No. 708,692. Patented Sept. 9, 1902.

W. F. BOSSERT.

JUNCTION BOX.

(Application filed June 4, 1902.)

(No Model.)

Fig. 1.

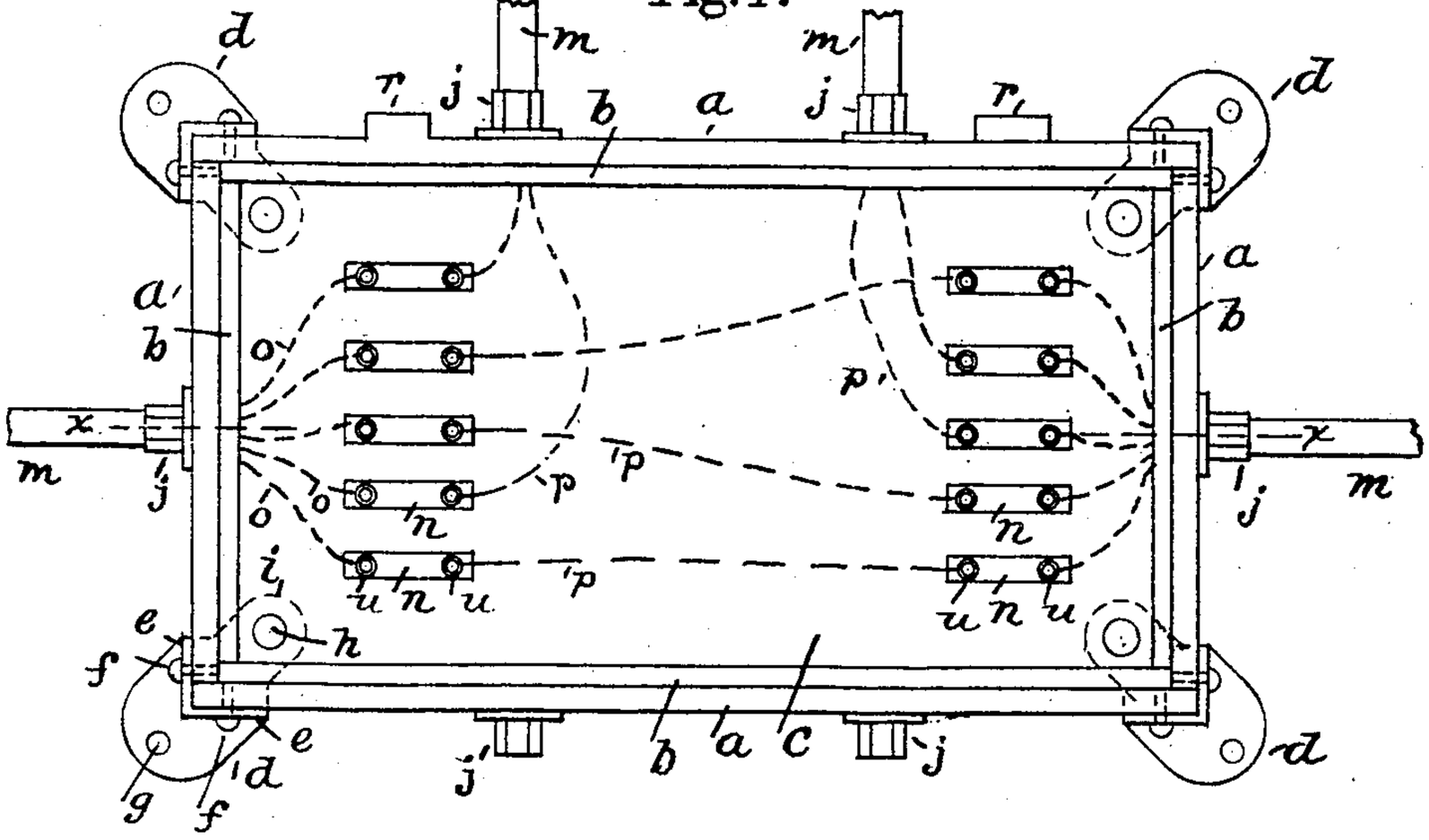


Fig. 2.

