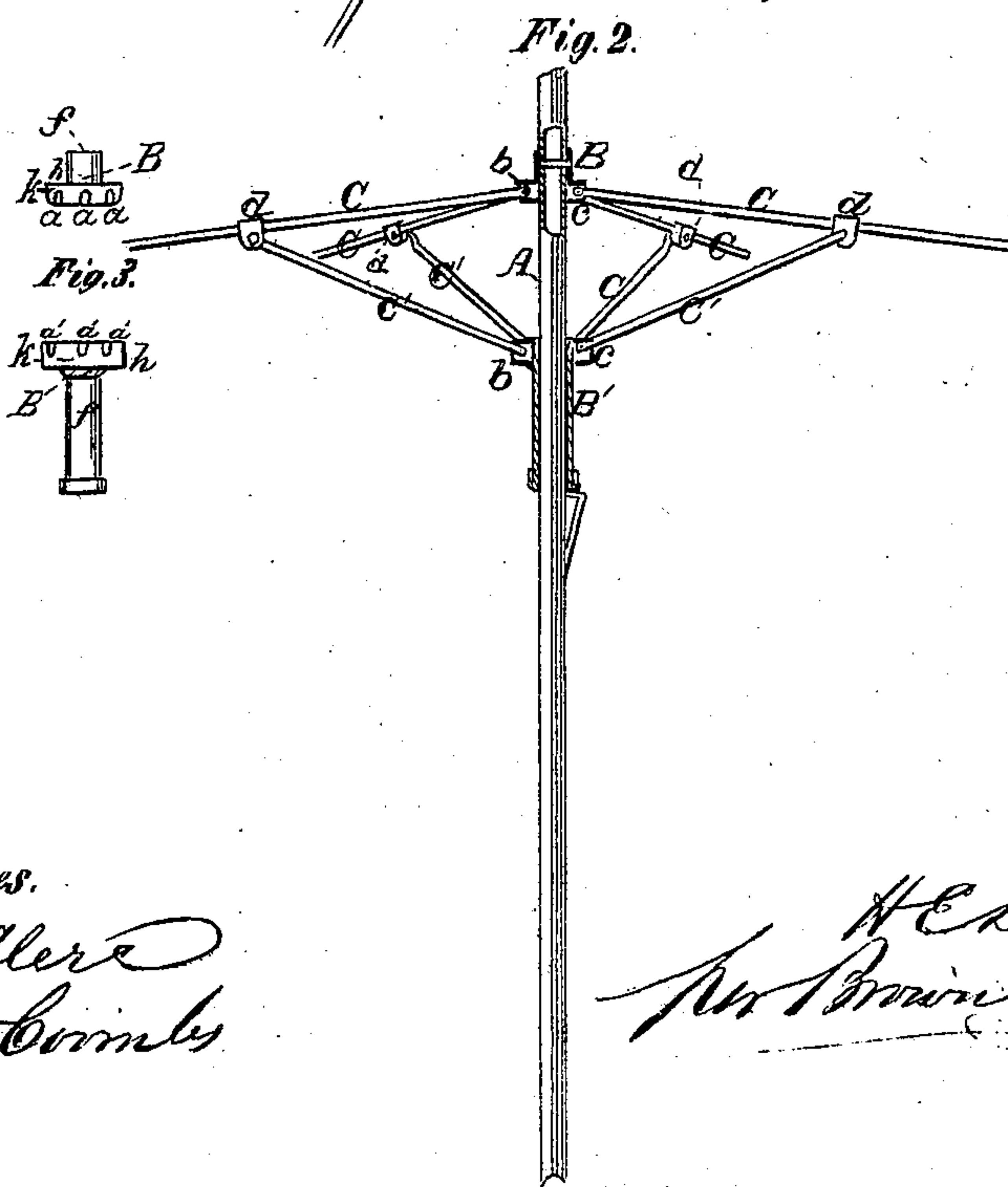
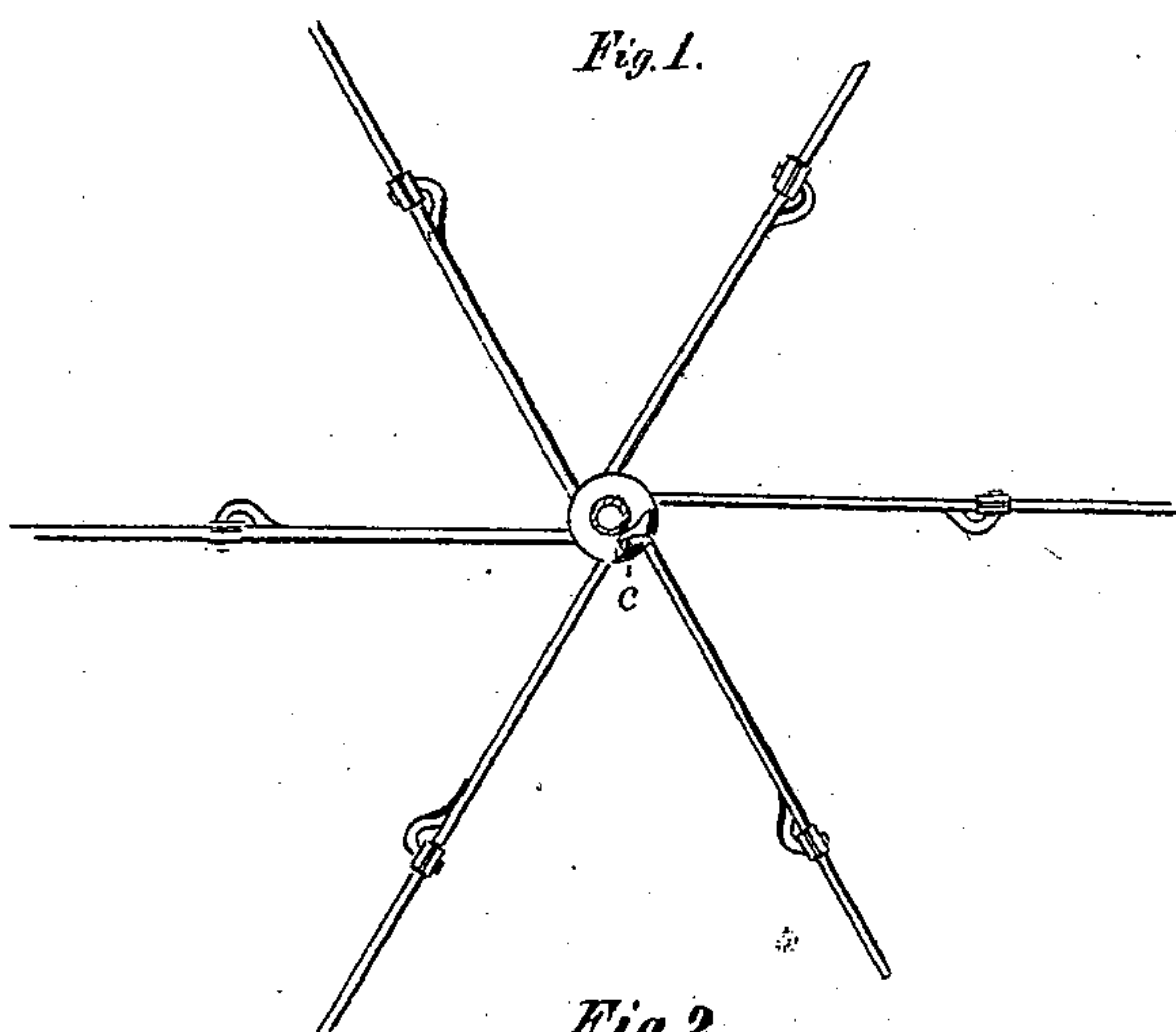


