

(No Model.)

R. P. & J. D. OSGOOD.  
INSULATING ATTACHMENT FOR ELECTRICAL CONNECTORS.  
No. 598,109. Patented Feb. 1, 1898.

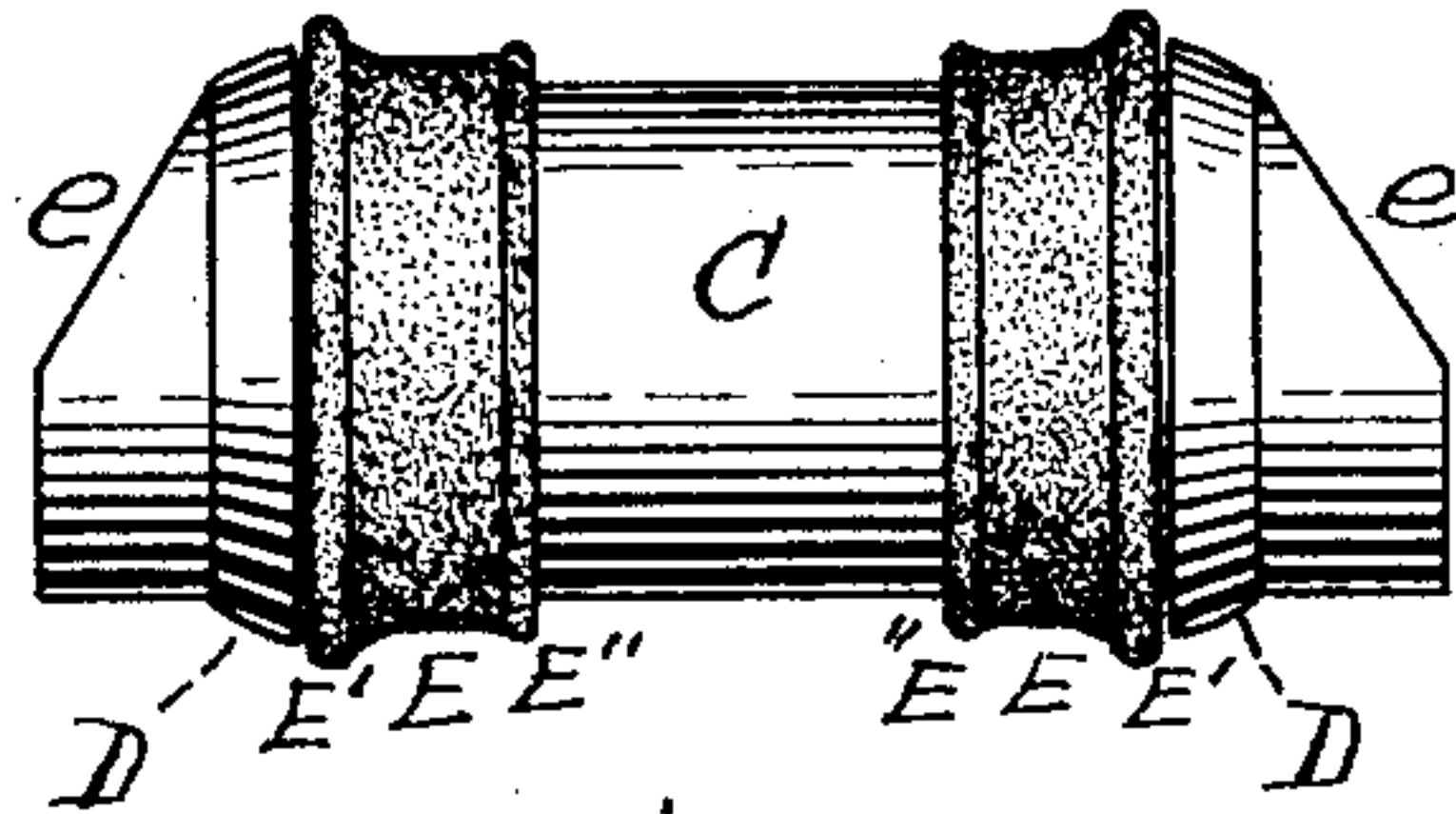


Fig. 1.

