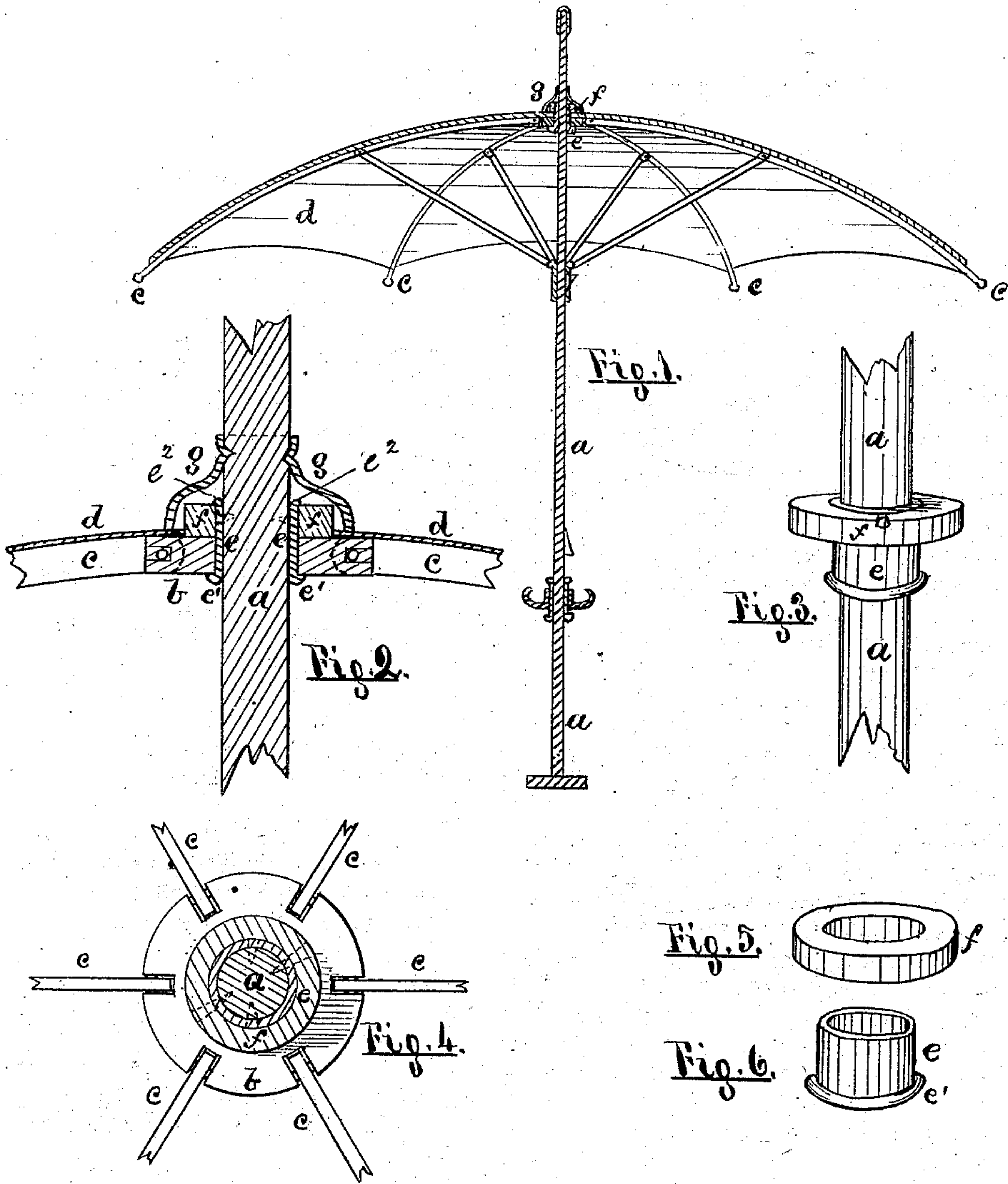


D. M. VREELAND.
 Revolving Umbrellas, &c.

No. 152,780.

Patented July 7, 1874.



Witnesses.

John Inglis Jr.
 R. D. Reile

Inventor.

Daniel M. Vreeland

UNITED STATES PATENT OFFICE.

DANIEL M. VREELAND, OF NEW YORK, N. Y., ASSIGNOR, BY MESNE ASSIGNMENTS, TO ANDREW M. DAVIES, OF SAME PLACE.

IMPROVEMENT IN REVOLVING UMBRELLAS, &c.

Specification forming part of Letters Patent No. **152,780**, dated July 7, 1874; application filed April 27, 1874.

CASE A.

To all whom it may concern :

Be it known that I, DANIEL M. VREELAND, of the city, county, and State of New York, have invented a new and useful Improvement in Umbrellas, Parasols, &c., of which the following is a specification :

My invention relates to improvements on that class of umbrellas, parasols, sun-shades, and other similar devices, in which the frames and their coverings are so arranged as to be capable of revolving around the stem or staff in the event of such frames or coverings colliding with fixed or passing objects, or when exposed to the action of heavy winds, the nature of which will be fully explained by the following specification, and the accompanying drawings, which form part of the same.

Figure 1 is a vertical section of an umbrella with my improvements applied thereto. Fig. 2 is a vertical section; Fig. 3, a front view; Fig. 4, a cross-section; and Figs. 5 and 6, detail views of parts on a larger scale.

a is the staff or stem of the umbrella, parasol, &c.; *b*, the frame-ring, to which the ribs *c* are attached by a wire, in the usual manner, over which is distended the cloth covering *d*. *e* is a ferrule encircling the staff *a*, and provided, at its lower edge, with a projecting rim, *e*¹, adapted to prevent the downward movement of the frame. *f* is a ring or washer arranged above the frame-ring *b*. This ring or

washer is retained in position by means of the upper edge of the ferrule *e*, which is burred or turned over the washer *f* at *e*². It will thus be seen that a notch or groove is formed between the washer *f* and the projection *e*¹ of the band *e*, in which the frame-ring *b* is free to revolve, while at the same time it is firmly and securely held in position on the staff *a*. *g* is the ordinary cap placed over the whole to insure the joint being water-tight.

By this construction and arrangement it will be seen that I am enabled to produce an umbrella, parasol, or other similar device with a revolving frame and covering at a much less cost than heretofore, and at the same time the frame and covering is capable of revolving with great facility.

Having thus described my invention, I would have it understood that I do not claim, broadly, a revolving umbrella-frame; but

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

The combination, with a staff, *a*, provided with a ring or ferrule, *e*, having a rim, *e*¹, of a washer, *f*, and frame-ring *b*, constructed and arranged to operate substantially as described; and for the purpose set forth.

DANIEL M. VREELAND.

Witnesses:

JOHN INGLIS, Jr.

R. H. REILLE.