

T. E. MURRAY.
JUNCTION BOX.
APPLICATION FILED SEPT. 11, 1911.

1,023,220.

Patented Apr. 16, 1912.

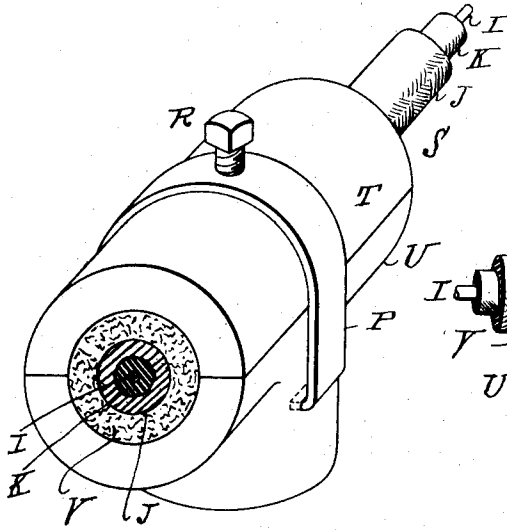


Fig. 1.

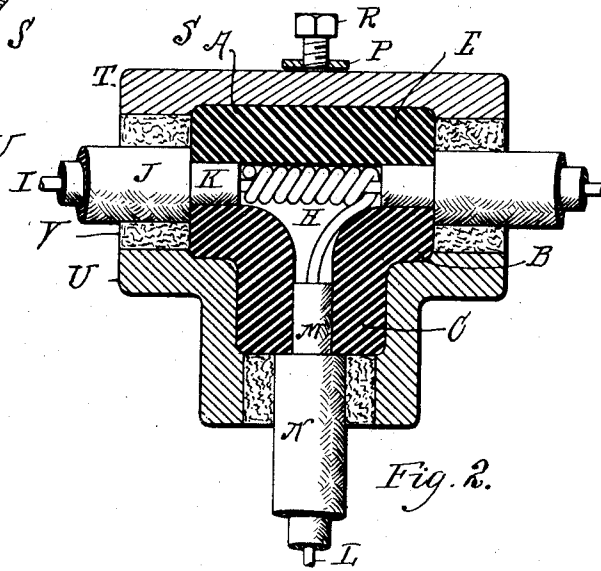


Fig. 2.

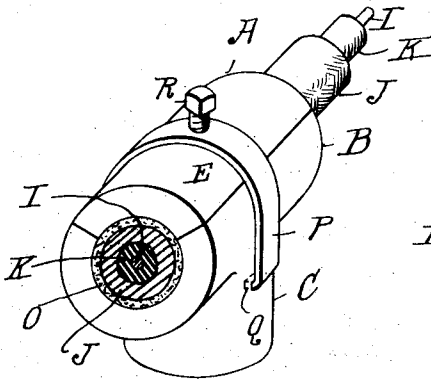


Fig. 3.

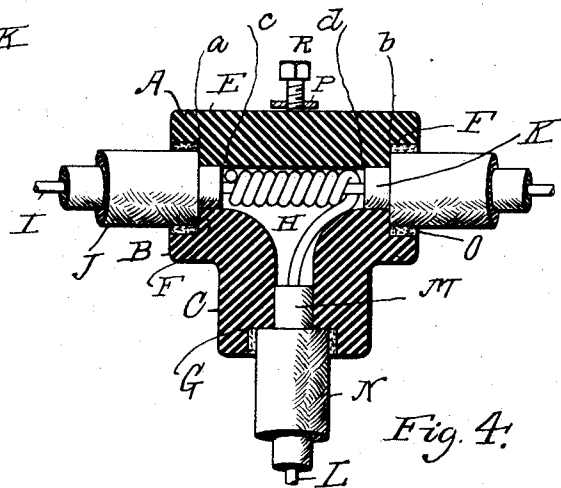


Fig. 4.

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UNITED STATES PATENT OFFICE.

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JUNCTION-BOX.

1,023,220.

Specification of Letters Patent.

Patented Apr. 16, 1912.

