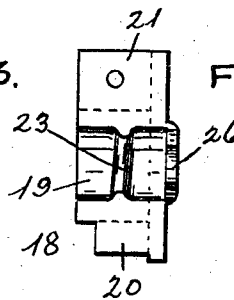
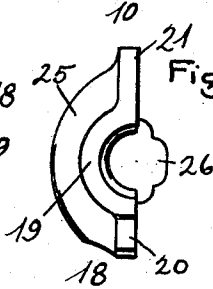
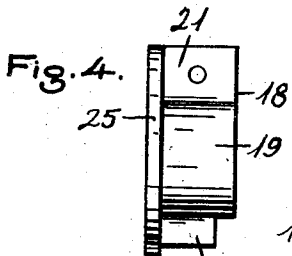
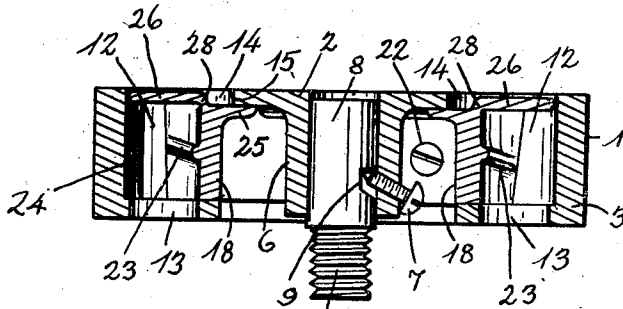
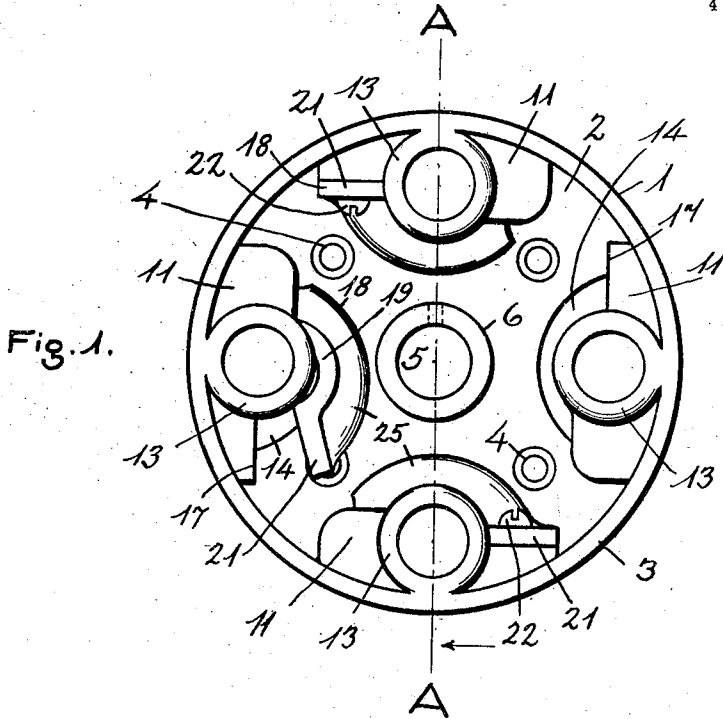


1,072,462.

Patented Sept. 9, 1913.
 4 SHEETS—SHEET 1.



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1,072,462.

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4 SHEETS—SHEET 2.

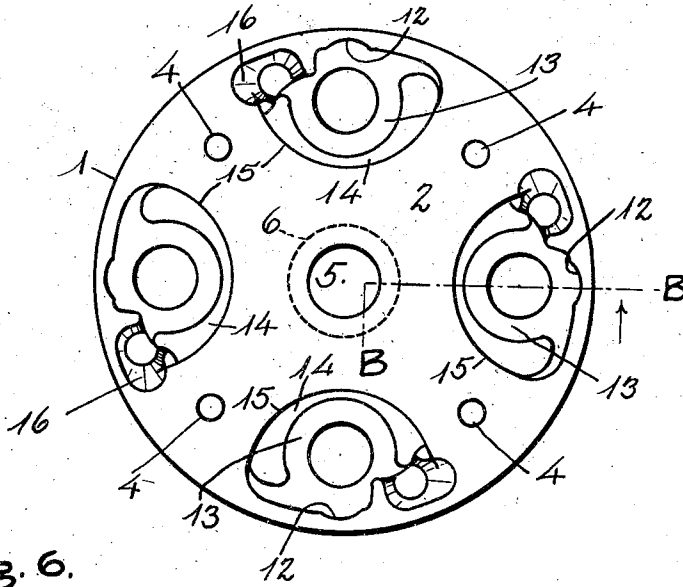


Fig. 6.