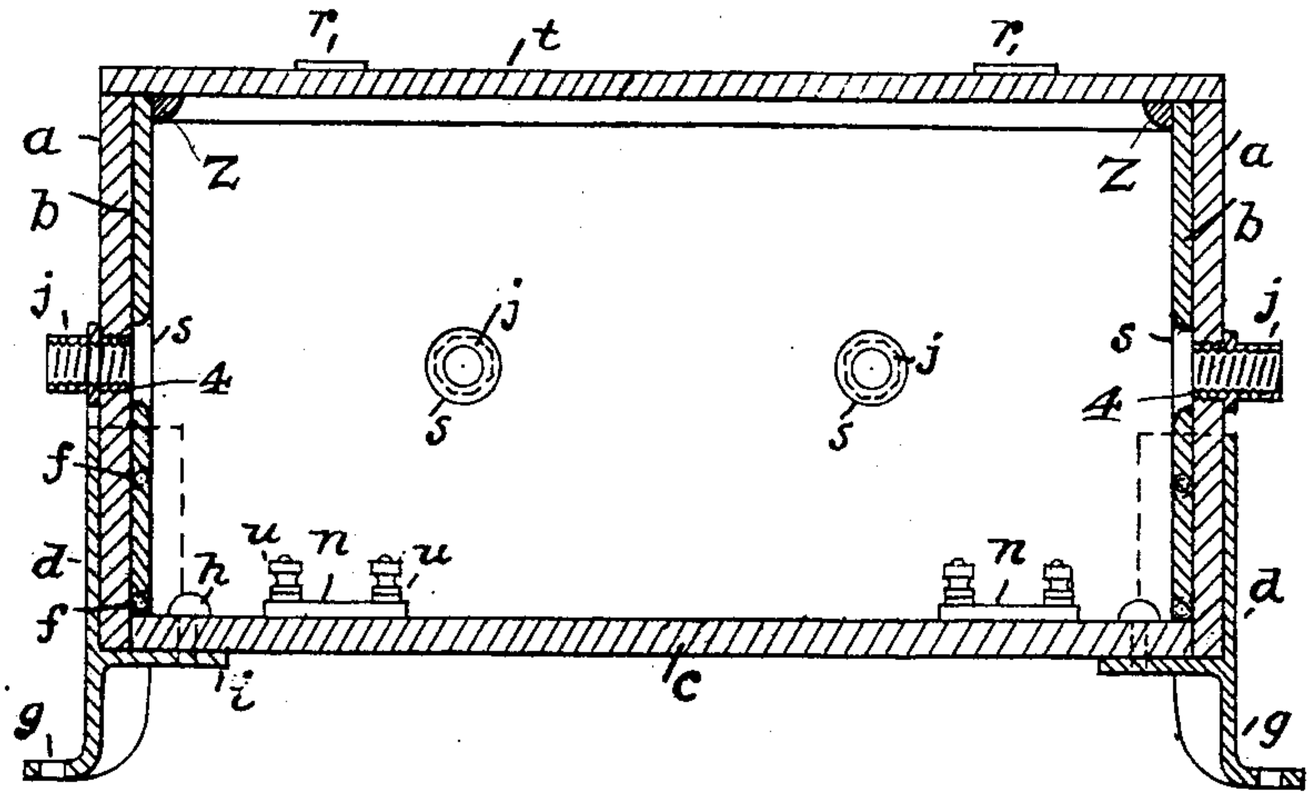


Fig. 3.

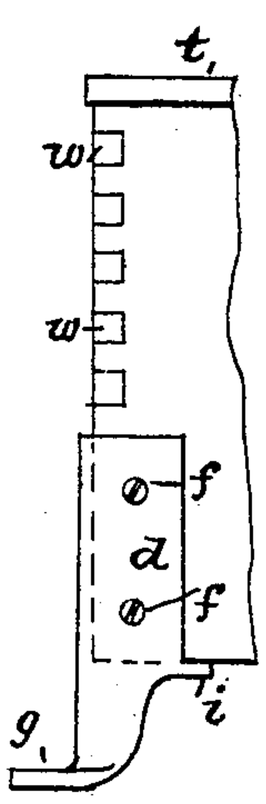


Fig. 5.

