(No Model.)

J. KRUESI.

JUNCTION FOR CONDUCTORS OF SYSTEMS OF ELECTRICAL DISTRIBUTION.

No. 266,483. Patented Oct. 24, 1882.

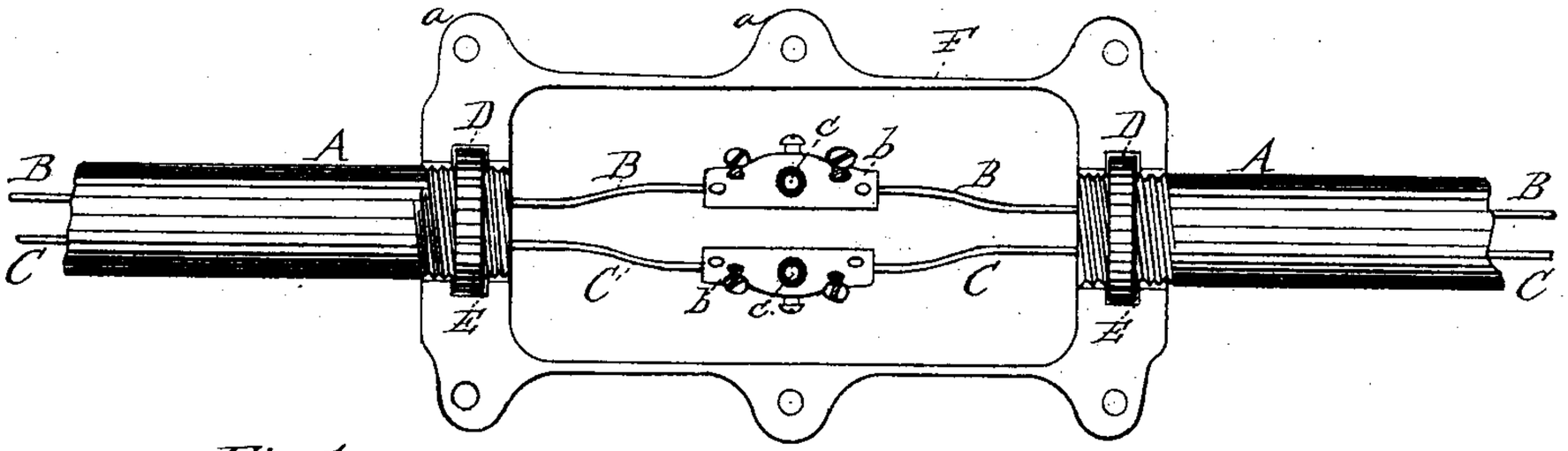
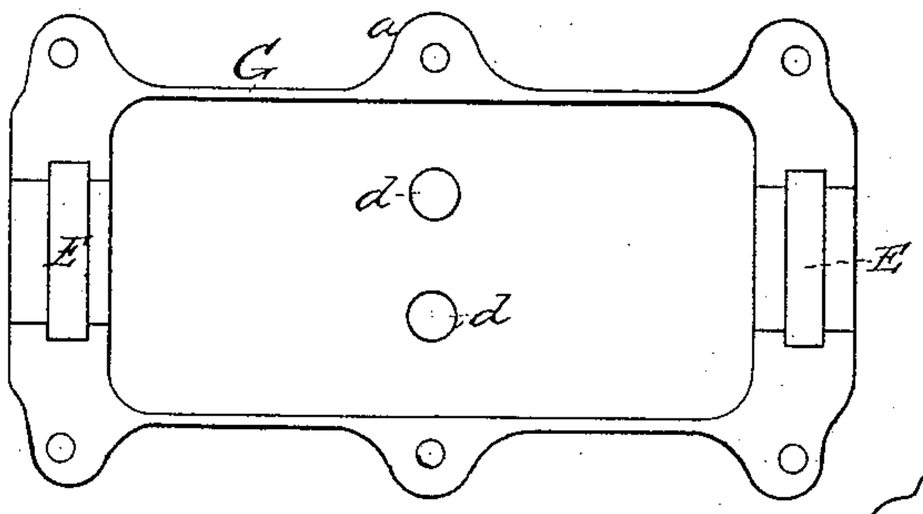


Fig. 1.



