

No. 721,049.

PATENTED FEB. 17, 1903.

H. E. KERN.
INSULATED FERRULE.
APPLICATION FILED AUG. 26, 1902.

NO MODEL.

Fig. 1.

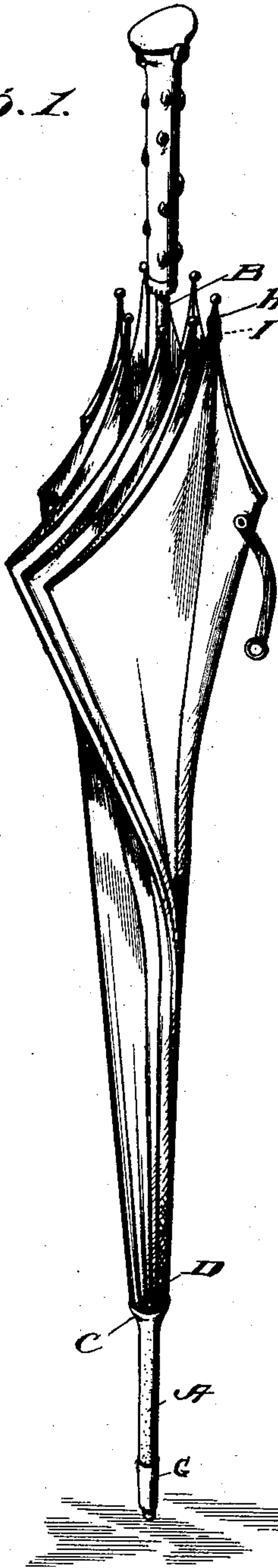


Fig. 2.

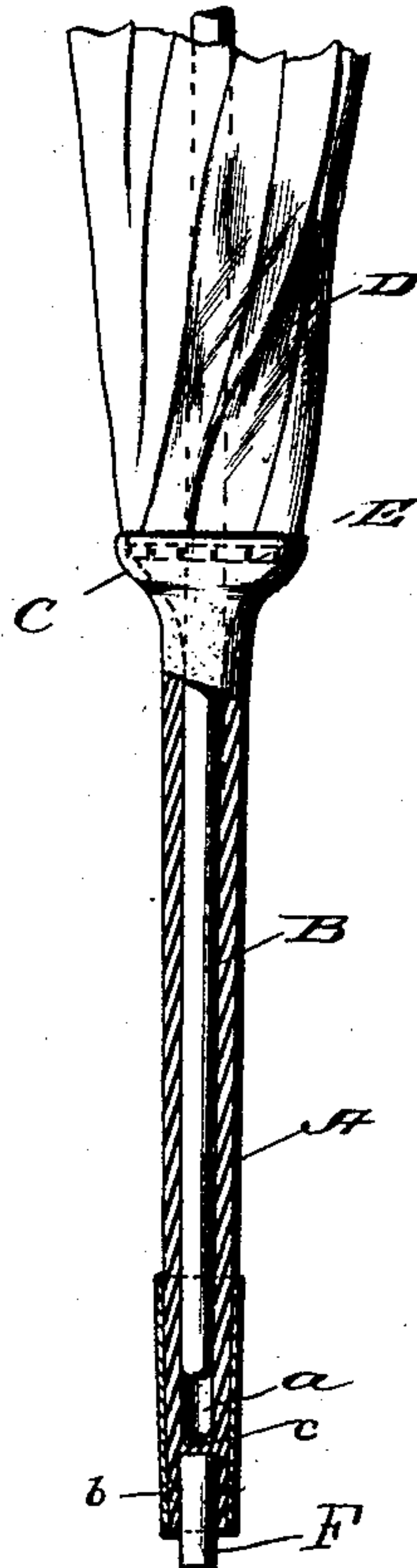


Fig. 3.

