

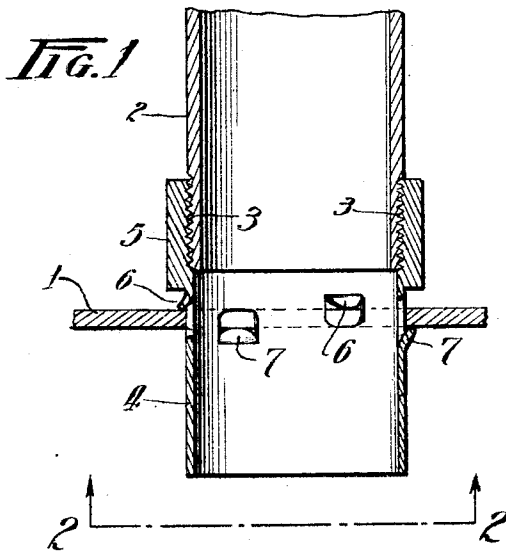
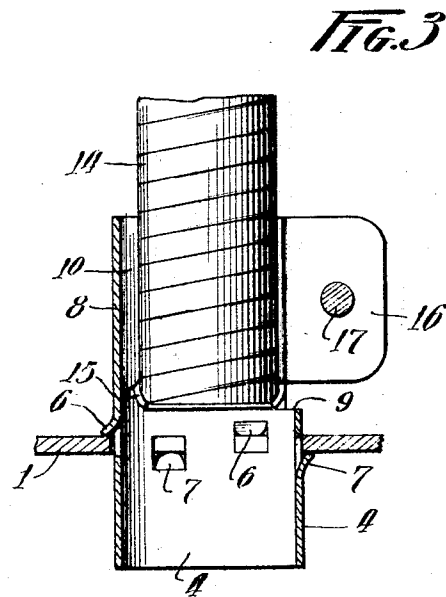
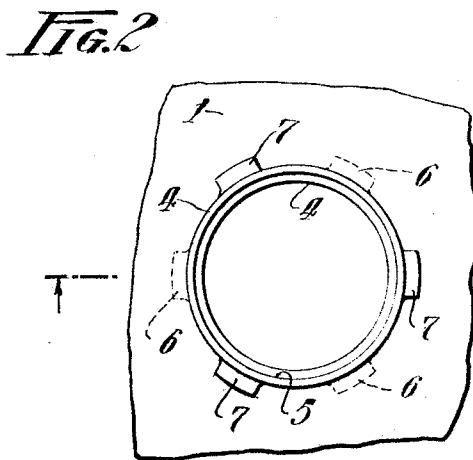
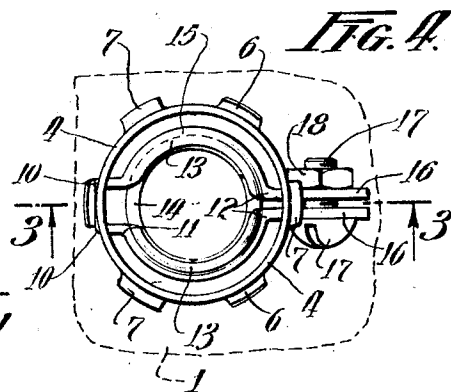
March 8, 1932.

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1,848,442

CONNECTER FOR ELECTRIC CONDUCTORS

Filed Dec. 2, 1929



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UNITED STATES PATENT OFFICE

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CONNECTER FOR ELECTRIC CONDUCTORS

Application filed December 2, 1929. Serial No. 411,188.

This invention relates to connectors for electric conductors for attaching electric conductor conduits and armored electric cables to the top or horizontal member of an electric outlet box.

Among the objects of the invention is to obtain connectors by means of which conduits enclosing electric conductors, or conductors of the kind known in the art as armored cables, may be easily attached to the top or horizontal member of an electric outlet box. An additional object is to obtain connectors of the kind named which may be inserted through an aperture in the top or horizontal member of an electric outlet box and will be automatically rigidly held in place in said aperture without the possibility of a break in the continuity or conductivity of the electric conduit system. An additional object is to obtain connectors of the kind named and for the purpose set forth which have no detachable elements or members thereto, and which is readily attached to an electric conduit or to an armored cable by one skilled in the art.

