I. E. Palmer,

Mosquito-Net Frame.

No. 58,283. Patented, Sept. 25, 1866.

Fig: 1.

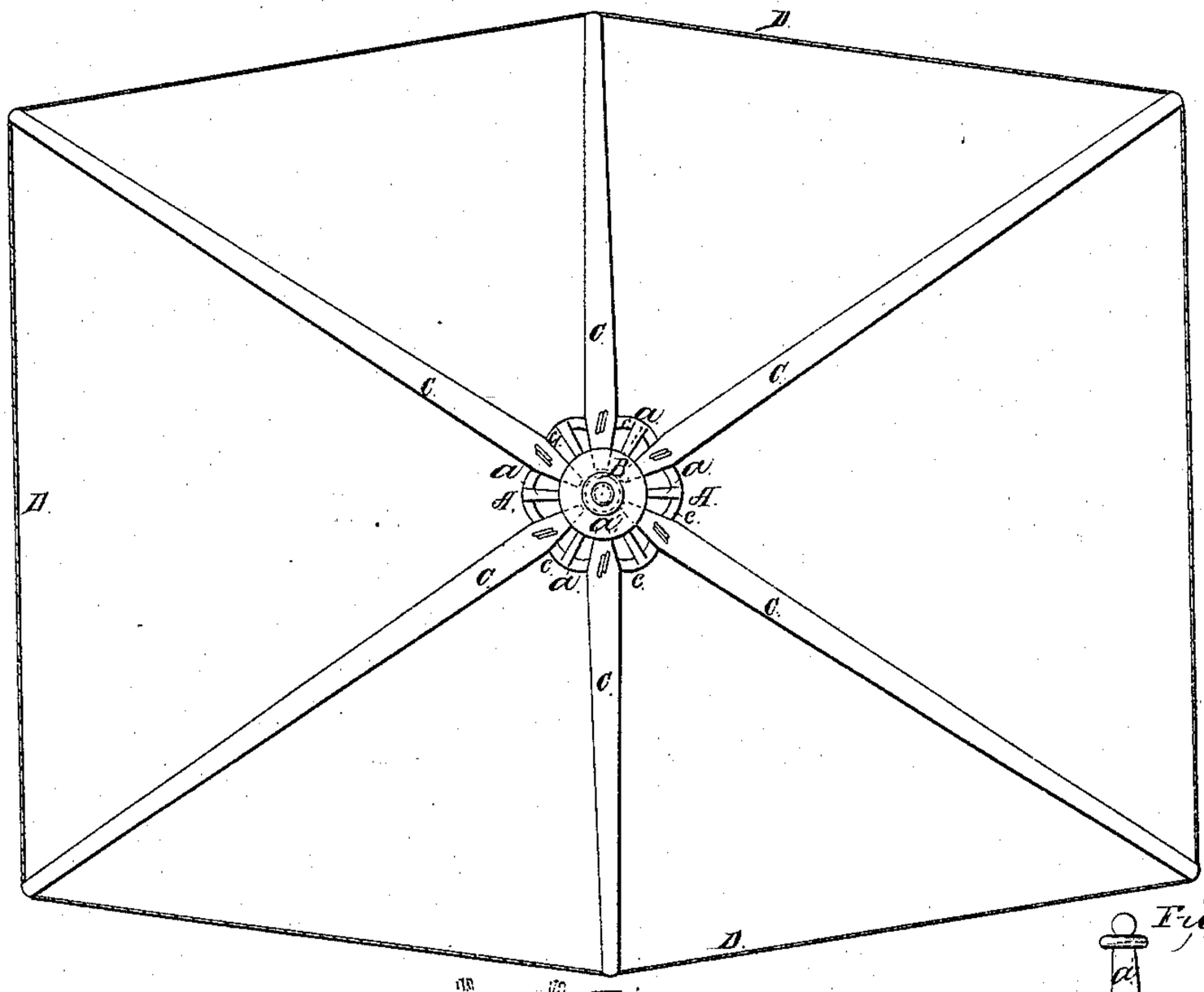

Fig: 2.