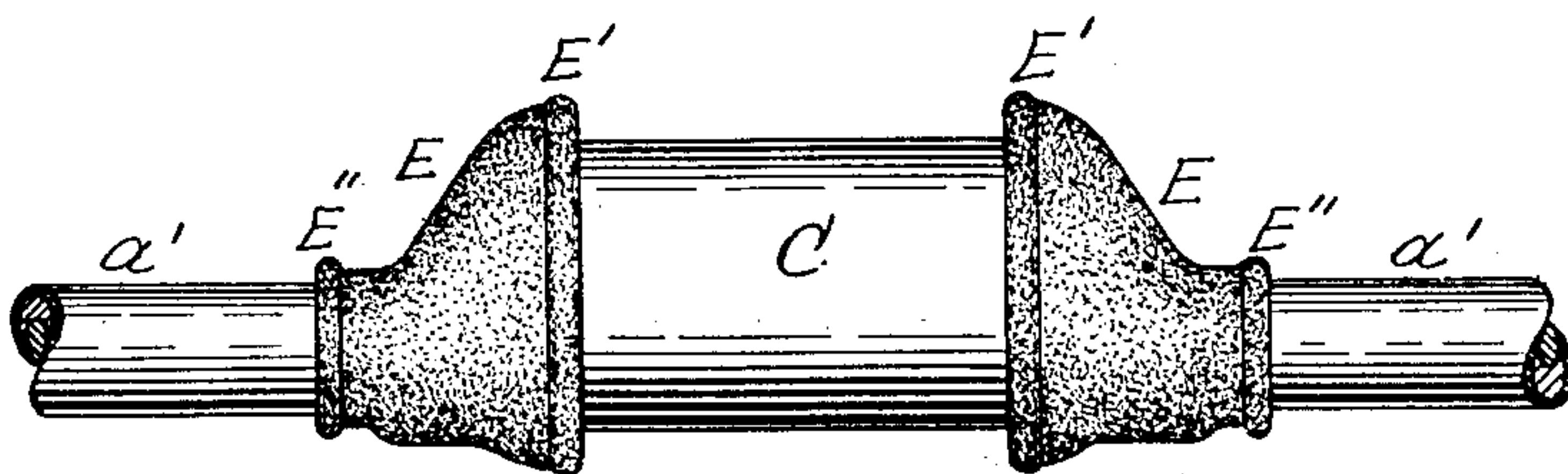


Fig. 2.

