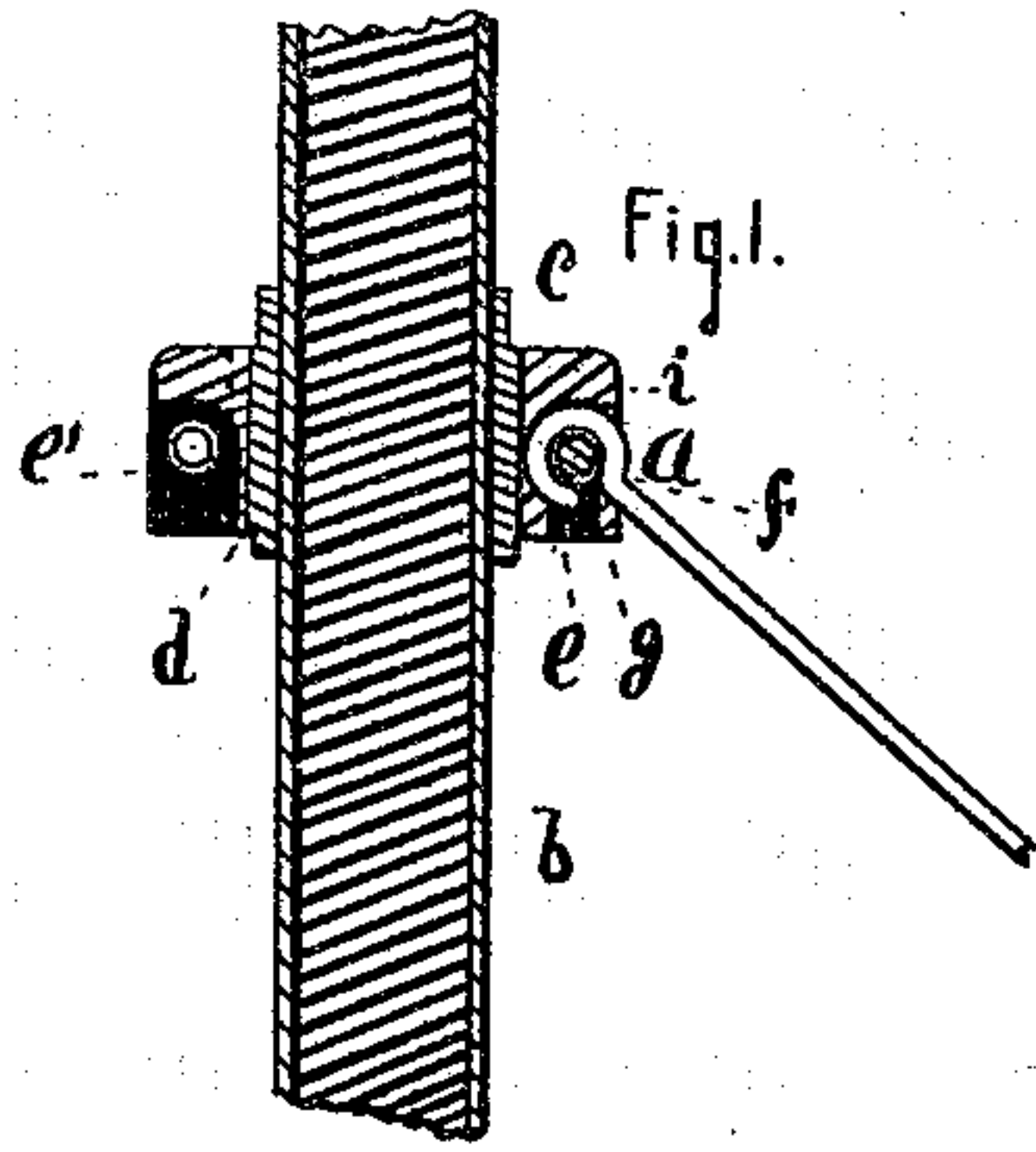


L. L. TREMAN.

UMBRELLAS.

No. 185,198.

Patented Dec. 12, 1876.



Witnesses.
Samuel J. Barker.
A. Parker

Inventor.
L. L. Tremen

UNITED STATES PATENT OFFICE.

LAFAYETTE L. TREMAN, OF ITHACA, NEW YORK.

IMPROVEMENT IN UMBRELLAS.

Specification forming part of Letters Patent No. 185,198, dated December 12, 1876; application filed August 28, 1876.