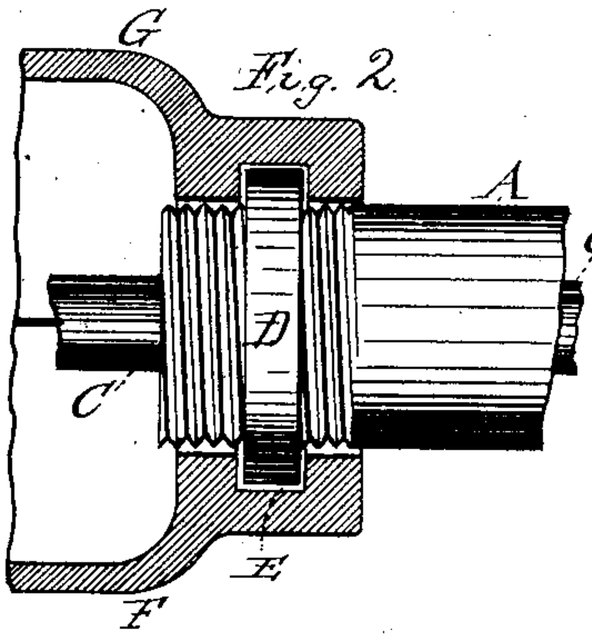


Fig. 2.

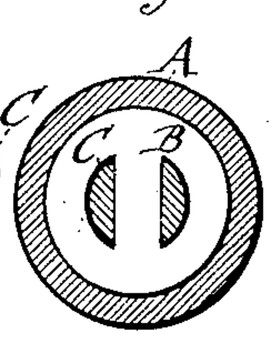


Fig. 3.

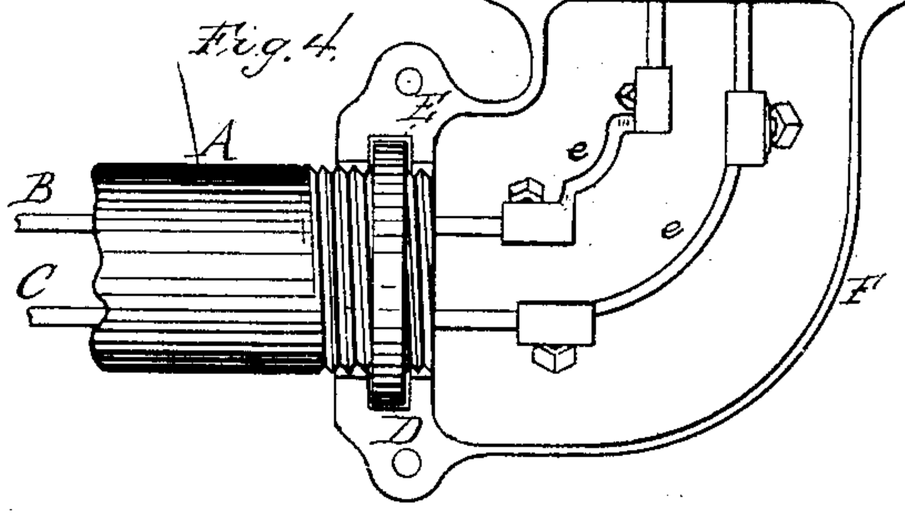


Fig. 4.

