

(No Model.)

2 Sheets—Sheet 1.

H. ALFMAN.  
UMBRELLA.

No. 420,375.

Patented Jan. 28, 1890.

Fig. 1.

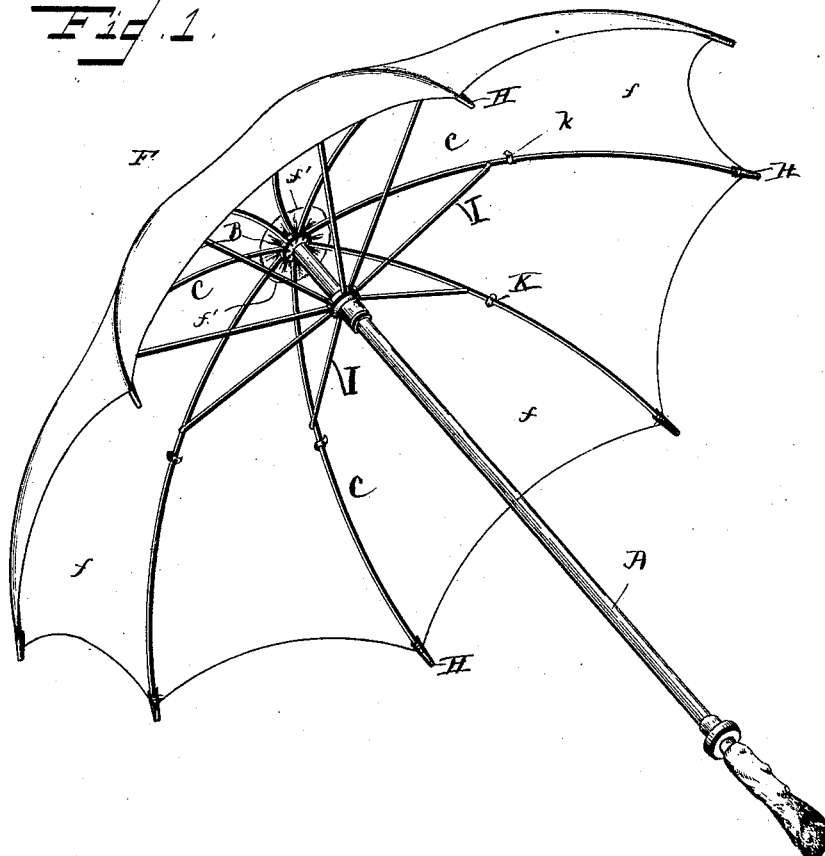
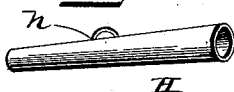


Fig. 5.



Witnesses

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By his Attorneys

C. H. Snow

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2 Sheets—Sheet 2.

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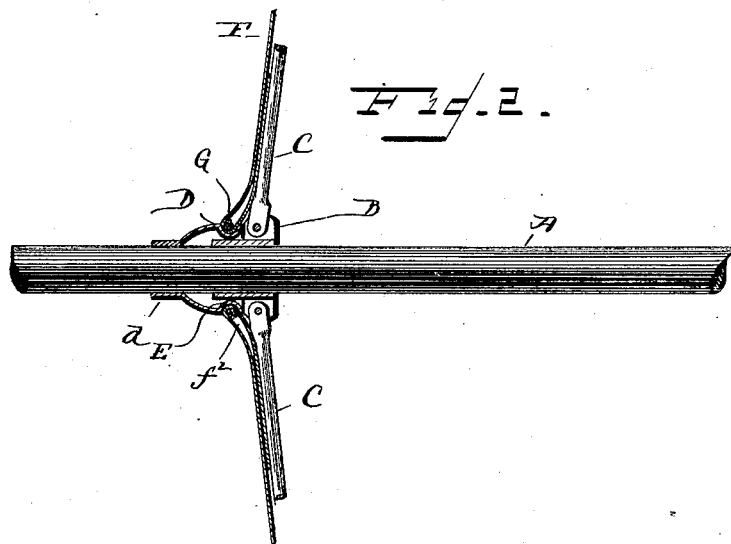


Fig. 3.

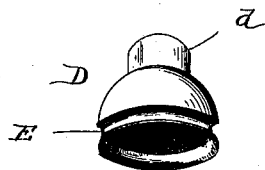


Fig. 4.

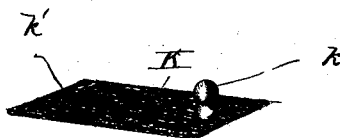
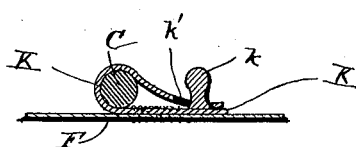


Fig. 5.