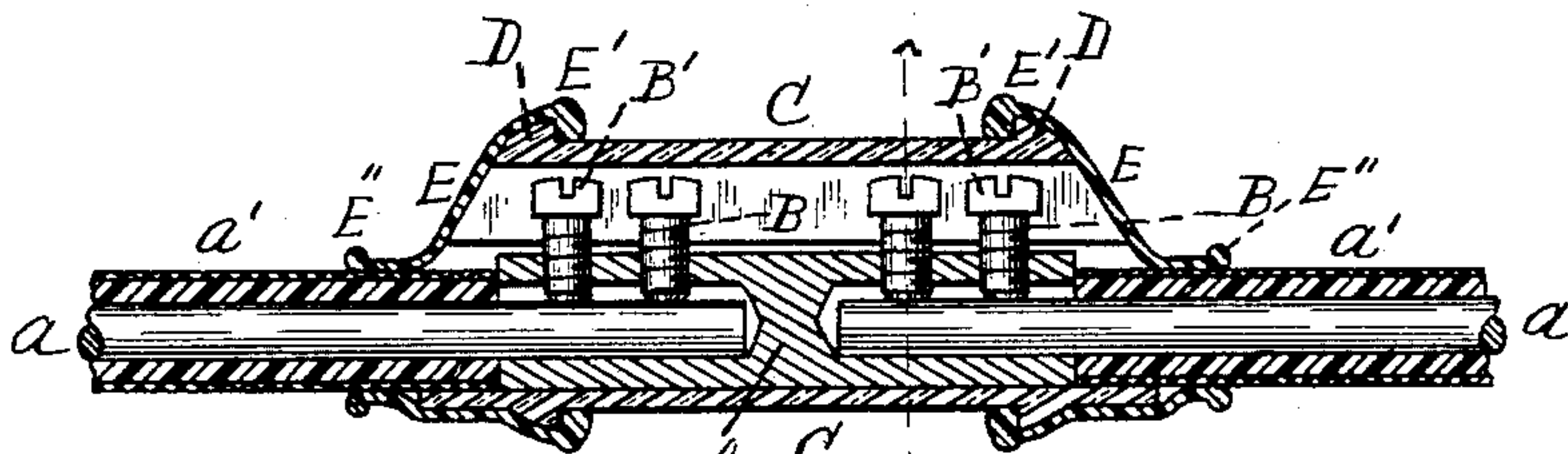


Fig. 3.

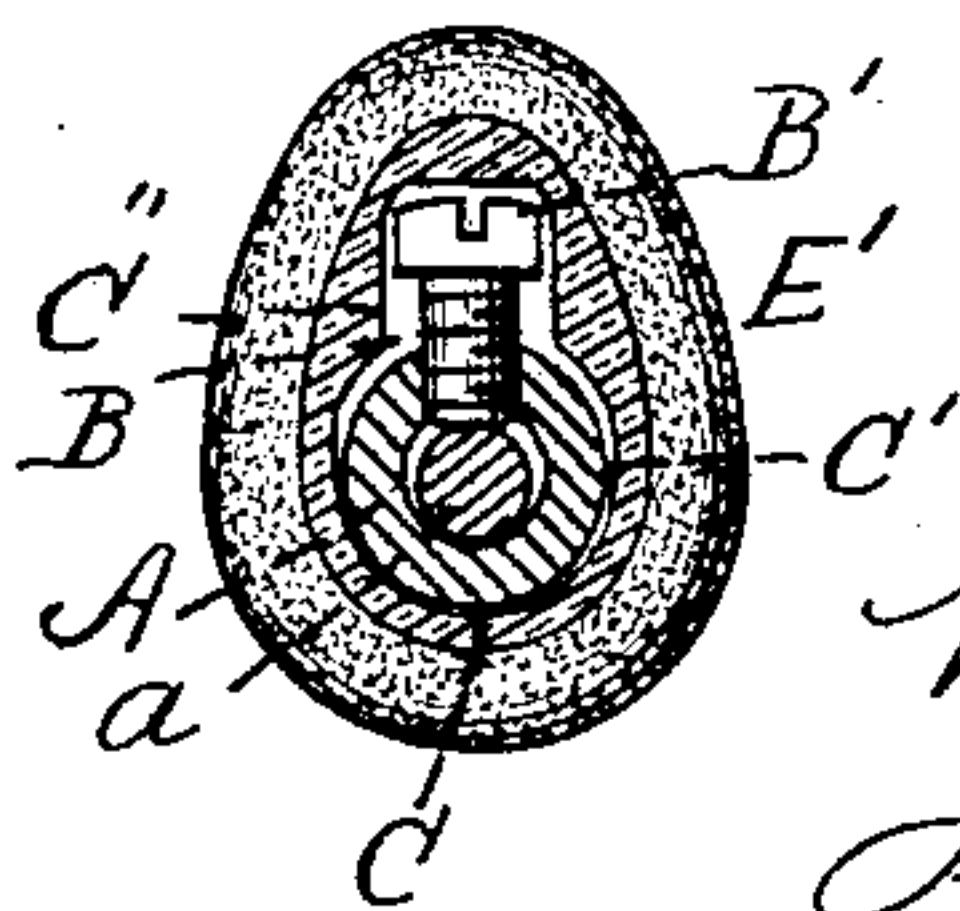


Fig. 4.

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# UNITED STATES PATENT OFFICE.

RICHARD P. OSGOOD AND JOHN D. OSGOOD, OF METHUEN, MASSACHUSETTS.

## INSULATING ATTACHMENT FOR ELECTRICAL CONNECTORS.

SPECIFICATION forming part of Letters Patent No. 598,109, dated February 1, 1898.

Application filed June 28, 1897. Serial No. 642,597. (No model.)