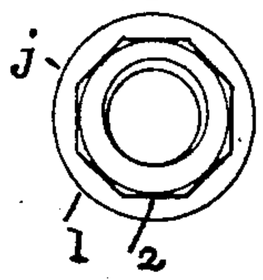
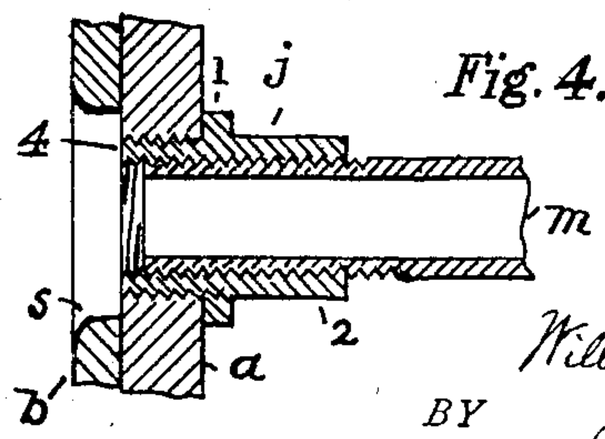


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM F. BOSSERT, OF UTICA, NEW YORK, ASSIGNOR TO THE BOSSERT ELECTRIC CONSTRUCTION COMPANY, OF UTICA, NEW YORK.

JUNCTION-BOX.

SPECIFICATION forming part of Letters Patent No. 708,692, dated September 9, 1902.

Application filed June 4, 1902. Serial No. 110,171. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. BOSSERT, residing at Utica, in the county of Oneida and State of New York, have invented certain Improvements in Junction-Boxes, of which the following is a specification.

The present invention relates to junction-boxes for electrical circuits and apparatus; and it consists of a box provided with double walls for the sides and ends, the inner walls being of insulating substance, while the bottom and top of the box are of single thickness. The outer walls of the sides and ends are preferably dovetailed at their corners, at which are provided corner-pieces with legs to raise the box, so that its bottom shall not rest upon any support otherwise than provided by the legs. The said corner-pieces are designed to embrace the side and end walls of the box and are provided with an inwardly-extending support or seat adapted to support the weight of the box and are also provided with outwardly-extending feet through which are holes for the admission of bolts to secure the same to a base or a stable foundation. The cover is hinged to the side of the box and provided with a lock or other suitable means for securing the same. The sides and ends of the outer walls are perforated and screw-threaded to receive the ends of internally-threaded screw-bushings, upon whose exterior are a stop-ring and a nut, both integral with the bushing, the former of which serves as an abutment against the outside surface of the said walls, and the nut is provided for the reception of a wrench to screw the bushing into and out of the said walls. Opposite the said screw-threaded perforations in the outer walls are perforations in the inner walls which coincide with the first-mentioned perforations, and these are made of larger diameter than the screw-threaded perforations and their inner edges are chamfered or rounded. These bushings are adapted to receive the threaded ends of metal conduits, within which insulated conductors are carried to the junction-boxes and then led to screw terminal bars, from which they are conducted by means of bridle-wires to other terminal bars to be joined to other conductors secured to said bars from other entering conductors, or the said conductors may be connected to the opposite ends of the said bars, all of which I will now proceed to describe, and point out in the claims.

In the drawings, Figure 1 is a top view of a junction-box with the cover removed. Fig. 2 is a section on line *x x* of Fig. 1. Fig. 3 is a partial elevation of the box to show the corner-support and the method of securing the ends of the outer walls together. Figs. 4 and 5 are respectively a section and end view to show the bushing and the method of securing the same to the outer wall of the box.

a represents the outer walls or casing of the junction-box, whose corners are dovetailed together, as shown in Fig. 3 at *w w*.

c is the bottom of the box and is of marble, slate, or other insulating material. This bottom fits snugly into the walls of the outer casing.

d d are corner-pieces, made of metal having upright right-angled parts *e e*, which embrace the corners of the outer casing and are secured thereto by the screw-bolts *f f*, which penetrate its walls.

i is a seat extending inwardly from the sides *e e*, having a screw-thread hole into which is screwed the bolt *h*, extending through a hole in the corner of the bottom piece *c*.

g is a downwardly-extending leg having an outwardly-projecting foot provided with a hole for the reception of a bolt to secure the leg to a suitable foundation.

The casing or outer walls *a a* are lined with an inner casing or walls *b b*, the lower edges of which rest upon the outer and upper edges of the bottom piece *c* to break joint with the inner joint of the outer casing and said bottom piece, and the side walls extend beyond the ends of the end walls, as shown in Fig. 1, and break joints with the corners of the outer case, so as to prevent the entrance of dust or moisture at the bottom or corners. Screw-threaded perforations are made in the sides and ends of the outer casing-walls *a a*, into which are entered the externally-screw-threaded ends 4 of the bushings *j*, having a ring 1 midway of its length, which serves as a limit-stop to the entrance of the bushing and an abutment to stiffen the bushing when in place. The outer end of the bushing is

squared, as represented, to provide means for securing a wrench to its surface in order to attach or withdraw the bushing to and from the walls *a*.

s indicates orifices in the inner wall *b* concentric with the screw-threaded holes in the outer wall *a* and are of larger diameter than said holes and have their inner edges chamfered or rounded in order that the insulation from entering conductors shall not be abraded.

