(No Model.) 2 Sheets—Sheet 1.

H. G. OSBURN.

INTERIOR CONDUIT FOR BUILDINGS.

No. 590,373. Patented Sept. 21, 1897.

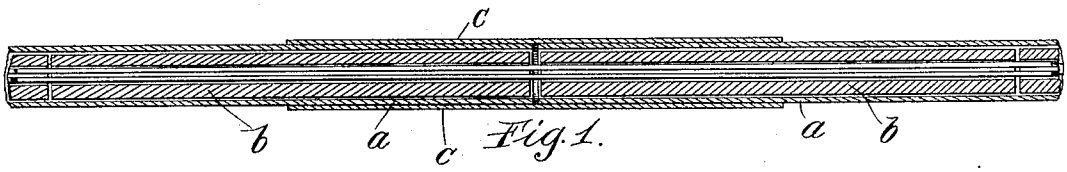


Fig. 1.

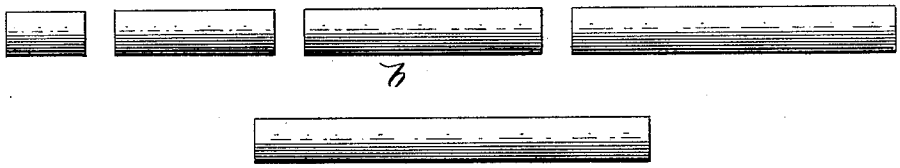


Fig. 2.

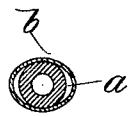


Fig. 3.

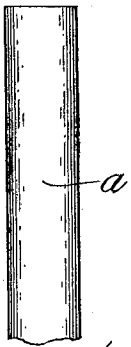


Fig. 4.

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(No Model.) 2 Sheets—Sheet 2.

H. G. OSBURN.

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Fig. 5

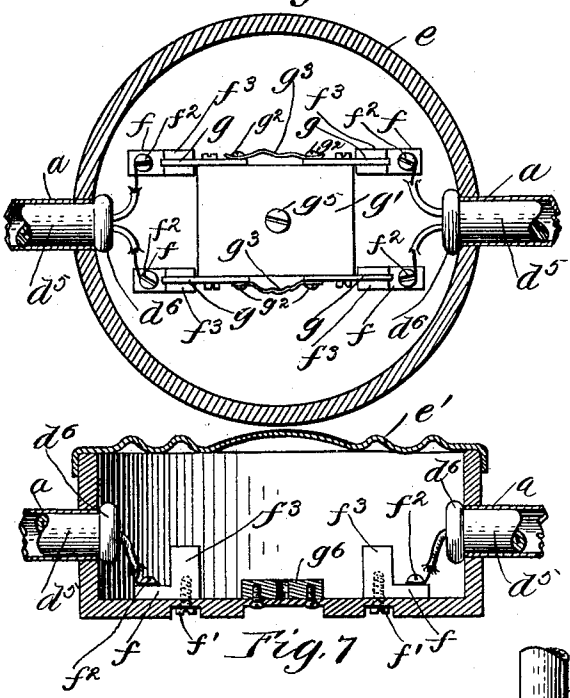


Fig. 7

Fig. 6.

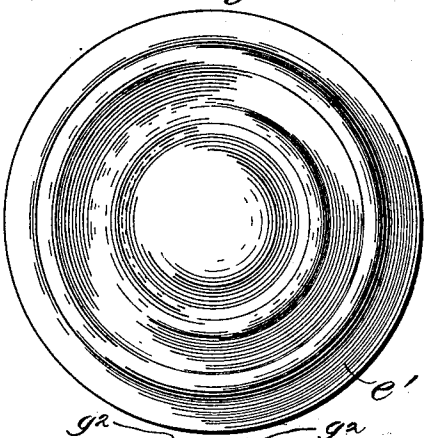


Fig. 8.



Fig. 9.

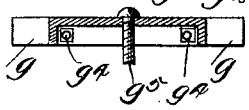


Fig. 10.

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UNITED STATES PATENT OFFICE.

HARRY G. OSBURN, OF CHICAGO, ILLINOIS.

INTERIOR CONDUIT FOR BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 590,373, dated September 21, 1897.

Application filed November 1, 1895. Serial No. 567,580. (No model.)

To all whom it may concern:

Be it known that I, HARRY G. OSBURN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Interior Conduits for Buildings, (Case No. 1,) of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to interior conduits for electrical conductors, its object being to provide an improved form of conduit for the interior of buildings in which electrical conductors may be placed and thoroughly insulated and improved means for distributing conductors from a central or junction point.

A form of interior conduit now being largely used comprises a metal tube or casing within which are placed short tubes of non-combustible material, such as earthenware usually employed in making ordinary pottery. The tubes are made about six inches long and are inserted within a metal casing, lying end to end. The metal tubes may be made of any desired length and are secured together in any preferred manner. The conduit is put upon the market with the insulating-tubes inserted in the metal tubes or casing.