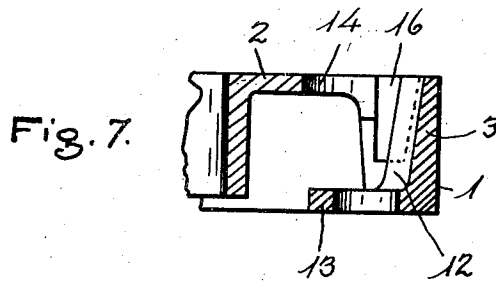


Fig. 7.

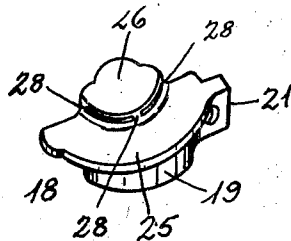


Fig. 8.

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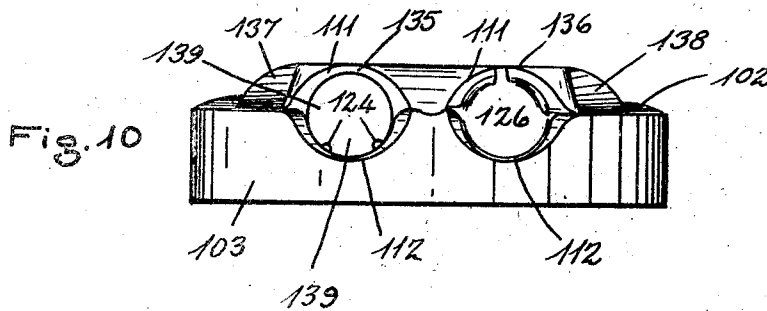
OUTLET BOX.

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4 SHEETS—SHEET 3.

Fig. 9.

104 143 102 138 139 111 144 145 116 136 137 139 111 104 116 104 111 135 116 126



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WITNESSES
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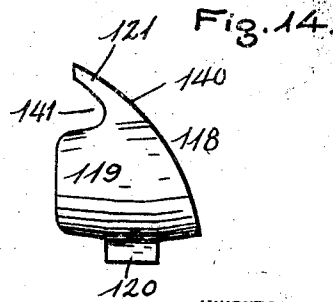
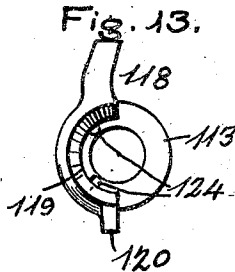
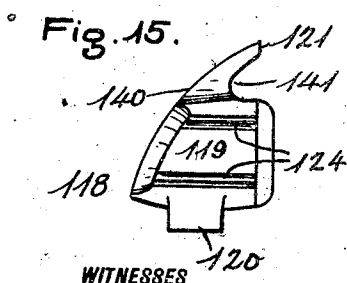
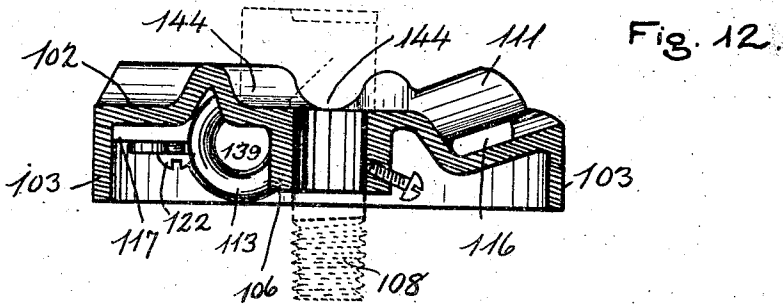
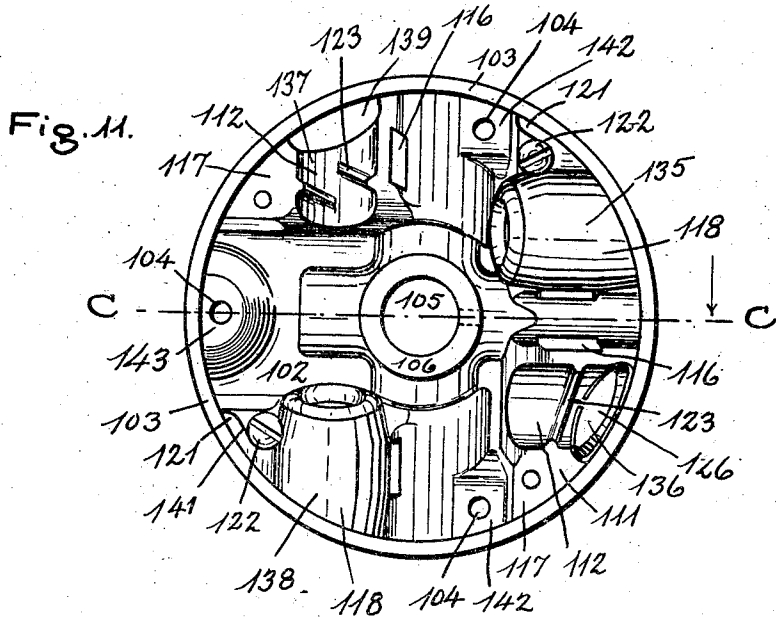
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OUTLET BOX.
APPLICATION FILED SEPT. 26, 1911.