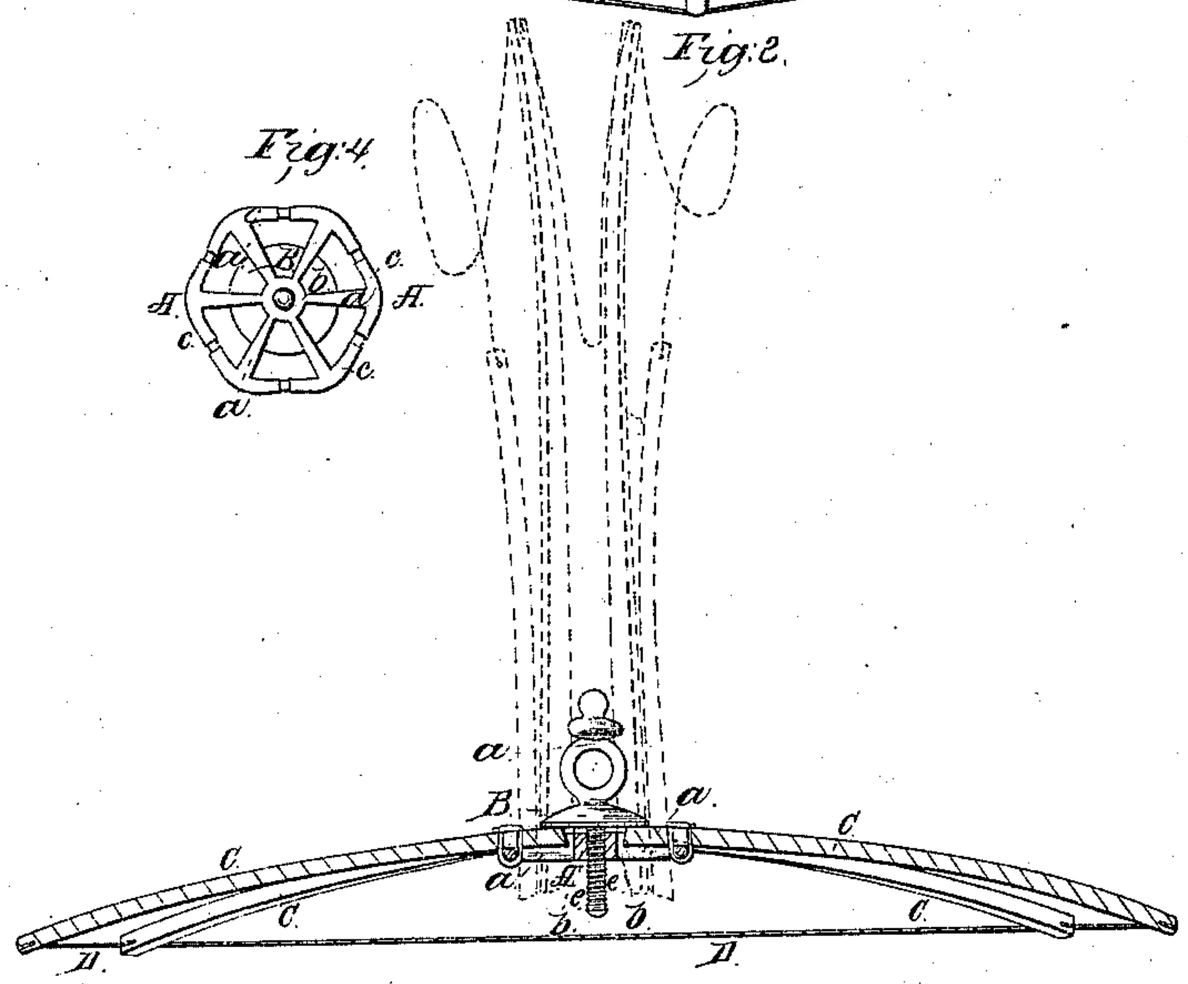

Fig: 3.

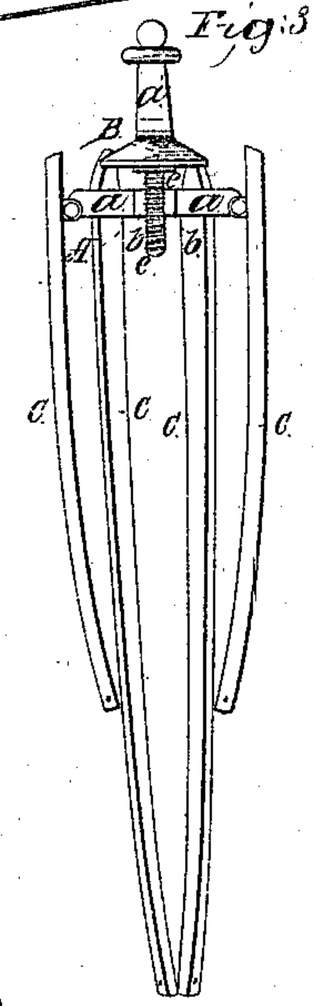

Fig: 4.