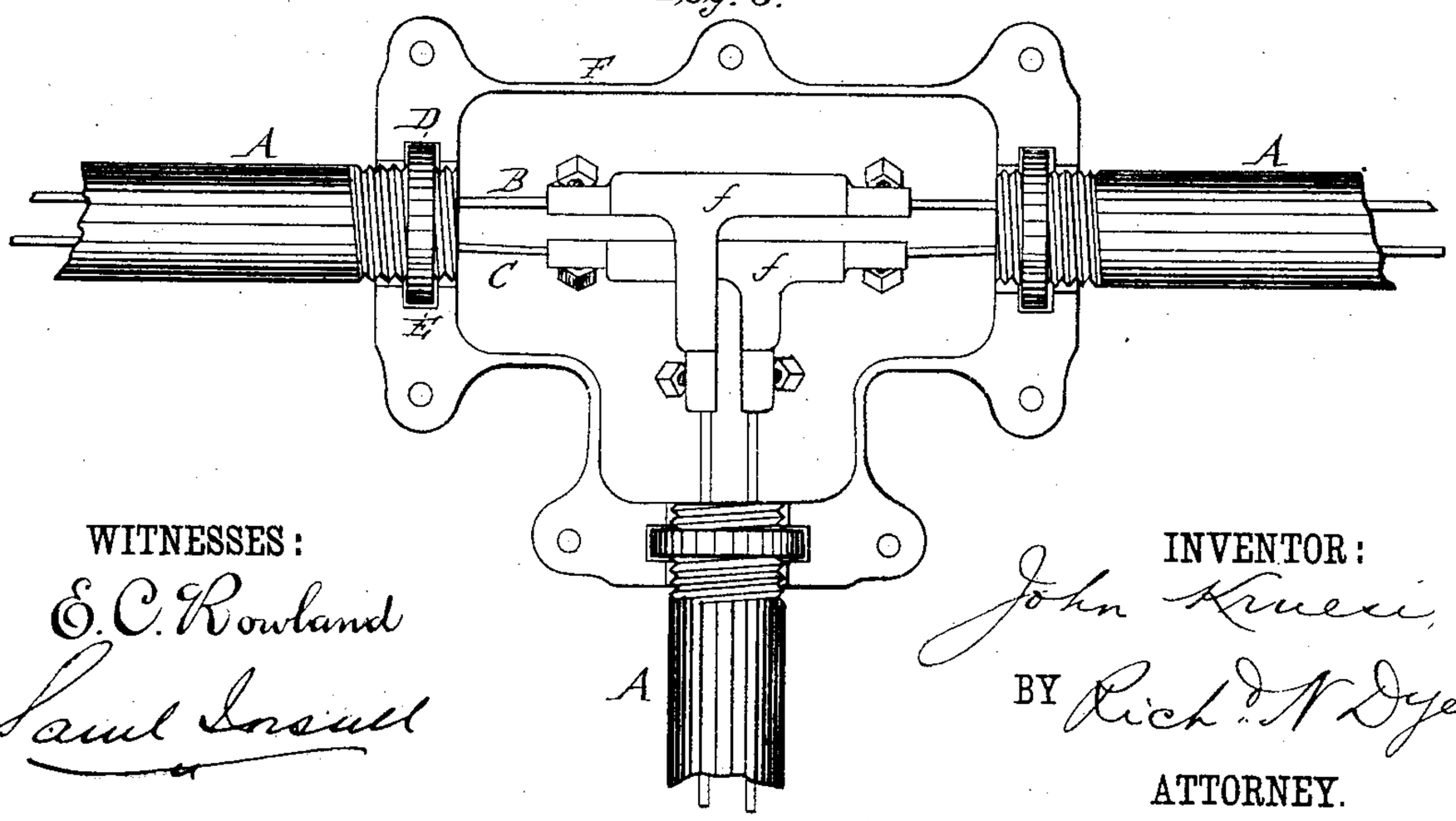


Fig. 5.

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JUNCTION FOR CONDUCTORS OF SYSTEMS OF ELECTRICAL DISTRIBUTION.

SPECIFICATION forming part of Letters Patent No. 266,483, dated October 24, 1882.

Application filed April 20, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN KRUESI, of Menlo Park, in the county of Middlesex and State of New Jersey, have invented a certain new and useful Improvement in Junctions for Conductors of Systems of Electrical Distribution, of which the following is a specification.

My invention relates more especially to the junctions and junction-boxes of conductors arranged and connected for systems of electrical distribution for supplying lights, motors, &c., which conductors are rods or strips of copper or other metal carried by inclosing metallic tubes and insulated from each other and from the inclosing-tubes, such tubes being constructed in sections and entering at their ends metallic boxes in which the proper connections of the conductors which project beyond the ends of the inclosing-tubes are made.