1,072,462.

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4 SHEETS—SHEET 4.



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UNITED STATES PATENT OFFICE.

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OUTLET-BOX.

1,072,462.

Specification of Letters Patent.

Patented Sept. 9, 1913.

Application filed September 26, 1911. Serial No. 651,447.

To all whom it may concern:

Be it known that I, WILLIAM H. HOPE, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain Improvements in Outlet-Boxes, of which the following is a specification.

This invention relates to that class of outlet boxes represented by the one shown in my prior application Serial No. 626,411, filed May 11, 1911, and the objects of the present improvements are to enable the end of the cable to be more readily inserted into place in the box; to provide means for either clamping the box upon a gas pipe for a combination fixture, or supporting an electric light fixture from the box itself, where there is no gas pipe; to secure a form of box which the cables enter through the peripheral edges and leave close to the center, so that the clamped portion of the cable has its axial line parallel to the plane of the box; to thus avoid bending the cables to enter the box where there is narrow space, as in side walls or between an old plaster ceiling and a new metal one; to provide an outlet-box which will go onto a drop-elbow and expose the thread outside itself; to secure an improved "knock-out" closure for the cable ways, and to obtain other advantages and results as may be brought out in the following description.

Referring to the accompanying drawings, in which like numerals of reference indicate the same parts throughout the several figures, Figure 1 is a view of one form of an outlet box of my improved construction, looking at the open side which is exposed when the box is mounted on a wall or ceiling; Fig. 2 is a section of the same, taken on line A—A, of Fig. 1; Fig. 3 is an edge view of one of the clamps, looking at its lower edge; Fig. 4 is a view of the outside of the clamp, and Fig. 5 is a view of the inside; Fig. 6 is a view of the box from its bottom; Fig. 7 is a detail view of a certain fixed clamp portion, taken on line B—B, Fig. 6, with the movable clamp member removed; Fig. 8 illustrates the improved "knock-out" disk; Fig. 9 is a view of another form of my improved box, looking at the bottom or base of the same; Fig. 10 is an edge view of the same; Fig. 11 is a view of the open side which is exposed when the box is mounted on a wall or ceiling; Fig.

12 is a section of the same, taken on line C—C of Fig. 11; Fig. 13 is an edge view of one of the clamps, looking at its inner edge; Fig. 14 is a view of the outside of the clamp, and Fig. 15 is a view of the inside.

In said drawings, and referring especially to Figs. 1 to 8 inclusive, 1 indicates the body portion of one form of an outlet box embodying my invention, said body portion having a bottom 2 and a peripheral wall 3. The said bottom provides a base at its side away from the wall 3 by which the box may be secured to a ceiling with screws or the like fastened through holes 4 in said bottom, and in the particular form of box now being described said bottom is flat to form such a base.

At the center of the body portion 1 is an aperture 5 surrounded by a hub 6 projecting in the same direction as the wall 3, and a set screw 7 works through the side of said hub, preferably being inclined inward toward the base of the box. In a combination fixture or one designed for both gas and electric light, the gas-pipe passes through the aperture 5 and the set screw 7 is tightened thereagainst to secure a good contact. For fixtures intended for electric light alone, I provide a stud 8 which fits into the hub 6 and has a recess or socket 9 at one side of itself to receive the set screw 7, whereby the stud can be most firmly and securely united to the box. The stud projects from the said hub at its end away from the base of the box, and this projecting end is threaded as at 10, or otherwise suitably adapted, to receive the electric light fixture and support the same. My improved box can therefore be used for both kinds of fixtures.

