

W. A. CHARTERS & E. G. BARDWELL.
JUNCTION BOX.

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911,293.

Patented Feb. 2, 1909.

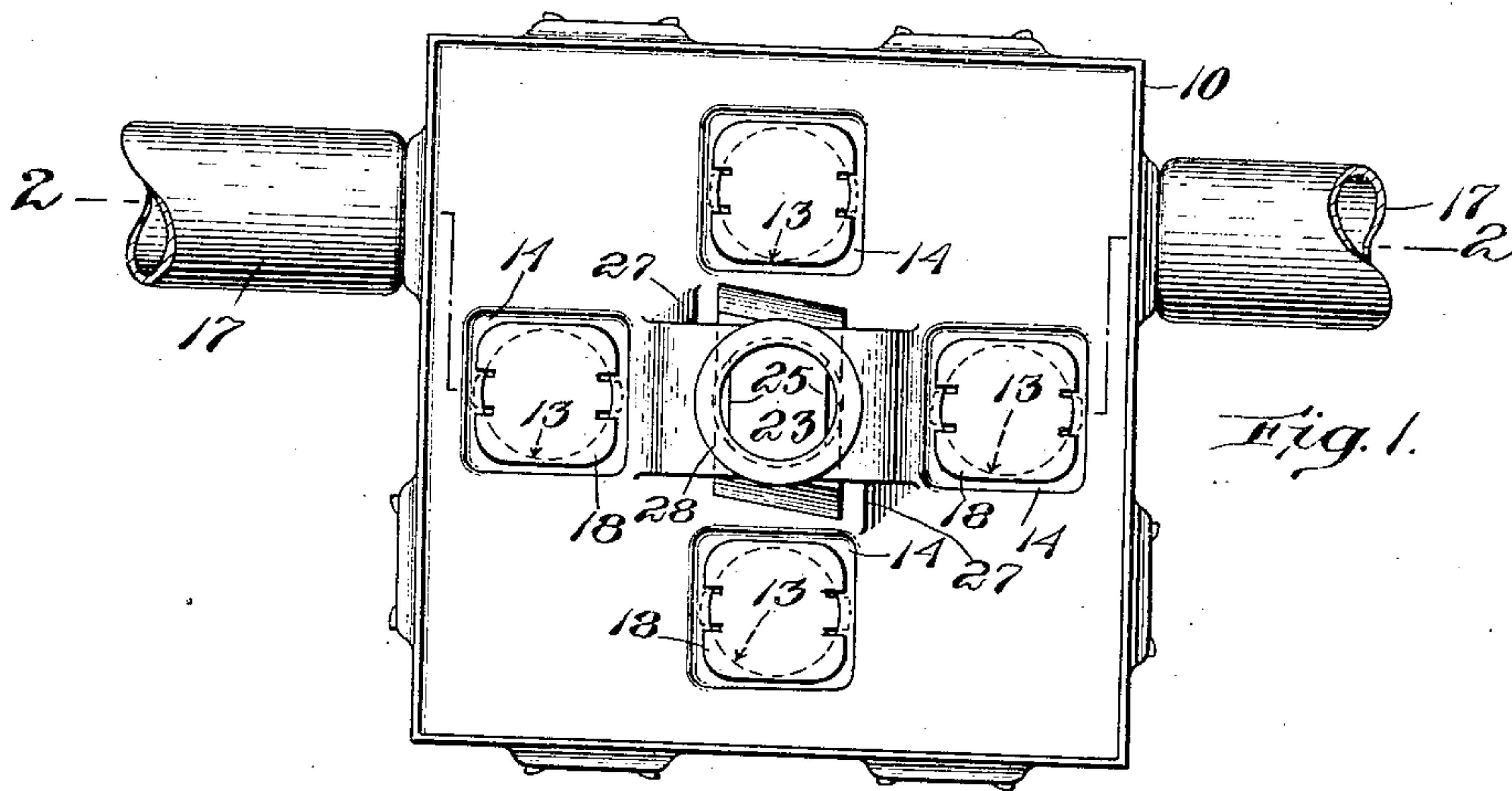


Fig. 1.