In the process of manufacture of insulating-tubes employed for wiring purposes a large number become so crooked as to prevent their insertion in the cylindrical casings of but slightly-larger diameter than the insulating-tubes. One feature of my invention consists in constructing a metallic casing with an elliptical or oval cross-section wherein crooked insulating-tubes, which could not have been inserted in a cylindrical casing, may be inserted. By the employment of an elliptical casing a great many of the insulating-tubes may be utilized which could not be employed with a cylindrical casing on account of their crookedness. I also employ cut-out and junction boxes, made, preferably, of earthenware material and which are preferably formed cylindrical, metallic clips being mounted upon the interior of the box, adapted to engage the contact-plates of a removable insulating-plate which carries fuse-wires for protecting the circuits. The fuse-wires may thus be placed in position when the contacts are out of electrical connection with the circuit.

I will describe my invention more particularly in connection with the accompanying drawings, in which—

Figure 1 is a sectional view of a conduit composed of insulating-tubes placed within an inclosing metallic casing. Fig. 2 is a view of a number of supplemental insulating-tubes of different lengths. Figs. 3 and 4 are views of an elliptical casing within which insulating-tubes are adapted to be placed. Fig. 5 is a plan view of a cut-out box constructed in accordance with my invention. Fig. 6 is a view of a cover therefor. Fig. 7 is a sectional view of the cut-out box. Fig. 8 is a plan view of the insulating-plate carrying the fuse-wires. Fig. 9 is a sectional view thereof. Fig. 10 is a plan view of the junction-box.

Like letters refer to like parts in the several figures.

As illustrated in Fig. 1, the conduit is formed from a number of metal tubes or casings *a a*, within which are placed insulating-tubes *b b*, formed of any suitable material, as pottery. The casings rest end to end, and the sleeve *c* is slipped over the ends of the casings and joins them together.

In Fig. 2 a number of short insulating-tubes of, for example, one, two, three, four, and five inches in length are shown, which may be employed in place of tubes of uniform length for the purpose of completing the required length of the conduit as a whole.

I construct the inclosing tube of an oval or an elliptical cross-section, as illustrated more clearly in Fig. 3, into which the insulating-tubes *b* are adapted to be inserted, the dimensions of the metallic tube being such that the insulating-tubes engage the flat sides of the metallic tube to thus maintain the insulating-tubes in alinement. If the insulating-tube be somewhat bent or crooked, the metallic tube yields sufficiently to permit the insertion of the insulating-tube. In this manner tubes may be employed which could not be employed with a cylindrical casing on account of their crookedness.

The cut-out box E (illustrated in Figs. 5 to 9, inclusive) is formed, preferably, of ceramic material, and is preferably made cylin-

drical in shape, as it may be more readily burned when of this shape. Openings are provided in the sides of the box, through which the ends of the metal tubes a may be passed. Tube d^5, provided with a shoulder d^6 upon the end, is inserted into the end of the metallic tubing from the interior of the cut-out, the electrical conductors being thus prevented from coming into contact with the end of the metallic tube and also being prevented from being cut by the sharp edge of the end of the tube a. Upon the bottom of the cut-out box are mounted plates f f, preferably secured in position by means of screws f' f', passing through the bottom of the cut-out box and into tapped holes provided in said plates. Binding-posts f^2 are provided, upon the plates of which the electrical conductors are connected. Clips f^3 f^3 are mounted upon the several plates f f and are adapted to engage contact-plates g g, mounted upon the block g', formed, preferably, of ceramic material, screws g^2 g^2 being provided upon the contact-plates g, to which the ends of the fuse-wires g^3 g^3 may be secured.

When it is desired to re-fuse the block, the block may be lifted to move the contact-plates g^3 out of engagement with the clips f^3 f^3. The fuse-wires may thus be placed in position when the contact-plates are disconnected from the electrical circuits. The contact-plates g g are secured to the contact-plate g' by means of screws or bolts g^4, passing through the flange or rim carried upon the block. Screw g^5 may be provided, adapted to engage the block g^6 upon the bottom of the cut-out box to thus lock the block g' in position.

A cover e' is provided for the cut-out box, which is preferably formed of metal.

In Fig. 10 I have illustrated a form of junction-box embodying my invention, in which four tubes a a enter the box, through which tubes the electrical conductors pass and are connected to binding-screws f^2. A fuse-block g' is provided in connection with each of the four circuits.

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

1. In a cut-out or junction box, the combination with a box or casing formed of ceramic material, of metallic clips mounted thereon, and a fuse-block carrying plates adapted to engage said metallic clips, binding-screws being provided in connection with said plates to which the fuse-wire is adapted to be secured; substantially as described.

2. The combination with a box provided with an opening, of a metallic tube passing therethrough, and an insulating-tube extending into said tube and provided with an enlargement upon the end adapted to rest against the end of the metal tube to prevent the conductors from coming in contact with the end of the metal tubing, substantially as described.

3. In an interior conduit, the combination with a metallic casing or tube having an oval or elliptical cross-section, of insulating-tubes disposed within said casing for containing conducting-wires, substantially as described.

In witness whereof I hereunto subscribe my name this 25th day of October, A. D. 1895.

HARRY G. OSBURN.

Witnesses:
JOHN W. SINCLAIR,
W. CLYDE JONES.