H. E. Donor, Umbrella.

No. 100271.

Patented Mar. 1. 1870



Witnesses.

Attest
J. M. Corbin

H. E. Donor
Per J. M. Corbin
Atty

United States Patent Office.

HARRY E. DONOR, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND
ROBERT E. BRETT, OF SAME PLACE.

Letters Patent No. 100,271, dated March 1, 1870; antedated February 17, 1870.

IMPROVEMENT IN UMBRELLA-FRAMES.

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

To all whom it may concern:

Be it known that I, HARRY E. DONOR, of the city, county, and State of New York, have invented a new and useful Improvement in Umbrella-Frames; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming a part of this specification.

Referring to the accompanying drawing—

Figure 1 represents a plan view of an umbrella-frame to which my invention is applied;

Figure 2, a vertical section of the same;

Figure 3 represents the fixed and sliding collars detached from the frame; and

Figure 4 represents a transverse section of one of the ribs, taken through the point of connection of the stretcher therewith, illustrating the manner of attaching the block to rib and of connecting the stretcher to the block.

Similar letters of reference indicate corresponding parts in the several figures.

A is the stick of an ordinary umbrella-frame.

B B' are the notch or fixed collar and the runner or sliding collar, the one secured upon the stick near the upper extremity thereof, and the other made to slide upon the central portion thereof.

Said collars B B' are provided with heads *b b'*, having openings *a a'*, corresponding in number to the ribs and stretchers, and designed for the reception of the same.

Hitherto, so far as I am aware, no means have been provided whereby the ribs and stretchers might be detached from each other and their notches and runners, respectively, without the necessity of removing a cap or portion of the notch, or the rivets connecting the stretchers and ribs, or some other equally objectionable and comparatively tedious operation. It is, how-

ever, very desirable that both the ribs and stretchers should be individually detachable, each from the other and from their respective notches, for the purpose of repair, and that in such a manner as to allow the detachment to be effected almost instantaneously. To this end, I bend the ends of the stretchers C' to form a right angle, and also the inner ends of the ribs C in the same manner. When thus bent, it will be perceived that the same may be readily connected together by means of the laps *d*, and also to the runner and notch, as required, with a simple movement involving a small fraction of time. Their detachment may, of course, be effected with equal facility.

This construction of ribs and stretchers enables them to be furnished at less cost than any heretofore known, as but a single wire is requisite, and after being cut into suitable lengths, nothing more is required save to form the angular terminations at their ends. If preferred, the latter may be made slightly hook-shaped, to insure a more secure connection of parts.

I am aware that angular projections or enlargements on the ends of the ribs and stretchers of umbrellas have been previously employed, but such involving greater expense, and not adapting them for detachment, form no part of my invention.

What I claim as my invention, and desire to have secured by Letters Patent, is—

In an umbrella-frame, the ribs C and stretchers C', having their ends bent laterally or at a right angle to the staff, whereby each is adapted to be individually or separately detached from the other and its respective notch, as herein shown and described, for the purpose specified.

H. E. DONOR.

Witnesses:

A. LE CLERC,
A. KINNIER.