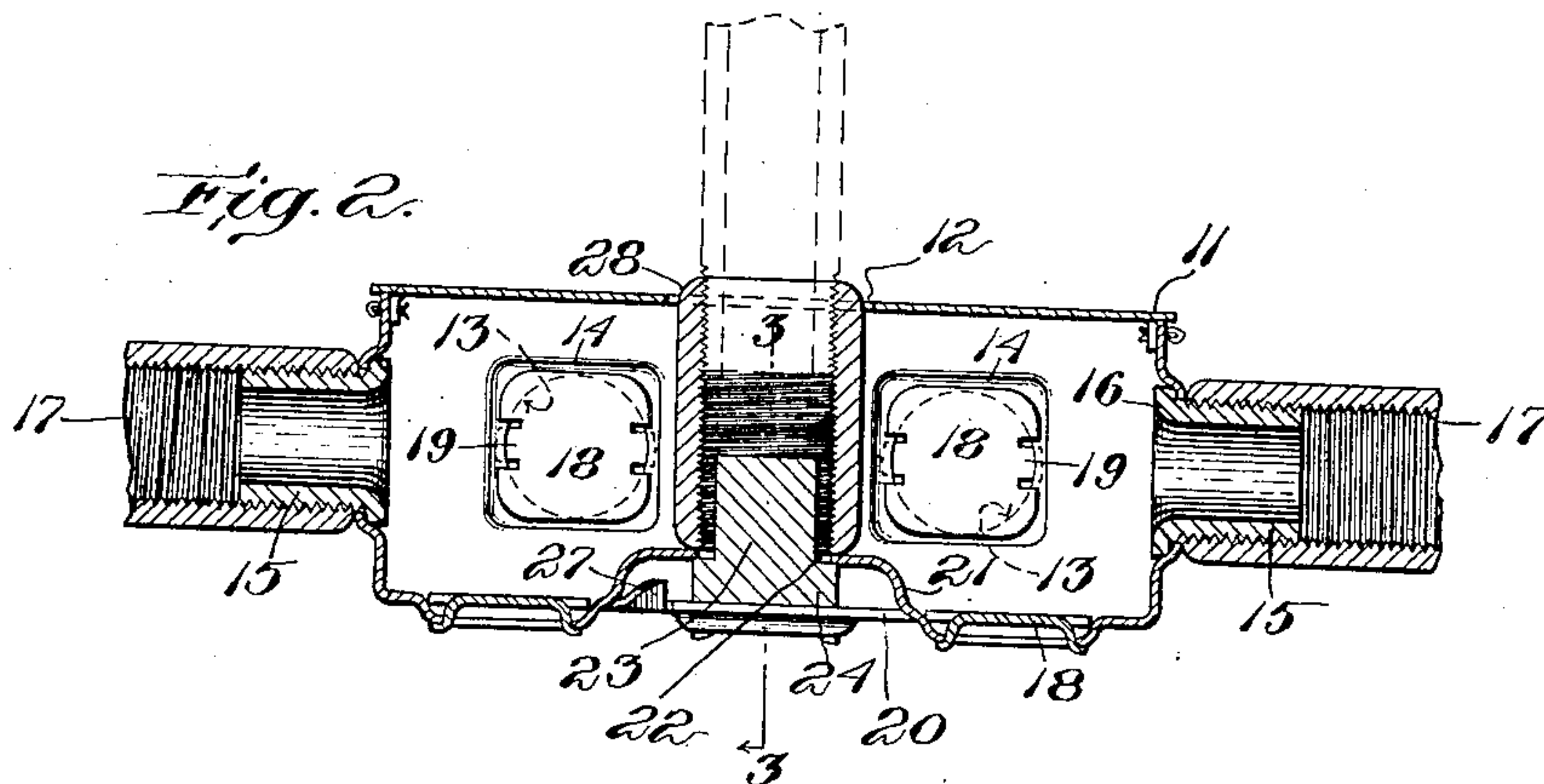


Fig. 2.

