

No. 638,230.

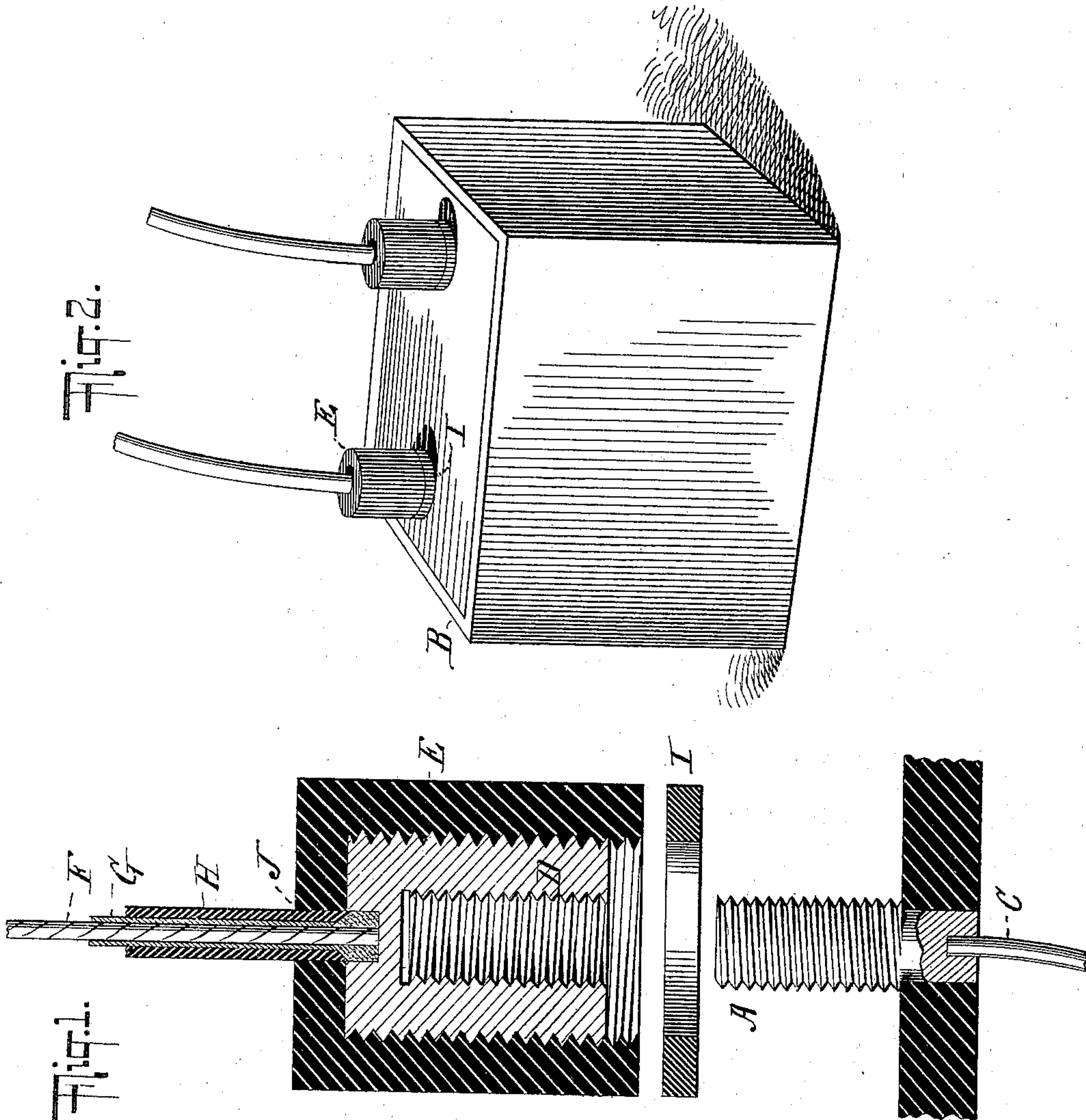
Patented Dec. 5, 1899.

A. FISCHER.

BINDING POST AND CONNECTION FOR ELECTRICAL APPARATUS.

(Application filed May 1, 1899.)

(No Model.)



WITNESSES:

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ALEXANDER FISCHER, OF NEW YORK, N. Y., ASSIGNOR TO ALBERT R. SHATTUCK, OF SAME PLACE.

BINDING-POST AND CONNECTION FOR ELECTRICAL APPARATUS.

SPECIFICATION forming part of Letters Patent No. 638,230, dated December 5, 1899.

Application filed May 1, 1899. Serial No. 715,078. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER FISCHER, of the city, county, and State of New York, have invented a new and useful Improvement in Binding-Posts and Connections for Electrical Apparatus, of which the following is a specification.

