D. P. Felts,
Umbrella.

No. 40,558. Patented Nov. 10. 1863.

Fig. 2.

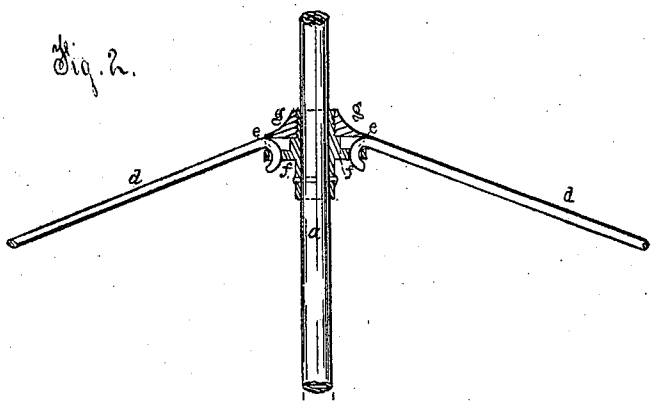


Fig. 1.

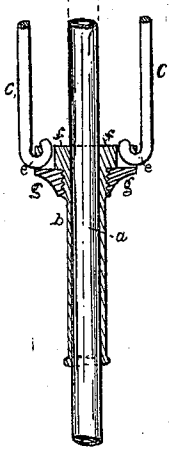
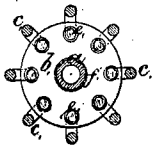


Fig. 3.



Witnesses,

Derrick P Felts

Samuel W. Sewell

Thos. Lee Harvell

UNITED STATES PATENT OFFICE.

DERRICK P. FELTS, OF NEW YORK, N. Y.

IMPROVEMENT IN UMBRELLAS.

Specification forming part of Letters Patent No. **40,558**, dated November 10, 1863.

To all whom it may concern:

Be it known that I, DERRICK P. FELTS, of the city and State of New York, have invented, made, and applied to use a certain new and useful Improvement in Umbrellas; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is a section of the runner, with the stretchers in the position they assume when the umbrella is folded. Fig. 2 is a section of the notched crown-piece, with the ribs as spread. Fig. 3 is a view of the face of the runner.

Similar marks of reference denote the same parts.

In umbrellas and parasols it is usual to connect the ribs to the crown-piece and the stretchers to the runner by means of a wire passed through a hole in the respective parts, or formed by an eye turned up by bending the wire.

The nature of my said invention consists in forming the ends of the wires composing the ribs or stretchers as hooks introduced through holes in a plate, and kept from coming out of those holes by a plate setting at the back of said hooks, whereby the respective parts are free to move in opening or shutting the umbrella, but cannot become disconnected in so doing; but in case any repairs have to be made it can easily be accomplished by unscrewing or otherwise removing the plates at the back of the hooks, when the particular rib or stretcher can be removed without deranging the other ribs.

In the drawings, *a* represents a portion of the umbrella or parasol handle, and *b* the runner, and springs are provided, as usual.

c represents a portion of the brace or stretchers, and *d* a portion of the ribs. The ends of the ribs are bent up into a hooked form, as at *e*, and the hook is passed through a hole in the crown-piece *f*, and a plate or disk, *g*, is brought against the backs of these hooks to keep them from coming out of the aforesaid holes in *f*. By this device the rib can move as the umbrella is opened or shut, the hook of each rib moving in its respective hole, but not coming out of the same. I prefer that the crown-piece *f* be notched, so as to guide the sides of the hook and form a channel for it to turn in, and that the disk *g* be fitted on by a screw, so as to be easily removed for repairs. The ends of the braces at the runner *b* are made in the same manner as the ribs with a hook, and enter holes, and are retained by a plate in a manner similar to that specified.

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

The hook-shaped ends of the umbrella ribs or braces, formed by bending the wire composing such rib or brace, in combination with the perforated crown-piece or runner receiving such hooks, and with the disk at the back of such hooks for retaining them in place, as and for the purposes specified.

In witness whereof I have hereunto set my signature this 6th day of February, 1863.

DERRICK P. FELTS.

Witnesses:

LEMUEL W. SERRELL,
THOS. GEO. HAROLD.