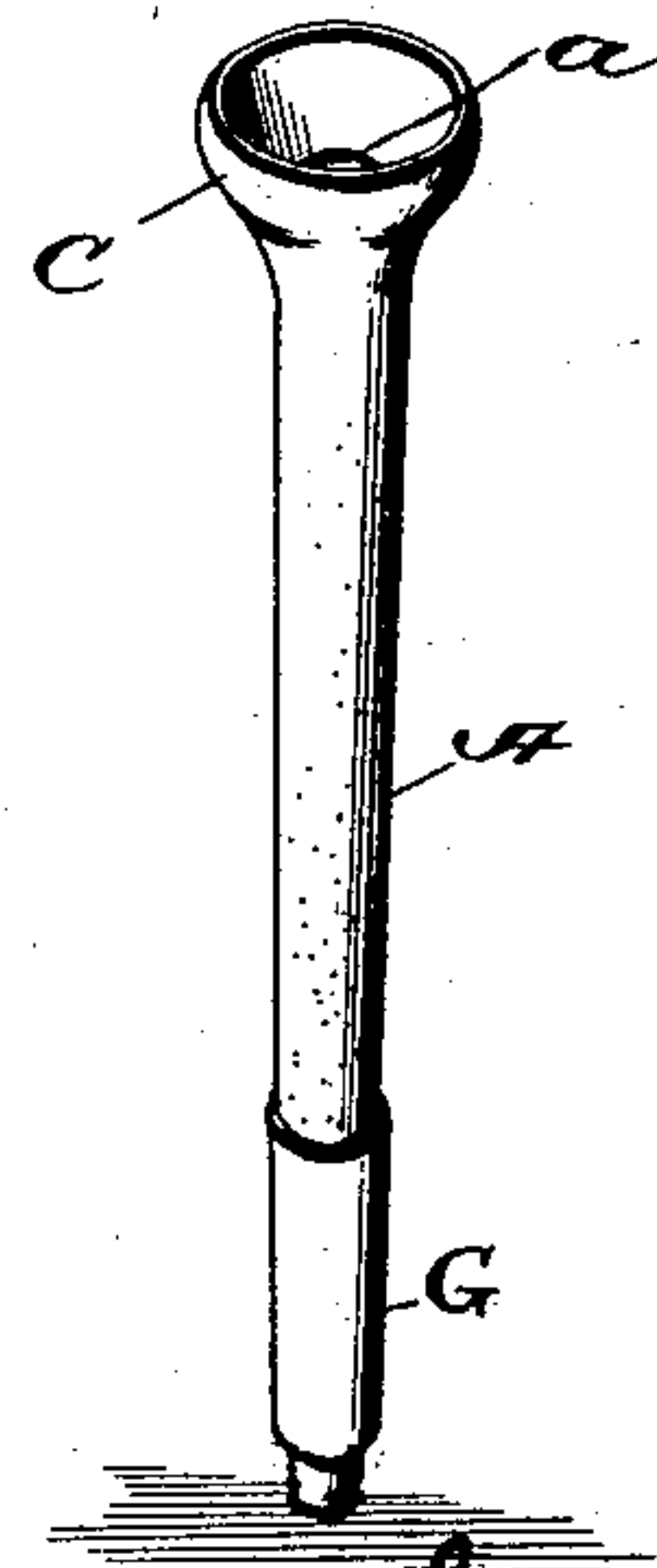
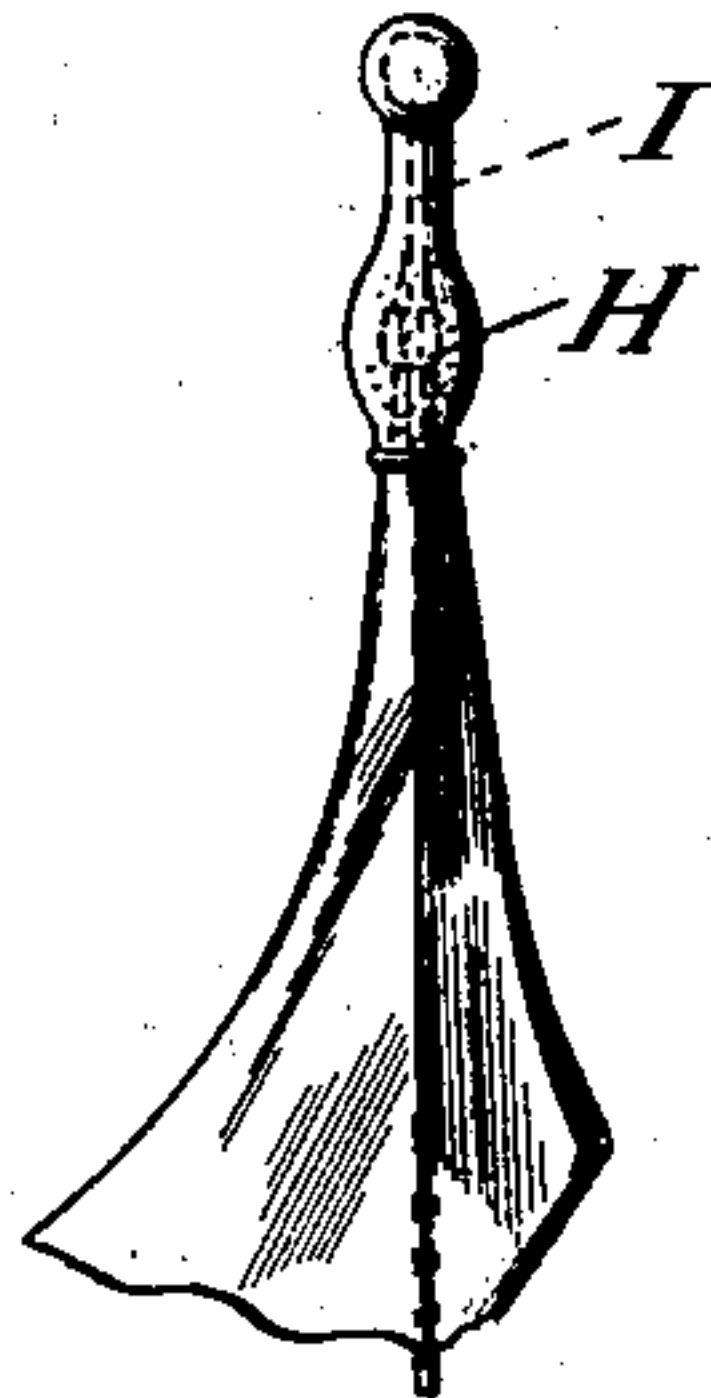


Fig. 4.



