

(No Model.)

M. M. RAY.

UMBRELLA.

No. 348,584.

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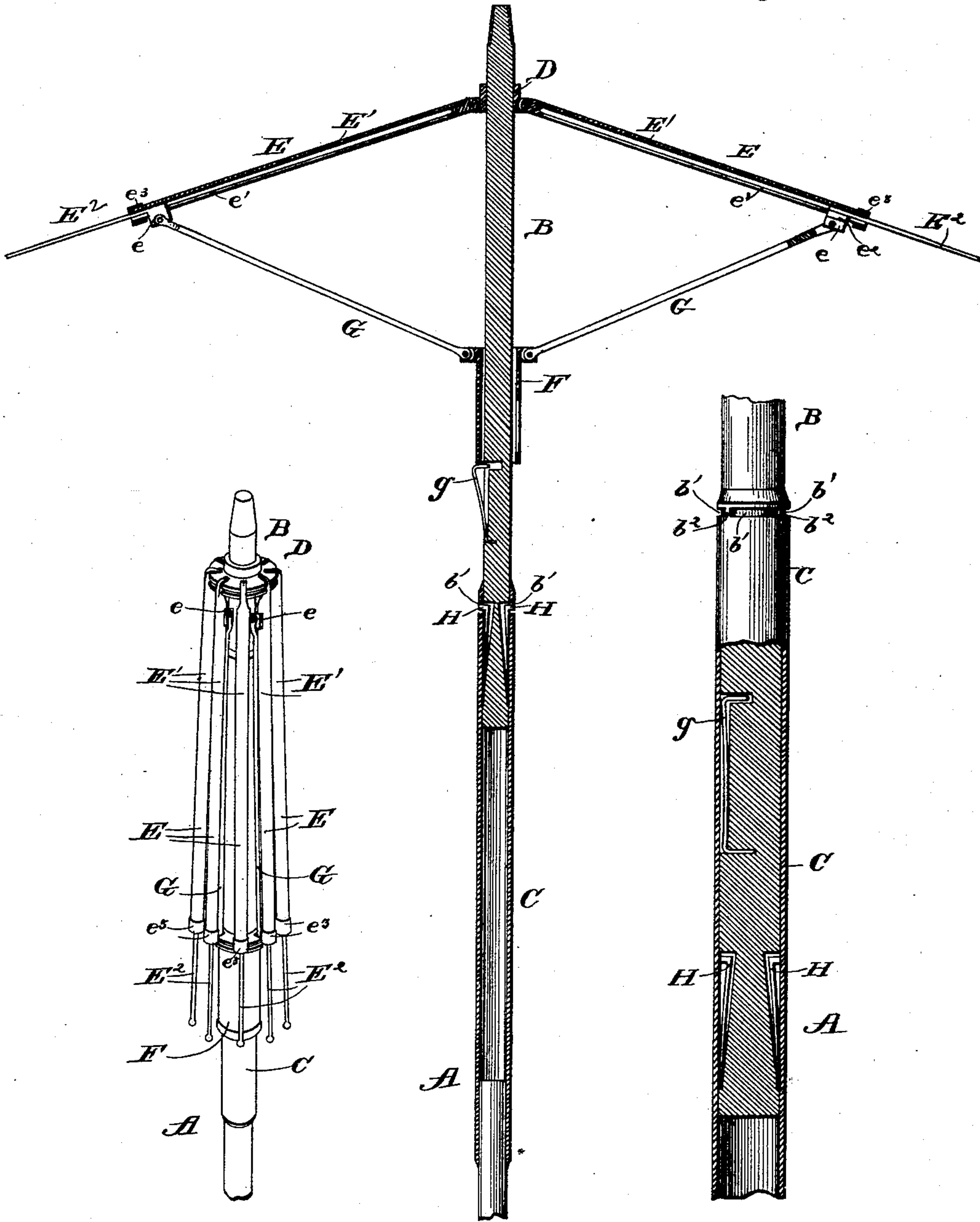


Fig. 1.

Fig. 2.

Fig. 3.

Witnesses

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# UNITED STATES PATENT OFFICE.

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## UMBRELLA.

SPECIFICATION forming part of Letters Patent No. 348,584, dated September 7, 1886.

Application filed January 22, 1886. Serial No. 189,399. (No model.)

### *To all whom it may concern:*

Be it known that I, MITCHELL MICHAEL RAY, a citizen of the United States, residing at Bellefonte, in the county of Centre and State of Pennsylvania, have invented a new and useful Improvement in Umbrellas, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in umbrellas and parasols; and the novelty consists of the peculiar construction, combination, and arrangement of parts, substantially as hereinafter fully set forth, and specifically pointed out in the claim.

