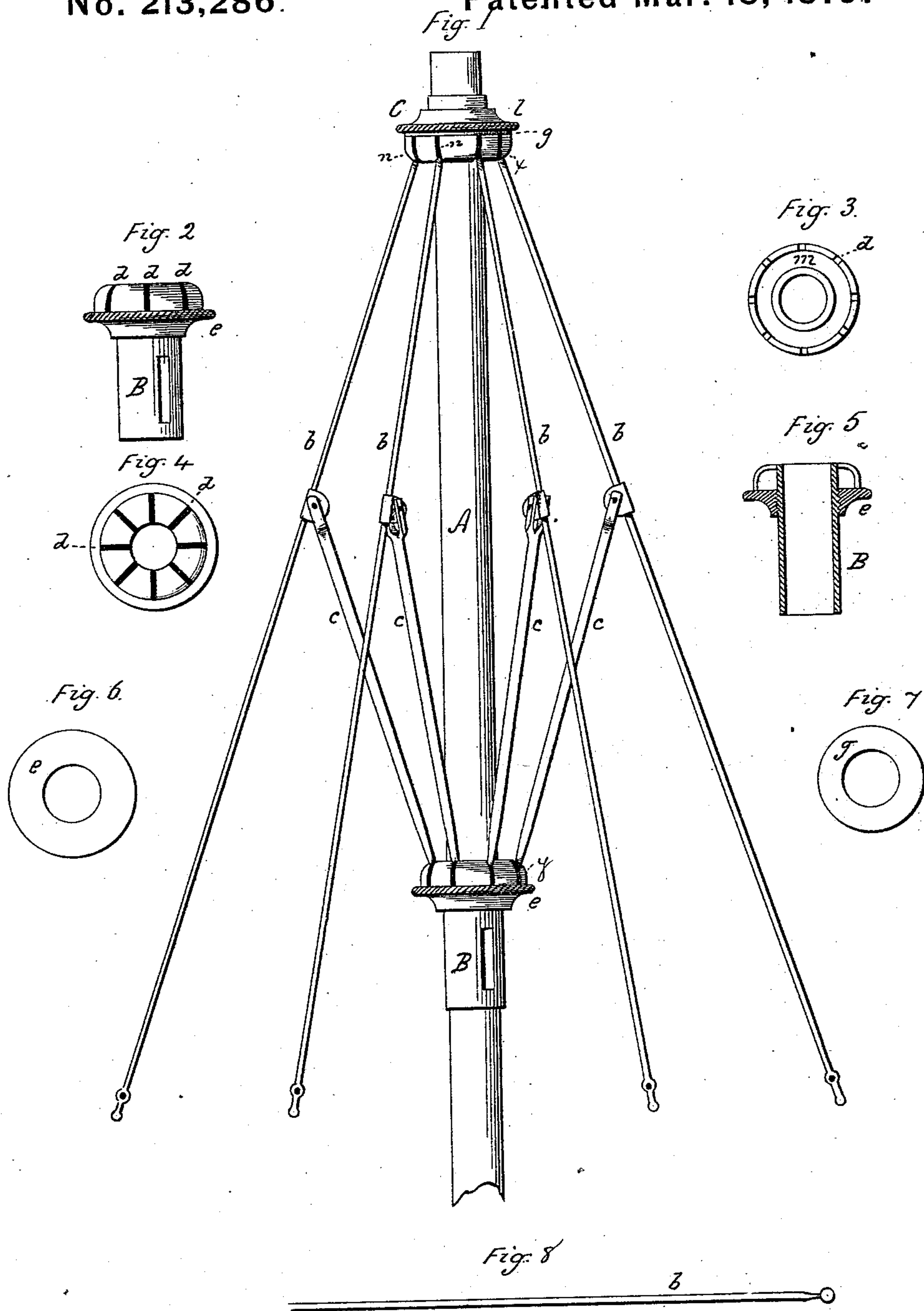


C. A. HOWARD.
Crown-Piece for Umbrellas.

No. 213,286.

Patented Mar. 18, 1879.



Witnesses.

William Hopper,

Roger M. Sherman

Inventor.

Cornelius A. Howard
by George Perry
Atty

UNITED STATES PATENT OFFICE.

CORNELIUS A. HOWARD, OF NEW HAVEN, CONNECTICUT, ASSIGNOR OF
ONE-HALF HIS RIGHT TO JOHN C. THOMPSON, OF SAME PLACE.

IMPROVEMENT IN CROWN-PIECES FOR UMBRELLAS.

Specification forming part of Letters Patent No. 213,286, dated March 18, 1879; application filed
October 23, 1878.

To all whom it may concern:

Be it known that I, CORNELIUS A. HOWARD, of New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Crown-Pieces for Umbrellas, of which the following is a specification:

My invention relates to umbrellas; and consists in the novel method of securing the cloth covering at the crown of the umbrella, as hereinafter more fully set forth and claimed.

Figure 1 is a view of the umbrella-frame. Fig. 2 is a side view of the runner; Fig. 3, an end view showing the circular groove, and Fig. 4 an end view showing the equidistant slots. Fig. 5 is a central longitudinal section of the runner. Fig. 6 is a view of the nut, and Fig. 7 of the washer, used. Fig. 8 is a view of the flattened portions of the ribs and stretchers and of their spherical ends.

A is the handle or central stick of the frame, and is of the usual form. The letter *b* indicates the ribs, the upper portions of which are flattened, the ends being spherical, as shown in Fig. 8. The letter *c* indicates the stretchers, the lower portions of which are flattened, the ends being spherical, the lower portions and ends being like the upper portions and ends of the ribs, as shown in Fig. 8. The upper or outer ends of the stretchers are forked in the usual manner, and are connected to the ribs in the usual way.

The runner B has its upper end enlarged, and has the circular slot or groove *m* on the under side of the enlargement *y*. Into the edge and top of the enlargement equidistant slots *d* are cut into the groove *m*. These slots equal the stretchers in number. A portion of the runner is threaded, as shown in Fig. 5. The

nut *e* screws on the threaded part, comes against its enlarged part, as shown in Fig. 1, and closes the space made by the circular groove *m*. The spherical ends of the stretchers are placed in the groove *m*. The flattened portions coming in the slots *d* are inclosed by the nut *e*, and form the joints.

The crown-piece C is a duplicate of the runner B, has one of its ends enlarged in the same manner, has a circular groove on the side of the enlargement *x*, has equidistant slots *n* cut in the enlargement equal to the ribs in number, has a threaded part and nut, *l*, between which and the enlargement the washer *g* is interposed. Between the washer and the nut the cloth is placed. The spherical ends of the ribs form joints with the crown-piece, in the same way as the stretchers form joints with the runner, above described. The crown-piece is rigidly attached to the handle.

As the runner is moved on the handle, the spherical ends of the stretchers and ribs turn in the spaces formed by the circular grooves and nuts, the washer being interposed between the enlargement and the nut in the crown-piece, and their flattened portions move in the equidistant slots.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The washer *g*, in combination with the enlargement *x*, and circular nut *l*, for the purpose of securing the covering of the umbrella at this point, substantially as shown and described.

CORNELIUS A. HOWARD.

Witnesses:

JOHN C. THOMPSON,
GEORGE TERRY.