My invention has for its object to provide a means for electrically connecting a conducting wire or cable to any electrical appliance—such, for example, as an induction-coil—in such a manner as that the connection will be completely impervious to moisture, either at the joint or elsewhere.

My invention consists, first, in the construction of the connecting device which is secured to the conducting-wire, and, second, in the combination of that device with a casing of insulating and impervious material inclosing said appliance in such a way as to form a moisture-tight joint.

My invention consists more particularly in the construction and arrangement of the several parts, as hereinafter pointed out in the claims.

In the accompanying drawings, Figure 1 is an enlarged cross-sectional view of my improved binding-post and connection. Fig. 2 shows in perspective two of said binding-posts in place upon the inclosing case of an electrical appliance.

Similar letters of reference indicate like parts.

A is a rod of metal screw-threaded on its exterior and secured in any suitable way in the side of the inclosing case B, which is of non-conducting material. The post A connects with the electrical appliance within the case by means of the wire C. (Shown broken off in Fig. 1.)

D is a tubular cylinder of metal closed at one end and threaded both inside and outside. The external thread of cylinder D engages with the internal thread of an inclosing cylinder E, which is made of hard rubber or other waterproof insulating material. Cylinder E is closed at one end and is provided at such closed end with a small opening through which passes the conducting-wire F. This wire enters a recess in the closed end of cylinder D and is secured therein by solder

or other suitable means. Surrounding wire F may be a coating of cotton G, and outside of said coating is a covering H of soft rubber, which is secured by cement at J within the opening in cylinder E, through which it passes. The post A is received in the threaded bore of cylinder D, which is screwed down upon said post. Between the lower edge of cylinder D and the side of the case B is interposed a soft-rubber washer I. By this construction I obtain a perfectly water-tight connection. The wire C, being covered by rubber, is of course impervious to moisture. The joint at J between the rubber covering and the rubber cylinder E is also tight. The rubber cylinder E completely protects the inner metal cylinder D, and it will be noticed that the said cylinder D does not completely fill the inclosing rubber cylinder E. Hence the joint between the rubber cylinder E and side of the case B involves simply the approximation of hard-rubber faces to the soft-rubber washer I, whereby said joint is packed, by the screwing down of cylinder D upon post A, as tightly as may be desired.

The side B may be a part of a box or case of any desired form—such, for example, as shown in Fig. 2—and any electrical appliance may be inclosed therein. My invention is, however, especially applicable to induction-coils, and especially those used for the production of igniting-sparks for gas-engines, &c. In such event it is exceedingly important that the coil and all its connections should be protected from moisture, as otherwise the efficiency of the coil rapidly deteriorates. Such a coil would therefore be inclosed in the case represented in Fig. 2 with its terminals united to binding-posts, as shown, constructed in the manner already explained.

In the specific construction shown in the drawings I have represented the cylinder D as externally threaded and engaging with the internally-threaded cylinder E of non-conducting material; but it is to be distinctly understood that I do not limit myself to this mode of securing the external cylinder upon the internal cylinder, since it is obvious that I may make said cylinders smooth internally and externally in lieu of screw-threaded and

secure them together by means of cement or by any other suitable means.

I claim—

1. The combination of the tubular cylinder D of conducting material having one end closed, the inclosing tubular cylinder E of non-conducting waterproof material and closed at one end and receiving and secured to said cylinder D, the conducting-wire F extending through said cylinder E and electrically connected to said cylinder D, and the insulating waterproof coating H of said wire forming an impervious joint with said cylinder E, substantially as described.
2. The combination with the externally-threaded binding-post A and support therefor, of the tubular internally-threaded cylinder D of conducting material having one end closed and adapted to receive within it said binding-post, the tubular cylinder E of non-conducting waterproof material and closed at one end and receiving and secured to said cylinder D, the conducting-wire F extending through said cylinder E and electrically con-

nected to said cylinder D and the insulating waterproof coating H of said wire forming an impervious joint with said cylinder E, substantially as described.

3. The combination with the casing B of non-conducting material having the externally-threaded binding-post A, of the tubular internally-threaded cylinder D of conducting material having one end closed and adapted to receive within it said binding-post, the tubular cylinder E of non-conducting waterproof material and closed at one end and receiving and secured to said cylinder D, the conducting-wire F extending through said cylinder E and electrically connected to said cylinder D, the insulating waterproof coating H of said wire forming an impervious joint with said cylinder E, and the elastic washer I interposed between said cylinder E and said casing, substantially as described.

ALEXANDER FISCHER.

Witnesses:

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