Disposed around the inside of the wall 3 are clamps adapted to receive the cables which are to project from the outlet box, and for convenience I have shown four of these clamps. Each clamp comprises a fixed portion 11 which is integral with the wall 3 and provides a hollowed seat 12 adjacent thereto, said seat being in central axial alinement with a bushing 13 integral with said fixed portion 11 at the end thereof away from the base of the box. The cable lies in said seat 12 and with the wires projecting through said bushing 13, and the bottom of the box is apertured, as at 14, for the cable to pass through. Said aperture extends from the fixed portion 11 to—

ward the center of the box beyond the bushing 13 in plan view, being bounded by a curved edge 15, as shown in Figs. 1 and 6. Said fixed portion is provided at one side of the seat 12 and adjacent thereto with a pocket 16 which opens toward the bottom of the box, and also along the edge of the said seat 12, as shown in Fig. 7. At the opposite side of the seat 12 is a shoulder 17 extending away therefrom. A movable clamping member 18 is adapted to lie between the bottom 2 of the box and the said bushing 13, having a curved middle 19 adapted to engage a cable at the opposite side thereof from the seat 12. One end of this clamping member has a toe, as at 20, to be pivotally inserted into the pocket 16 of the fixed portion 11 of the clamp, and the other end 21 is adapted to lie against the shoulder 17 and is perforated to receive a tightening screw 22 which is tapped into said shoulder. Obviously, when said screw is tightened, the member 18 will clamp the cable firmly against the seat 12, and for greater security I have shown the face of the movable clamping member provided with a helical rib 23, and the seat 12 provided with longitudinal ribs 24, which are sharp enough to bite into the cable sheath. The clamping member 18 has at its edge next the bottom of the box a flange 25 at the outer or rounded side of the member which is adapted to lie upon the floor of the box and cover the aperture 14, and at the opposite or inner side of the member is a knock-out disk 26 which will lie across a cableway which is not used or occupied by a cable to close the same against dirt and the like. This disk is connected to the clamping member 18, only at separated points, as 28, so that it is easily broken off when the cable is to extend out through the clamp.

In Figs. 9 to 15 inclusive of the drawings, I have shown a form of my improved outlet box in which the clamps for cables are arranged in the plane of the box instead of transverse thereto, and the cables therefore enter through the peripheral wall 103 of the box and emerge near the center or hub 106 which is similar to the hub 6 already described and similarly provided with a stud 108. In order to enable the wires projecting from the clamps to avoid the said hub 106 or pass to one side thereof in wiring, the clamps are disposed as follows: I have shown for convenience four clamps, and two of these, as 135 and 136 are arranged side by side on opposite sides of a diametric line through the box and as close thereto as possible while allowing wires projecting from them to pass the central hub 106. The other two clamps 137 and 138 are also on opposite sides of the same diametric line before referred to, but at right angles thereto and in alinement with each

other, being arranged as close to the clamps 135, 136 first described as possible, while allowing wires projecting from them to pass the central hub 106. This arrangement allows ample space in wiring and has been found to be a very good one, but I do not wish to be understood as limiting myself absolutely to such arrangement.

Each clamp comprises a fixed portion 111 which is integral with the bottom 102 of the box and provides a hollowed seat 112 adjacent said bottom, said seat slanting inward away from said bottom at an angle of 15-20 degrees and being in alinement with a hole 139 through the wall 103 for the cable to enter. The fixed portion is provided at one side of said seat 112 with a pocket 116 adjacent to said seat and extending longitudinally thereof, and at the opposite side of the seat there is a shoulder 117, said pocket and shoulder both extending laterally away from the said seat 112. A movable clamping member 118 is adapted to cooperate with the said seat 112, said clamping member having a curved middle 119 adapted to fit against a cable at the opposite side thereof from the seat 112. One end of this clamping member has a toe 120 adapted to be pivotally inserted into the pocket 116 of the fixed portion of the clamp, and the other end 121 of the member 118 is adapted to lie against the shoulder 117 and is perforated to receive a screw 122 tapped into said shoulder. Tightening of this screw clamps the cable as will be understood, and in this case I have shown the face of the movable member provided with longitudinal biting ribs 124 and the seat 112 having a helical biting rib 123. One lateral edge of the clamping member is curved, as at 140, to fit against the wall 103, and the opposite lateral edge carries an integral ring 113 which is in substantial axial alinement with the hollowed middle 119 of the member and lies at the inner end of the clamp for the wires to project through from the cable.