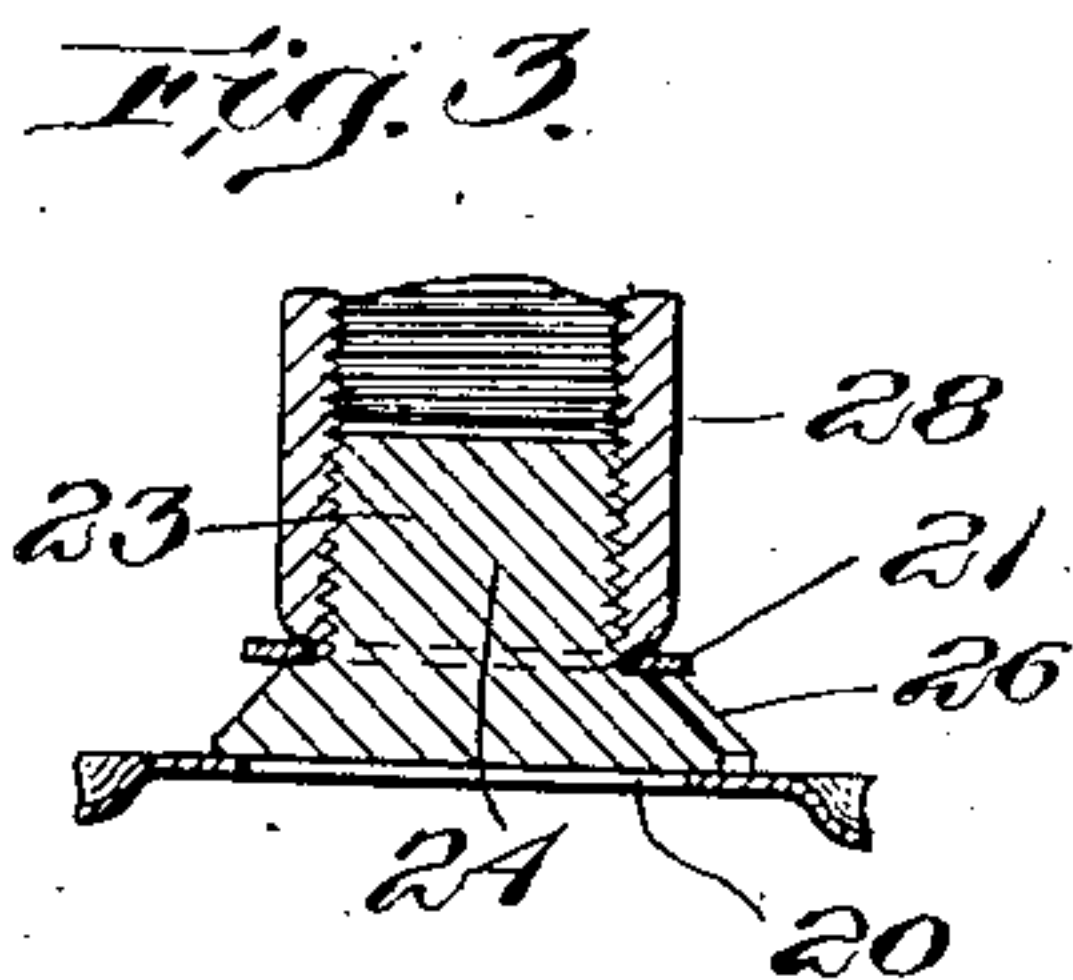


Fig. 3.

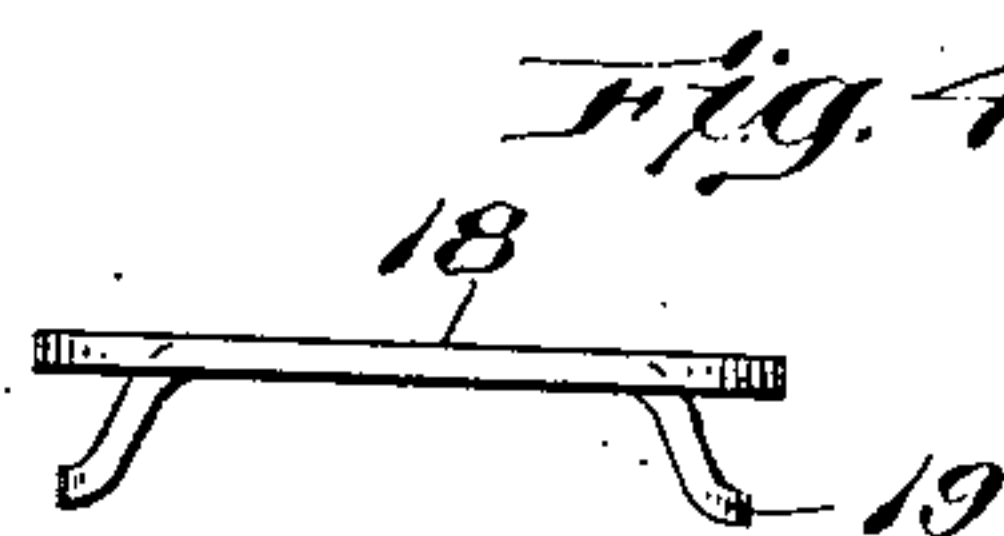


Fig. 4.

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UNITED STATES PATENT OFFICE.

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JUNCTION-BOX.

No. 911,293.

Specification of Letters Patent.

Patented Feb. 2, 1909.

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To all whom it may concern:

Be it known that we, WILLIAM A. CHARTERS and ERNEST G. BARDWELL, of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Junction-Boxes, of which the following is a specification.

This invention relates to junction-boxes employed in connection with conduits for electrical wiring, and particularly to that type designed to not only serve as a connection for the extremities of the conduit, but also as a support for lamp brackets and other electrical fittings.

The principal objects of the invention are to provide improved means for connecting the conduits and the fitting-support to the box.