Witnesses

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# UNITED STATES PATENT OFFICE.

HARRY ALFMAN, OF MOBILE, ALABAMA.

## UMBRELLA.

SPECIFICATION forming part of Letters Patent No. 420,375, dated January 28, 1890.

Application filed November 21, 1888. Serial No. 291,460. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY ALFMAN, a citizen of the United States, residing at Mobile, in the county of Mobile and State of Alabama, have invented new and useful Improvements in Umbrellas, of which the following is a specification.

The invention relates to improvements in umbrellas; and it consists in a certain novel construction and combination of devices, fully described hereinafter in connection with the accompanying drawings; and specifically pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of an umbrella embodying my improvements. Fig. 2 is a detail sectional view of the center of the same and the upper end of the stick to illustrate the manner of securing the covering to the handle. Fig. 3 is a detail perspective view of the removable ring for securing the center of the covering. Fig. 4 is a detail view of the elastic strap. Fig. 5 is a detail view of one of the caps or sockets for the ends of the ribs. Fig. 6 is a transverse section showing more clearly the elastic-strap connection between the cover and the ribs.

Referring by letter to the drawings, A designates the stick of the improved umbrella, which is provided near its upper end with a rigid hub B, to which the inner ends of the ribs C C are pivoted, and D designates a removable ring, which fits on the upper end of the stick and bears on the upper side of the said rigid hub. This ring is substantially conical or trunco-conical in shape, and is provided at its upper end with a vertical flange *d*, which fits snugly around the stick, and at the lower end of the ring is formed a peripheral groove E.

The covering F of the umbrella is composed of gores *f f* in the usual manner, the inner ends or points *f' f'* of which are turned inward or downward to form a fold or bend *f*<sup>2</sup>, which is fitted in the peripheral groove at the lower end of the ring D. A cord G is passed around the said ends or points *f'* in the fold or bend *f*<sup>2</sup> to hold the latter in place in the said groove. The removable ring is thus secured firmly to the covering and is removable therewith.

The outer edge or periphery of the covering

is provided at intervals with elongated caps or sockets H H, which receive and fit snugly on the outer extremities of the ribs. These caps or sockets are provided at points about equidistant from both ends with eyes or keepers *h h*, and the edge of the covering is drawn tightly around the caps or sockets and secured by stitching taken through the eye or keeper. This method of securing the caps or sockets to the covering enables a long cap or socket to be used, which prevents the possibility of the end of the rib slipping out of place.

The braces I I of the frame are pivoted at their outer ends to intermediate points of the ribs, and adjacent to the said outer ends of the braces small elastic straps K K are secured to the covering. These straps are provided at the ends which are secured to the covering with small buttons *k*, and the free ends of the straps are provided with apertures or perforations *k'* to receive or fit over the buttons. When the covering is applied to the frame, the ring is fitted over the upper end of the stick and drawn down until it bears on the upper side of the hub of the frame. The extremities of the ribs are then fitted in the caps or sockets on the periphery of the covering, and, finally, the free ends of the elastic straps are passed around the ribs and the apertures therein are engaged with the buttons. The straps embrace the ribs tightly close to the outer ends of the braces, and thereby prevent lateral movement of the ribs at their centers and at the points where they are most liable to be displaced. After the straps have been fastened it is obvious that the removal of the outer ends of the ribs from the caps or sockets will be impossible, as the straps are so located as to prevent the bending of the ribs.

Having thus described my invention, I claim—

1. In an umbrella, the combination, with the stick having the ribs pivoted thereto, the removable ring fitting on the upper end of the stick, and the covering secured at its center to the ring, of the elastic straps secured to the covering and provided at one end with a button and at the other end with an aperture to engage the button, substantially as specified.

2. In an umbrella, the combination, with the

stick, the ribs connected at their inner ends  
to the stick, the braces pivoted at their outer  
ends to intermediate points of the ribs, the  
removable ring fitting on the upper end of the  
5 stick, and the covering secured at its center  
to the said ring and provided at its outer edge  
with caps or sockets fitting on the outer ends  
of the ribs, of the elastic straps secured at one  
end to the covering, adjacent to the outer ends  
10 of the braces, and provided at their free ends  
with apertures to engage buttons at the other  
ends to secure the ribs against lateral move-  
ment, substantially as and for the purpose  
specified.

3. In an umbrella, the elastic straps secured 15  
at one end to the covering, adjacent to the  
braces, and provided at their free ends with  
apertures to engage buttons at the other ends  
to secure the ribs against lateral movement.

In testimony that I claim the foregoing as 20  
my own I have hereto affixed my signature in  
presence of two witnesses.

HARRY ALFMAN.

Witnesses:

W. E. HORN,

WM. H. SULLIVAN.