N. Starr,
Umbrella.

No. 111,487. Patented Jan. 31, 1871.

Fig. 1.

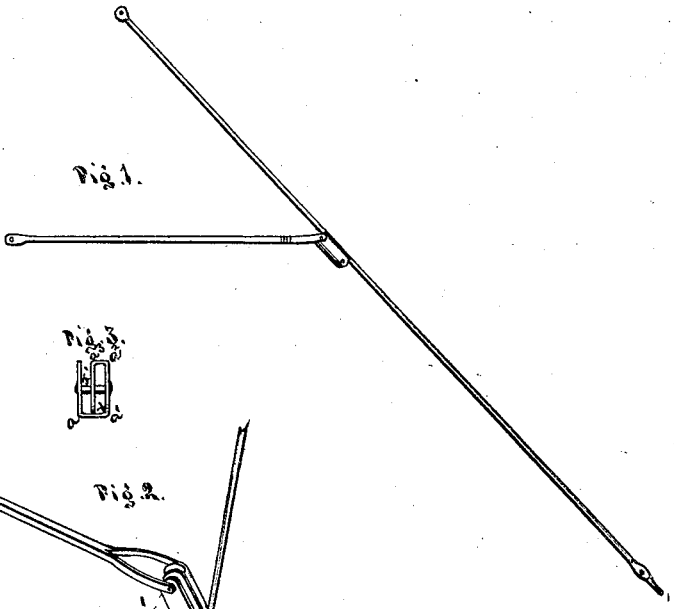


Fig. 3.

Fig. 2.

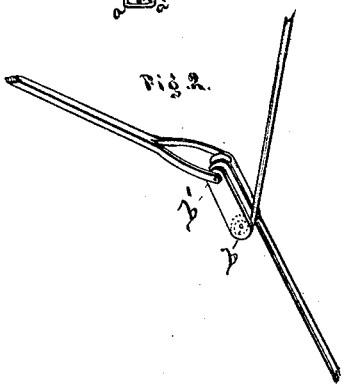


Fig. 4.

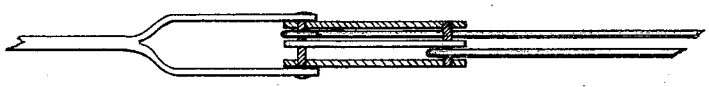
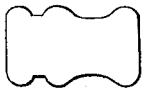


Fig. 5.



Witnesses:
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Inventor:
N. Starr, by
H. W. Beadle, atty.

United States Patent Office.

NICHOLAS STARR, OF HOMER NEW YORK.

Letters Patent No. 111,487, dated January 31, 1871.

IMPROVEMENT IN UMBRELLAS.

The Schedule referred to in these Letters Patent and making part of the same

I, NICHOLAS STARR, of Homer, in the county of Cortland and State of New York, have invented certain Improvements in Umbrellas, of which the following is a specification.

This invention has for its object to furnish a joint for the ribs of folding umbrellas which shall possess requisite strength and durability, and which may be furnished at a very small cost; and consists in certain specific details of construction, which will be fully described hereinafter.

In the drawing—

Figure 1 represents a side elevation of the joint, with the parts of the rib and the brace attached thereto;

Figure 2 represents a partial perspective view of the same;

Figure 3, an end elevation of the joint detached;

Figure 4, a partial sectional view; and

Figure 5, a plan view of the metal piece before it is formed to make the joint.

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

A represents a flat piece of metal, which is cut in any proper manner into substantially the shape shown in fig. 5.

By means of suitable formed pliers, or other instruments or means, this piece of metal is bent at a a^1 a^2 a^3, and to it are secured, by means of rivets b b', the divisions of the rib and brace-rod.

The lower division of the rib is rigidly held in the closed socket x of the joint, while the upper division is held in the open socket x'.

By means of this construction the adjacent ends of the divisions of the rib pass by each other a certain distance, and they are each also clamped on the sides by the sockets, as well as held by the rivets, so that they are braced to resist lateral and downward strain. A joint of great strength is thus obtained which can be produced at a very small cost.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

The described joint, formed of a single piece of metal bent at a a^1 a^2 a^3, to form the closed socket x for the lower half of the rib, and open socket x' for the upper half of the rib, the rib and brace-rods being held by the rivets b b', as described.

In testimony whereof I have signed my name to this specification in presence of two subscribing witnesses.

N. STARR.

Witnesses:

R. H. DUELL,

JNO. D. BURTON.