My invention has for its object to provide means whereby the ribs of the device shall fold or telescope within a tube or sheath, to provide means for detachably securing the sectional stick or staff together, and to provide novel means for holding the telescopic sections of the staff extended, and to provide means which shall be simple, strong, and durable in construction, thoroughly effective for the purposes designed, and cheap of manufacture.

In the accompanying drawings, Figure 1 is a perspective view of my improvements. Fig. 2 is a vertical sectional view. Fig. 3 is a detached detail view.

Referring to the drawings, in which like letters of reference denote corresponding parts in all the figures, A designates the staff or stick of my improved umbrella or parasol which is made in two sections, B C, adapted to telescope together. The section B is made solid, and at or near its upper end it has a disk or ring, D, rigidly secured thereon, and to this disk is pivotally connected radial ribs E. These ribs are made in two sections, E' E<sup>2</sup>, the former of which is made tubular and hollow, and the latter is arranged to slide and telescope within the tubular section. The upper end of the section E<sup>2</sup> has a slide block, e, rigidly secured thereon, and this block projects through and slides in the longitudinal slot e' of the tubular section E' of the rib.

F designates a runner arranged to slide over the staff of the umbrella, and to the upper notched edge of a flange of this runner is pivotally connected a series of radial stretchers or brace-rods, G. These stretchers correspond in number to the ribs of the umbrella

or parasol, and the outer ends thereof are pivotally connected to the slide-block e of the sections E<sup>2</sup> of the ribs E. The upper surface of the sliding blocks are grooved, as at e<sup>2</sup>, and in these grooves of the sliding blocks are fitted the edges of the slot e' of the tubular section E', thereby guiding the block in its movements when it withdraws the section E' or projects beyond the latter. The outer free end of the rib-section E' is provided with a ring or enlargement, e<sup>3</sup>, and when the block e is moved or adjusted to the outer extremity of the rib-section E' it strikes against the enlargement, and is thereby prevented from becoming detached from the rib-section E', as will be readily understood.

The upper end of the section B of the staff has a spring-catch, g, that serves to hold the runner from downward movement thereon, and the ribs extended in proper position.

The lower end of the solid section B of the staff has two spring-catches, H, arranged in sockets on opposite sides thereof, and having squared catching and retaining edges, and the upper end of the tubular section C of the handle has three horizontal slots, b', which are separated by narrow intervening strips b<sup>2</sup>. The object of this construction is to prevent the accidental detachment of the sections of the handle when they are unfolded.

When the sections B C are drawn apart, the tubular section C slides over the solid section B, and when the slotted upper edge of the tubular section comes opposite the point where the spring-catches H are located in the solid section the catches spring outwardly and enter the slots in the tubular section, thus securely locking the sections together against accidental detachment while permitting the tubular section to rotate on the solid section.

The umbrella is opened and closed in a manner similar to the ordinary class, and the telescopic ribs and staff are normally extended, as shown in the drawings, when the device is in use; but when it is desirable to fold and close the umbrella within the smallest possible space for shipment and transportation, or to be inclosed within a case, trunk, or traveling baggage, the telescopic ribs are folded together by hand, so that the section E<sup>2</sup> lies within and is concealed by the tubular section E', and



tubular section of the handle or staff is slid over the solid section B, as is obvious.

The operation of my invention is as follows: When it is desired to open the umbrella for use, the tubular section C of the staff is drawn outwardly from the solid section B until the slots *b'* thereof arrive opposite to the catches H, which spring outwardly and enter the said slots to prevent further longitudinal movement of the sections, and the runner F is then elevated until it passes the catch *g* to force the rib-section E<sup>2</sup> and the sliding block *e* by which they are carried to the outer end of the tubular section E'. To fold the umbrella compactly for shipment or storage, the spring-catches H are forced inwardly by hand or a suitable implement until they are disengaged from the slots *b'* of the tubular staff-section, and the latter is quickly forced over the spring-catches until the slots are drawn away from the same and the section B of the staff is inclosed in the tubular section C, after which the runner F is lowered or moved over the section C to withdraw the rib-section E<sup>2</sup> into the tubular section E'.

The lower end of the tubular section of the staff has a handle secured thereto, either rigidly or detachably.

I am aware that it is not new to provide an umbrella-stick composed of several pieces or sections having sockets, whereby they may be connected, and a longitudinal groove through the sockets, but such is not my invention; and I am also aware that it is not broadly new to provide telescopic rib-sections, and hence I confine myself to the particular construction herein described.

Having thus described my invention, what I claim as new, is—

The combination of the solid staff-section B, the spring-catches H, carried thereby at its lower end, and a tubular staff-section, C, adapted to telescope over the staff-section B, and having the isolated horizontal slots *b'* at its upper end, and into which the catches H are adapted to spring when the umbrella is unfolded, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

MITCHELL MICHAEL RAY.

Witnesses:

S. D. RAY,  
J. C. MEYER.