To all whom it may concern:

Be it known that I, LAFAYETTE L. TREMAN, of Ithaca, Tompkins county, New York, have invented an Improved Fixture for Umbrellas, of which the following is a specification, reference being had to the accompanying drawing, and to the letters thereupon.

My fixture is for securing the ends of the bows or spreaders, at their top ends, to the umbrella, and also for the foot of the braces or stretchers, where they are secured to the runner or hand-slide; and it consists of an improved top or notch piece, and in a corresponding runner, both having a firm ring, which is inserted in a cavity made in their faces—or, more definitely, in the under side of the notch-piece, and in the upper side of the runner. The nature of my invention will be further apparent as I describe it.

Figure 1 is a sectional view of my fixture as top or notch piece on the staff or handle of an umbrella. Fig. 2 is a view of the under side of my fixture, showing the cavity in its face for the stout ring. Fig. 3 is a view from above of my fixture, showing the clefts or slots. Fig. 4 is a view of substantially the same arrangement, (shown as an equivalent.)

Views of the runner are so similar that they need not be shown in detail.

In the figures, *a* is the notch-piece, the runner having the same, with *b*, the staff or handle, through it, made preferably of one piece of metal, which, for convenience of description, may be assumed to be divided into the following parts, proceeding from the staff outward, namely: The ferrule *c*, next to the staff, which is thickened from this ferrule toward the main cavity, as seen at *d*, thus making the inner wall of the cavity of the ring for the spreaders and stretchers. Next is the ring-cavity *e*, in which lies the ring *f*, which has on it the upper ends of the spreaders, and, correspondingly, the lower ends of the stretchers, as the case may be. Further outward is the last part of my fixture, which is the bracing lip or ferrule *g*, which is slotted at each place where a spreader or a stretcher is attached to the ring, and at *e'*, Fig. 1, the space necessary to be cut for the slots is shown by dark shading. Though the slot is cut, as indicated by the dotted lines of that side of the figure, clear down,

when the fixture is made of cast metal the change in the direction of the lines of section on the other side of the figure shows the slot as usually made.

Reference is made to a patent granted to me January 17, 1876, No. 175,307, in which I use a ring cast or made immovably fast to, and as a part of, the notch-piece and runner, and with small bracing-arches external to this fast and immovable ring. The present invention is an improvement on the invention then patented. In that patent bracing-slots were made to a certain extent. In this case a new part, which I have termed the "ferrule" *g*, is added, and bracing-slots are cut in it. Nor was there in that patent any loose ring in any cavity. In this the ring is a main feature.

It will be noticed that the bows or stretchers are not drilled with holes in their ends, as is usual, but that the bows, as well as the spreaders or braces, are bent about the ring *f*, and that the ring *f* is quite thick and stout, so much so that, by closing the ends of it together, the ring holds the spreaders and braces firmly on it, without bending or denting the ring. The ring, with its spreaders or stretchers on it, is inserted in its cavity by putting it over the aperture or cavity, and adjusting the spreaders or stretchers to their slots; and, when adjusted, the ring, with its spreaders or stretchers, is slid into the cavity, and two or more of the parts of the bracing lip or ferrule *g* are bent inward a little, which fastens the ring and its spreaders or stretchers in their places.

Fig. 4 shows the cavity for the ring inverted, and the notch-piece or runner made of sheet metal. Without describing fully its construction, it will be seen that the inner or ferrule part *c* is made quite long downward, and its lower edge slotted for the stretchers or spreaders; and when the ring *f* has been put on with the spreaders or stretchers, these lower parts of the ferrule *c* are bent upward, thus making the cavity *e* for the ring, which faces the projection *m* above the ring, and thus the cavity *e* is made reversed, and the lower ends of the ferrule *c*, after bending, become the lip or bracing-ferrule *g* described, and this I regard as equivalent to what has been described.

Quite a number of other forms, of both cast,

and pressed, and sheet metal, might be explained; but they, as well as the advantages and uses of my invention, are apparent to those skilled in the art to which it appertains.

I claim—

1. The described notch-piece and runner, having the groove or cavity cut or made in its base or face between the inner ferrule part *c* and the outer ferrule part *g* for the ring *f*, as shown and described.

2. The ring *f*, when inserted in the groove or cavity cut or made in the notch-piece or runner, substantially as shown and described.

3. The teeth or serrations between the slots of the notch-piece or runner, when bent or shaped upon the ring *f*, for the purpose of holding the ring in the cavity *e* of the face of the notch-piece or runner, substantially in the manner set forth.

LAFAYETTE L. TREMAN.

Witnesses:

S. J. PARKER,

P. J. PARTENHAUER.