Preferably the end 121 of the clamping member has a tapered recess 141 to receive the clamping screw 122, whereby the curved edge 140 of the clamping member is forced toward the wall 103 in tightening the clamping member. The movable clamping member 118 also carries at its end of the curved middle 119 opposite the bushing 113, a knock-out disk 126 which will serve to close the hole 139 in the wall until it is desired to run a cable therethrough. This knock-out disk is weakened at its connection to the clamping member, so as to be easily broken off, as has already been described.

It will be noted that the arrangement of the clamps as herein set forth causes the clamps of each pair to be a right and a left with respect to each other, or the two clamps on one side of the diametric line before men-

tioned are rights while those on the opposite side are lefts. The construction is, however, the same.

For lightness in weight, and to save stock, the bottom of my improved box is at its base gouged out where the construction causes a building up of metal upon the inside or floor of the box, so that an apparently very irregular bottom surface results, as shown in the drawings. By this means, however, a floor of uniform thickness or substantially so is obtained, and a great deal of metal and weight is saved.

The outermost ends of the seats project farthest and therefore form a base for the box to engage the surface upon which it is mounted, and in two flat portions of the floor between the two pairs of clamps and adjacent to the wall 103, as well as in a third flat portion 143 built up to the same plane between the two clamps of the aligned pair, are holes 104 for screws to mount the box in place. Furthermore, in shaping the bottom, or base of the box as above described, recesses 144 are formed in the base leading radially outward from the central aperture 105 equi-distant from each other and which especially adapt this form of box to use in connection with drop-elbows or side-walls. One of these elbows is shown dotted in Fig. 12, and it will be noted that the recess 144 allows the elbow to project far enough through the box to expose its thread outside the same for receiving a fixture. At the same time, the depth of the box as regards its clamps for the cables is not decreased.

The form of box shown in Figs. 9-15 is generally termed a "side" outlet-box, while the form illustrated in Figs. 1-8 is what is known in the trade as a "ceiling" outlet-box. Either can be used, however, in any place to which it is best adapted.

It will be noted that the slant of the clamps which has been described in the side outlet box greatly facilitates the insertion of cables and bringing their wires out parallel to the hub 106. I also desire to call attention to the bushing 113 being carried upon the movable clamping member 118, integral therewith, in the side outlet box shown and described.

Having thus described the invention, what I claim is:

1. In an outlet box, a clamp comprising a fixed portion and a movable clamping member, both having opposite hollowed seats for a cable, one of said seats having a helical biting rib and the other a longitudinal biting

rib, and means for adjusting said clamping member with respect to said fixed portion.

2. In an outlet box, a clamp comprising a fixed portion having a hollowed seat with a socket on one side thereof which opens also through the base of the box and a shoulder on the other side, a separable clamping member adapted to be inserted at one end into said socket and extend across said seat and shoulder, and means for adjusting the other end of said clamping member toward said shoulder.

3. In an outlet box, a body portion having a bottom and a peripheral wall, a fixed clamp portion on said wall having a hollowed seat for a cable extending substantially perpendicular to the bottom of the body portion with a bushing at its end away from said bottom in axial alinement with said hollowed seat, the said bottom having an aperture extending from the said fixed clamp portion inward toward the center beyond the said bushing in plan view, a movable clamping member adapted to swing across said hollowed seat between the bushing and bottom of the box, and means for clamping said member.

4. In an outlet box, a body portion having a bottom and a peripheral wall, a fixed clamp portion on said wall having a hollowed seat for a cable extending substantially perpendicular to the bottom of the body portion with a bushing at its end away from said bottom in axial alinement with said hollowed seat, the said bottom having an aperture extending from the said fixed clamp portion inward toward the center beyond the said bushing in plan view, a movable clamping member adapted to swing across said hollowed seat between the bushing and the bottom of the box and having an outer flange parallel to the bottom and adapted to cover said aperture, and means for clamping said member.

5. In an outlet box, the combination with a chambered body having an aperture to receive a cable, of a clamp adjacent to said aperture comprising a fixed portion on the body, a movable clamping member adapted to cooperate with said fixed portion, means for clamping said member toward said fixed portion, and a knock-out disk on one of said clamp parts integrally connected thereto at a plurality of separated points of its peripheral edge.

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Witnesses:

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