The object I have in view is to give a simple, compact, and highly-efficient form to the several kinds of boxes used with conductors of this class, and to provide means for attaching the inclosing-tubes to the boxes, which means of attachment will be of such construction that the connections of the conductors at any box can first be made and completed before the box is applied, which enables the work to be done better and more economically, and the conductors will be relieved of the strain which necessarily occurs when the tubes are placed in other than a horizontal position, such strain being taken by the inclosing-tubes and boxes.

In the accompanying drawings, forming a part hereof, Figure 1 is a top view of a service-box laid open, showing the connections of the conductors and the attachment of the tubes to the box; Fig. 2, a vertical section through one end of the box, the entering tube being in elevation; Fig. 3, a cross-section of one of the tubes; Fig. 4, a top view of an elbow-box, the upper half being removed; and Fig. 5, a top view of a T-box, the upper half being removed.

Like letters denote corresponding parts in all the figures.

A represents the inclosing metallic tubes, in which are the insulated conductors B C, the two parts of the circuit being carried by the same line of inclosing-tubes, and the conductors being constructed and insulated preferably as described in Edison's Patent No. 251,552.

The tubes A at their ends are provided with adjustable collars D, which are received by grooves or channels E in the boxes, such grooves or channels being in the walls of the openings through which the tubes pass to the interior of the boxes. These collars are made adjustable, preferably by screw-threading the ends of the tubes and providing the collars with female threads engaging with the male threads of the tubes; but the adjustment can be accomplished by means of set-screws, or by other suitable devices.

When the boxes are secured upon the ends of the tubes the collars D are held by the grooves E, and the tubes are prevented from moving with respect to the boxes, such boxes forming supporting-connections between the sections of tubes, which are practically rigid. Hence, it will be seen, the longitudinal strain or pressure will be taken by the tubes and the boxes, and the connections of the conductors will be relieved of strain.

By making the collars adjustable the conductors projecting from the meeting sections of tubing can be connected properly and the connections soldered and completed outside of the inclosing-box. The joint can then be covered by a box, the collars being adjusted to the grooves of the box. This enables the connections to be made with greater facility and economy.

The inclosing-boxes are made in two similar longitudinal halves, F G, which have a rounded form, approaching as nearly as possible the size and shape of the tubes. The parts of each box are provided with lugs *a*, which receive screws or bolts for securing the parts together. By having the boxes made in two similar halves they can be handled and applied more conveniently, and can be made of the compact form shown.

The box shown in Fig. 1 is a service-box, for use more especially within buildings, the conductors being connected by sleeve-pieces *b*, from which run insulated wires *c* out through holes *d* in one of the halves of the box.

The elbow-box and the T-box (shown in Figs. 4 and 5) are adapted for inside as well

as outside work, the conductors being connected by suitable connecting-pieces, *e* and *f*.

The boxes can be filled with an insulating and moisture-excluding compound when their location requires it.

All the various boxes used in systems of conductors for electric light and other purposes can be made upon the principle of the boxes described, which are shown for illustration only.

While the conductors are shown as carried in pairs by the inclosing-tubes, they may be carried by separate tubes, in which case the boxes would be constructed to receive twice the number of tubes, but otherwise would not require material change in construction.

What I claim is—

1. The combination, with the boxes having tube-openings, of the tubes, and means for adjustably attaching the tubes to the boxes, substantially as set forth.

2. The combination, with the boxes having tube-openings with grooved walls, of the tubes provided with adjustable collars held by the grooves, substantially as set forth.

3. The combination, with the boxes having the grooved openings, as described, of the tubes having screw-threaded ends, and screw-threaded collars upon such tubes, substantially as set forth.

4. The combination, with the metal tubes provided with adjustable end collars, of the inclosing-boxes made in two equal longitudinal parts and provided with grooved tube-openings, substantially as set forth.

JOHN KRUESI.

Witnesses:
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