Witnesses

John Miller
H. E. Kern

By

Inventor

Howard Kern
A. S. Pattison

Attorney

UNITED STATES PATENT OFFICE.

HOWARD E. KERN, OF ALLENTOWN, PENNSYLVANIA.

INSULATED FERRULE.

SPECIFICATION forming part of Letters Patent No. 721,049, dated February 17, 1903.

Application filed August 26, 1902. Serial No. 121,072. (No model.)

To all whom it may concern:

Be it known that I, HOWARD E. KERN, a citizen of the United States, residing at Allentown, in the county of Lehigh and State of Pennsylvania, have invented new and useful Improvements in Insulated Ferrules and Tips, of which the following is a specification.

My invention relates to improvements in insulated ferrules, and more particularly to that class used on metal-rod umbrellas and the like.

The object of my invention is to provide a combined insulator and ferrule which will protect the user of the umbrella from receiving a shock should the end of the umbrella be brought in contact with an electric conductor; and it consists of a device which is adapted to entirely cover the extended end of the metal rod, also covering the ends of the ribs and the ring to which they are secured.

Another object of my invention is to provide a simple, cheap, and more effective device of this character which can be readily detached or attached to the ordinary umbrella using a metal rod.

In the accompanying drawings, Figure 1 is a perspective view of an umbrella, showing my device attached. Fig. 2 is a longitudinal sectional view of Fig. 1. Fig. 3 is an enlarged perspective view of my device detached from the umbrella. Fig. 4 is a detail view of the insulated tube for the ends of the umbrella-ribs.

Referring now to the drawings, A represents my improved combined insulator and ferrule, and B is the steel rod of the umbrella, over which it is adapted to be slipped. The said insulator A is made of elastic insulating material, such as rubber or gutta-percha, and is of an elongated form, as clearly shown in Fig. 3 of the drawings, and is provided with a recess or opening *a*, which extends nearly through the entire length and into which the steel rod of the umbrella is adapted to pass. The lower end of the ferrule is flared outwardly at C, thus forming a covering for the upper ends of the steel ribs D and the ring E, to which the said ribs are pivoted, thus covering all of the exposed steel at the top of the umbrella and thoroughly insulating the upper end of the umbrella from the handle. It

will be clearly seen that the user of the umbrella is less liable to receive a shock by bringing the end thereof in contact with any electric conductor. The outer end of the said insulator is provided with a ferrule or metal cap, which is adapted to prevent it from wearing and at the same time strengthening and stiffening the whole device. The outer end of said elastic ferrule is provided with a longitudinally-extending opening *b*, which is insulated from the opening *a* by the transverse web *c*, and fitting within said opening is an outwardly-extending member F. Surrounding said body portion, adjacent the said member F, is a band G, which firmly clamps the said member therein and, as before stated, stiffens the said body portion.

As before stated, the insulator is of an elongated form and is of such a length that the opening therein is adapted to receive the entire outer end of the rod of an umbrella projecting beyond the ring carrying the ribs, and thus the device is adapted to fit different-size rods by the elasticity of the material of which it is made, as well as to fit umbrellas in which the said projecting portion of the rod is of greater or less length; but under all conditions the outwardly-flared portion will completely cover the ends of the ribs and the ring to which said ribs are pivoted.

For the purpose of making an umbrella which is thoroughly insulated I place insulating material in the form of tips H upon the ends of the umbrella-ribs I, as shown more clearly in Fig. 4. These tips serve to insulate the projecting metallic ends of the umbrella-ribs and also serve to protect the thread-fastening for the umbrella-cover to the ends of the metal ribs.

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

1. A ferrule comprising an elongated body portion of elastic insulating material and having a longitudinally-extending opening passing nearly through its entire length and adapted to receive the outer end of the umbrella-rod, an outwardly-flared upper end carried by said body portion and adapted to extend up beyond and completely cover the exposed lower ends of the ribs of the umbrella, and a metal tip carried by the lower

end of said body portion and entirely insulated from the umbrella-rod, substantially as described.

2. A ferrule comprising an elongated body
5 portion of elastic insulating material and having a longitudinal opening passing nearly through its entire length and adapted to receive the outer end of the umbrella-rod, an outwardly-flared upper end carried by said
10 body portion and adapted to extend up beyond and completely over the exposed lower ends of the ribs of the umbrella, the outer end of said body portion having an opening,

a transverse web separating said opening, a metal member within said lower opening and 15 a band around the lower end of the body portion and clamping said member in the lower end thereof, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing 20 witnesses.

HOWARD E. KERN.

Witnesses:

JNO. W. SEPP,
JOHN PRIEST.