*To all whom it may concern:*

Be it known that we, RICHARD P. OSGOOD and JOHN D. OSGOOD, of Methuen, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Insulating Attachments for Electrical Connectors, of which the following is a specification.

This invention relates to a device for insulating electrical connectors of the style usually termed "two-way" connectors. The method now most commonly in use is to wind the connectors with insulating-tape. This method has several disadvantages, prominent among which is the amount of time wasted in making connections and disconnections.

Our apparatus is intended to overcome the objections to the above-named method, and it comprises a rigid jacket of vulcanized fiber which is made of shape to fit over and around the connector and accommodate the binding-screws, preventing them at the same time from turning, and soft rubber tips or sheaths which extend from the opposite ends of the jacket to and around the wires, making elastic waterproof connections between the jacket and the wires which can be quickly rolled back upon the jacket in order to disconnect the wires.

The nature of the invention is fully described below and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of our improved insulating attachment with the tips rolled back upon the jacket. Fig. 2 is a side elevation showing the attachment in position upon a connector. Fig. 3 is a longitudinal vertical section of the same. Fig. 4 is a cross vertical section taken on line X, Fig. 3.

Similar letters of reference indicate corresponding parts.

*a a* represent two electric wires suitably protected by insulation *a'* and extending into opposite ends of an ordinary metallic connector A, being held in position therein by ordinary binding-screws B, having square heads B'.

C is a rigid jacket made of vulcanized fiber and preferably externally of oval or elliptical shape, so as to be slipped longitudinally over the connector and binding-screws. The shape of the opening or passage in the jacket is

somewhat like that of an ordinary keyhole reversed, the lower portion being preferably curved at C' to fit around the body of the connector, and the upper portion being formed with substantially parallel sides C'' in order to fit with sufficient closeness against the opposite sides or edges of the heads B' of the screws in order to prevent them from turning. Near the opposite ends of the jacket its external surface is formed up into two parallel ribs D.

E E are elastic rubber tips or sheaths, each open at its opposite ends and preferably provided at such ends with the beads or thickened edges E' and E''.

When a connection is to be made, one wire *a* is secured in the connector A by the binding-screw B, and the jacket C, with the tips rolled back upon it, as in Fig. 1, is slipped over the connector far enough to allow the opposite wire to be inserted and clamped by the binding-screws. The jacket is then moved into a central position, as shown in Fig. 3, and the rubber tips E rolled down into the position indicated in said figure. The beads E' and ribs D prevent the tips from slipping off the jacket, and the beads E'' make a close waterproof connection with the insulation *a'*. As above mentioned, the parallel walls C'' prevent the binding-screws from turning. To disconnect the wires or slide the jacket with relation to the connector, the tips are turned inside out and rolled back upon the jacket into the position indicated in Fig. 1. The jacket is preferably beveled off at its ends at *e* in order to render the binding-screws more accessible and to facilitate rolling back the tips. Thus the wires may be connected or disconnected quickly, and while they are connected they are perfectly insulated and protected from moisture.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

1. An insulating attachment for an electrical connector of the character described, comprising a rigid tubular jacket of non-conductive material and of shape to inclose the connector; and tubular elastic tips of non-conductive material each adapted to have one end stretched around one end of the jacket and the other hug closely around the wire,

whereby a waterproof connection is made between the wire and the jacket at each end, substantially as described.

2. The herein-described improved insulating attachment for electrical connectors, comprising the jacket C of non-conductive material formed with the external ribs D; and the elastic tips E of non-conductive material adapted to extend from the ribbed portions of said jacket to and closely around the electric wires, substantially as set forth.

3. The herein-described improved insulating attachment for electrical connectors, comprising the jacket C of non-conductive material formed internally with parallel sides or walls C' for preventing the binding-screws from turning; and the elastic tips E of non-

conductive material adapted to extend from the opposite ends of the jacket to and closely around the electric wires, substantially as described.

4. The herein-described improved insulating attachment for electrical connectors, comprising the jacket C of non-conductive material formed with the beveled ends e; and the elastic tips E of non-conductive material adapted to extend from the opposite ends of the jacket to and closely around the electric wires, substantially as set forth.

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