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To all whom it may concern:

Be it known that I, THOMAS E. MURRAY, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a certain new and useful Improvement in Junction-Boxes, of which the following is a specification.

The invention is a junction box, designed to protect a joint formed between main and branch line conductors and more especially those having a cover of insulating material and an outer sheath of metal.

The invention consists in the construction, hereinafter set forth, whereby the joint is inclosed in a casing of refractory insulating material, so as to be completely protected from current leakage, moisture or the weather, and whereby said casing may be easily applied and removed.

In the accompanying drawings my invention is shown applied to the joint formed between a main line and branch conductor.

Figure 1 is a perspective view of the device provided with an outer metallic casing. Fig. 2 is a longitudinal section thereof. Fig. 3 is a perspective view of the device without the metallic casing, and Fig. 4 is a longitudinal section of the same.

Similar letters of reference indicate like parts.

A is a casing, formed of porcelain or other refractory insulating material in two parts, namely, (1) a tubular portion B which is open at both ends, and has a gap in its wall, and a tubular offset C integral with said portion B; and (2) a closing piece E for said gap. The ends of the tubular portion B are enlarged and shouldered at F, and the outer end of the offset C is shouldered at G. The inner end of the bore of offset C is enlarged or flared, as shown at H.

The device is applied to the joint in the following manner: The main conductor I is denuded of its lead sheath J over a length *a, b*, equal to the distance between the shoulders F, so as to expose the insulating cover K. The middle portion of said exposed insulating cover is removed to expose the metallic conductor over a distance *c, d*, sufficient to enable the bared end of the branch conductor L to be coiled about said main conductor. A portion of the insulating cover M of said conductor L just beyond said bared portion is also exposed. The

diameter of the bores in the tubular portion B and offset C is such that the insulating covers M, K fit snugly therein. The closing piece E being removed, the main conductor is laid in the bore of tubular portion B, and the bared end of branch conductor L after being led through the bore of offset C is twisted, as before noted, around said main conductor to form the joint therewith. The extremities of the lead sheaths J, N of conductors I, L then lie closely against the shoulders F, G. The clearance around said sheaths is packed with lead floss, as shown at O, so as to form moisture proof joints. The closing piece E is seated in the gap in the wall of tubular portion B, and is secured by means of a metal strap P having inturned ends Q to engage in recesses in offset C, and provided at its outer portion with a clamping screw R, which bears on said closing piece E.

I may provide my device with an inclosing cover S of iron or other suitable metal, of similar shape to casing A, and formed in sections T, U. When the cover S is used, the ends of the bores in casing A are not enlarged and shouldered. The openings in said cover are, however, made larger in diameter than the sheaths of the conductors, but less in diameter than the outer end faces of the casing A, so that said outer faces form shoulders against which the extremities of the lead sheaths rest, as shown in Fig. 2. The clearance space around the sheaths in said openings is, as before, packed with lead floss, as shown at V, to form moisture proof joints. The metal strap P here extends over the cover S, upon which clamping screw R bears, and at its lower ends engages with cover S.

I claim:

1. A junction box for main and branch conductors, comprising a casing of refractory insulating material formed integrally of a tubular portion open at both ends and having a gap in its wall, and a tubular offset communicating with said tubular portion, a closing piece for said gap, an outer casing of metal inclosing said casing of insulating material and formed in separable sections, and means for securing together said sections.

2. A junction box for main and branch conductors, of the type in which the conductor has an insulating covering and an outer metal sheath, comprising a casing of

refractory insulating material formed integrally of a tubular portion open at both ends and having a gap in its wall, and a tubular offset communicating with said
5 tubular portion, a closing piece for said gap, and means for detachably securing said closing piece in said gap: the bores of said tubular portion and offset being of a diameter to fit the insulating cover of said con-
10 ductors, and enlarged and shouldered at

their ends to receive the metal sheath of said conductors and to provide a clearance space around the same, and packing of lead floss in said clearance spaces.

In testimony whereof I have affixed my 15 signature in presence of two witnesses.

THOMAS E. MURRAY.

Witnesses:

GERTRUDE T. PORTER,

MAY T. MCGARRY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