Witnesses:
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UNITED STATES PATENT OFFICE.

ISAAC E. PALMER, OF HACKENSACK, NEW JERSEY.

IMPROVED FRAME FOR MOSQUITO-CANOPIES.

Specification forming part of Letters Patent No. **58,283**, dated September 25, 1866.

To all whom it may concern:

Be it known that I, ISAAC E. PALMER, of Hackensack, in the county of Bergen and State of New Jersey, have invented a new and useful Improvement in Frames for Portable Mosquito-Canopies; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a plan or top view of a frame constructed according to my invention. Fig. 2 is a central vertical transverse section in which the frame is shown in an expanded condition. Fig. 3 is a central vertical transverse section in which the frame is shown in a closed condition. Fig. 4 is a detached inverted plan view of a portion of the invention.

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

This invention consists in so combining a screw-cap with the skeleton center-piece and radial arms of a mosquito-canopy that the said radial arms may, when desired, be closely folded together, either in an upward or downward direction, whereby the frame is alike adapted to the taste and requirements of those who desire a frame in which the arms fold upward, and of those who prefer one in which the arms fold in an opposite or downward direction.

To enable others to understand the nature and construction of my invention, I will proceed to describe it with reference to the drawings.

The skeleton center-piece of the frame is shown at A, and is made of iron or other suitable material, and is composed of spokes *a*, which radiate from a central hub, *b*, and are united at their outer ends by an annular rim, *c*. B represents a screw-cap, which may have upon its upper side or end a knob, *a'*, by which it may be turned around when required. The under side of this cap B is made flat, and projecting downward from the center thereof is a screw, *e*, which is screwed into a female screw formed in the center of the hub *b* of the center-piece, and in a position perpendicular to the upper side of the said hub. By turning the cap B in one direction or the other the screw *e* will be screwed in or out to adjust the cap B at any desired distance from the hub *b*.

The radial arms of the frame are marked C in the drawings, and may be made of flat strips of tough wood or of any other suitable material, and should taper gradually toward their outer ends, while their inner ends are tapered at the sides in such manner that when required they may be turned into and passed through the spaces or openings between the spokes *a* of the center-piece A, as will be hereinafter fully set forth.

The inner ends of the radial arms C are attached to the annular rim *c* of the center-piece A by means of downwardly-projecting wire staples *f* in such manner that when the frame is extended or opened out the inner extremities of the said arms will be situated immediately over the openings between the spokes *b*, with the upper sides or surfaces of the said inner extremities resting against the flat under side of the screw-cap B, while the under sides of the aforesaid arms C rest upon the annular rim *c*, as shown more clearly in Fig. 2.

The outer ends of the radial arms C are connected by a cord, D, which extends from one to the other of the said arms and is drawn sufficiently tight to cause the said arms to assume a slightly-curved form when the frame is extended, as shown in Fig. 2, just mentioned. When the frame is thus extended, as shown in Figs. 1 and 2, the mosquito net or canopy, which is attached to or placed upon the same in any ordinary or suitable manner, is spread out for use.

When it is desired to close or fold up the frame the arms C may be folded either upward or downward, as may be most convenient, into a position nearly parallel with each other. Thus, for instance, when it is desired to fold them downward the screw-cap B is turned in such manner that the screw *e* thereof is screwed outward, and thus brings the cap B away from the skeleton center-piece A to a distance sufficient to allow the inner ends of the arms C to swing upward and outward, and thus permit the said arms to be turned downward with reference to the center-piece A and its screw-cap B and brought into the position shown in

Fig. 3, while, if it is desired that the arms C should be folded upward instead of downward, the screw-cap B, instead of being turned outward, as just described, is retained in the same position as when the frame is extended, and the folding of the frame is accomplished by simply pushing the arms C in an upward or reverse direction with regard to the skeleton center-piece and its screw-cap, and thus bringing the said arms into the position shown in red lines in Fig. 2, the cord D yielding sufficiently to permit such upward movement of the arms C, and the inner ends of the said arms passing down into and through the openings between the spokes of the skeleton center-piece A. By these means the frame may be folded either upward or downward, as indicated by the taste or wishes of the person using the same, at the same time that, inasmuch as the arms C are separately attached to the annular rim *c* of the center-piece A, as hereinbefore explained, the detachment, by accident or otherwise, of one of the said arms does not interfere in any way with the others.

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

The combination of the screw-cap B, skeleton center-piece A, and radial arms C, substantially as herein described, whereby the said arms may be folded either in an upward or downward direction.

ISAAC E. PALMER.

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