In the accompanying drawing, in which similar characters designate like parts throughout the several views; Figure 1 is a top plan view of one embodiment of my invention with the cover removed. Fig. 2 is a full vertical section on the line 2—2 of Fig. 1. Fig. 3 is a sectional detail on the line 3—3 of Fig. 2, and Fig. 4 is a detail in elevation showing the means for closing the conduit openings.

The box 10, which may be of any convenient form, is shown as provided with a cover 11, in which is a central opening 12. Both box and cover may be stamped from sheet metal. In the walls of the box are openings 13, arranged in any desired manner, there being, in the present instance, two in each side, and four in the bottom, the latter being symmetrically arranged about the center. Each of these openings is situated in a recessed portion 14, opening within the box, and being conveniently formed by pressing a portion of the wall outwardly. As here illustrated, these recesses are square, but may be of any angular form. One or more of the openings 13 may receive coupling members 15, which are externally threaded, and which have enlarged end portions or heads 16, conforming to the recesses 14, and being of such thickness that when the coupling is in place in the opening, the head will lie within the recess with its inner face substantially flush with the wall of the box. The engagement between the coupling head and the edges of the recesses holds said coupling against rotation while conduits 17 are being screwed upon their outer ends. When these conduits are in place, they seat themselves

against the outer wall of the recessed portion, and thus lock the coupling in place. This arrangement avoids the necessity for inserting a wrench or like tool into the junction-box to make up the connection between the coupling and the conduit. The openings 13, to which conduits are not applied, are preferably closed by sheet metal covers 18 fitting the recesses and having integral projections 19, which are adapted to be bent over the edges of the openings outside the box to retain the covers in place. These covers are also flush with the inner wall of the box. This results in the presentation of a substantially continuous surface without rough edges, and in this manner the danger of abrading the insulation of the conductors is avoided.

In the bottom of the box, and preferably at or near its center, is an elongated opening 20, associated with which is a retaining means, here shown as consisting of a bridge 21, extending from one end of the opening to the other, and being preferably formed by pressing in a portion of the material of the box, there being a space left between this bridge and the bottom wall. In the bridge is an opening 22, to receive a supporting member, which is shown as consisting of a threaded stud 23, provided with an elongated head 24, which will enter the opening 20, but which will not pass through the bridge opening 22, and which, when turned at right angles to the opening 20, will rest upon the bottom of the box. The thickness of this head is preferably somewhat greater than the distance between the bridge and the bottom wall, so that when it is turned across the opening, this being conveniently accomplished by engaging flattened surfaces upon the stud at 25 by a wrench, said head will spring the wall and bridge apart, and be clamped in place by their pressure, thus preventing accidental rotation. To permit the head to readily enter the space between the bridge and the bottom wall, its extremities may be beveled at 26, thus exerting a wedging action to force the elements apart. Near the ends of the bridge and at opposite sides thereof, are stop projections 27, which may be formed by pressing up integral shoulders from the sheet metal. By these shoulders the rotary movement of the stud is limited, and the attaining of the correct position of the head across the opening 20 assured.

A coupling member 28 may be screwed

upon the stud, it passing through the opening 12 in the cover, and being employed to connect to the junction-box the fitting which is to be supported.

- 5 The box is set in the wall or ceiling, and is wired in the usual manner, and this need not here be described.

Having thus described our invention, we claim:

- 10 1. The combination with a junction-box provided with an opening, of a resilient bridge lying across the opening, and a supporting member extending through the bridge and having a head gripped between
15 the bridge and box.

2. The combination with a junction-box provided with an elongated opening, of a perforated bridge lying across the opening, a supporting member extending through the
20 bridge, and having an elongated head situated between the bridge and box, and means for permitting engagement with the supporting member whereby the head may be turned across the box opening.

- 25 3. The combination with a junction-box provided with an elongated opening, of retaining means situated within the box adjacent to the opening, and a supporting member having an elongated head adapted to be

introduced into the space between the box 30 and retaining means, said space being normally less than the thickness of the head.

4. The combination with a junction-box provided with an elongated opening, of retaining means situated within the box adjacent to the opening, and a supporting member having an elongated head beveled at its extremities and adapted to be introduced into the space between the box and retaining means, said space being normally less
40 than the thickness of the head.

5. The combination with a junction-box provided with an elongated opening, of retaining means situated within the box adjacent to the opening, and a supporting member having an elongated head adapted to be introduced into the space between the box and retaining means, said space being normally less than the thickness of the head and stop members carried by the box at each side
50 of the opening.

In testimony whereof we have affixed our signatures, in presence of two witnesses.

WILLIAM A. CHARTERS.

ERNEST G. BARDWELL.

Witnesses to both signatures:

E. A. GRAY,

ARCH B. ROSSELLI.