I prefer to attach the inner walls to the outer walls by means of cement or other suitable material in order that no moisture may gather between them, although it is the intention to make the inner or contiguous surfaces of said walls fit each other closely. All of the joints are preferably lined with some cement.

The cover *t* is hinged to the walls of the outer casing, as at *r*, and has a piece of glass in its center and provided with a suitable lock and has an entering projection *z* around its edge into the interior of the box. By this construction of dovetailed corners and inner joints breaking with one another and the means for closing the cover tightly a perfectly dry interior is secured.

To the bottom of the box *c* are secured the bars *n*, provided at each end with binding-screws *u* or other means for securing the ends of wires and conductors *o o*, carried in the metal conduits *m*, whose ends enter the bushings *j*. The said conductors extend to the outer binding-screws *u*, and from the inner binding-screws bridle or connecting wires *p* are carried directly to the other bushings, or they are secured to the ends of other bars *n*, to which other conductors *o o* are connected. These bars and bridle-wires are merely indications of the uses of a junction-box, as it is well known that connections to switches and to a variety of apparatus may be made therein.

I claim as my invention—

1. A junction-box for electric conductors, having double sides and ends, the walls of the outer casing dovetailed at their corners and provided with a bottom of insulating material fitting closely therein, the walls of the inner casing resting upon the bottom piece and breaking joints with the ends and sides of said piece, and also breaking joints with the corners of the outer casing; a cover secured to the outer casing; corner-pieces having right-angled parts embracing the corners of the outer casing and secured thereto by screw-bolts, a seat extending inwardly from the said parts under the corner of the said bottom piece and secured thereto by a screw-bolt, and an outwardly-projecting foot below the said seat; with two or more interiorly-threaded bushings screwed into holes in the sides or ends of the outer casing provided with an abutment-ring and a squared end; orifices in the inner casing concentric with the said holes and larger in diameter, having chamfered or rounded edges, as set forth.

2. A junction-box for electric conductors, having double sides and ends, the walls of the outer casing dovetailed at their corners and provided with a bottom of insulating material fitting closely therein, the walls of the inner casing resting upon the bottom piece and breaking joints with the ends and sides of said piece, and also breaking joints with the corners of the outer casing; a cover secured to the outer casing; corner-pieces having right-angled parts embracing the corners of the outer casing and secured thereto by screw-bolts, a seat extending inwardly from the said parts under the corner of the said bottom piece and secured thereto by a screw-bolt, and an outwardly-projecting foot below the said seat; with two or more interiorly-threaded bushings screwed into holes in the sides or ends of the outer casing, provided with an abutment-ring and a squared end; orifices in the inner casing concentric with the said holes and larger in diameter, having chamfered or rounded edges; and means secured to the bottom piece for the transposition of conductors from one bushing to another, as set forth.

3. A junction-box for electric conductors, having double sides and ends, the walls of the outer casing dovetailed at their corners and provided with a bottom of insulating material fitting closely therein, the walls of the inner casing resting upon the bottom piece and breaking joints with the ends and sides of said piece, and also breaking joints with the corners of the outer casing; a cover secured to the outer casing; corner-pieces having right-angled parts embracing the corners of the outer casing and secured thereto by screw-bolts, a seat extending inwardly from the said parts under the corner of the said bottom piece and secured thereto by a screw-bolt, and an outwardly-projecting foot below the said seat; with two or more interiorly-threaded bushings screwed into holes in the sides or ends of the outer casing, provided with an abutment-ring and a squared end; orifices in the inner casing concentric with the said holes and larger in diameter, having chamfered or rounded edges, metal bars secured to said bottom piece, with conduits entering said internally-threaded bushings carrying conductors whose ends are led into the box to the metal bars, the said bars provided with means for transposing the conductors to similar bars and to other conductors, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 2d day of June, 1902.

WILLIAM F. BOSSERT.

Witnesses:

FREDERICK T. FOXENBERGER,

WILLIAM GRAY.