In the drawings referred to Fig. 1 is a vertical section of a portion of the top or horizontal member of an electric outlet box, of the lower end of an electric conduit and of a construction embodying this invention, by means of which said conduit and top of said outlet box are rigidly joined, taken on line 1—1 of Fig. 2, viewed as indicated by arrows. Fig. 2 is a bottom plan view, looking up, as indicated by arrows at the ends of broken line 2—2, in Fig. 1, of the several parts which are illustrated in said Fig. 1. Fig. 3 is an elevation of the lower end of an armored electric cable, a cross section of a portion of the top or horizontal member of an electric outlet box, and a cross section of a connection embodying my invention, showing a modification of the upper part of the construction which is illustrated in Figs. 1 and 2, taken on line 3—3 of Fig. 4, viewed as indicated by arrows; and Fig. 4 is a bottom plan view, looking up, of the top of the electric outlet box and of the construction embodying my invention shown in Fig. 3.

A reference character applied to design-

nate a given part indicates said part throughout the several figures of the drawings, wherever the same appears.

1 represents a portion of the top or horizontal member of an electric outlet box. 2 represents the lower end of a conduit for electrical conductors. The lower end of conduit 2 is represented as screw threaded, as at 3, Fig. 1, in the ordinary way. 4, 5, represent a connector embodying this invention adapted to have the lower and screw threaded end of conduit 2 connected thereto, as by female screw threads in part 5 thereof being engaged with screw threads 3. 6 represent resilient tongues which are forced outwardly and downwardly from part 4 of member 4, 5; and 7 represent similar resilient tongues which are forced outwardly from said part 4, and upwardly from their bases. The bases of tongues 6 and 7, respectively, are integral with part 4.

The part 4 of the construction which is illustrated in Figs. 1 and 2, is similar to part 4 illustrated in Figs. 3 and 4, and the tongues 6 and 7 are forced out therefrom in the same manner and direction in the construction illustrated in Figs. 3 and 4, as in Figs. 1 and 2. The modified end of the construction which is illustrated in Figs. 3 and 4, is designated 8, and is made to form a clamp. To make this clamp a transverse cut is made in cylindrical part 4 at a point thereon which determines the upper end of said part 4, as at 9, Fig. 3; and the upper portion 8 of said member is bent as at 10, 11 and 12, with the portion between bends 11 and 12 curved, as at 13, to correspond with the peripheral curvature of the armored electric cable 14. The lower end of the curved part 13 is flared inwardly to obtain the bevelled inwardly extending flange 15. The purpose of this bevelled flange is to limit the downward insertion of the armored electric cable 14 in the clamp. By bend 12 I obtain the substantially parallel ear members 16; and 17 represents a bolt which extends through apertures provided therefor in ear members 16. 18 represents a nut on bolt 17, by means of which parallel ear members 16 are forced towards each other to bring curved portion 13 of the

clamp into close relation with the periphery of armored electric cable 14, thereby rigidly securing said armored cable in said clamp.

Conduit 2, illustrated in Figs. 1 and 2, and the armor of the armored cable illustrated in Fig. 3, form metal coverings of the electric conductors which extend there-through.

The operation of the device is; an electric conduit 2 is secured, in the construction illustrated in Fig. 1, in part 5 of the device, as by screw threads 3, or an armored electric cable 14, is secured in the clamp formed by members 13, 16, bolt 17 and nut 18.

The conduit or armored cable being secured to the upper part of the device, part 4 carrying therewith through apertures in the top or horizontal member of an electric outlet box the tongues 7; said tongues being of resilient material will, while within said aperture in the top or horizontal member of the outlet box 1, be forced substantially into the peripheral plane of part 4, and as soon as said tongues are through said apertures they will, respectively, spring into substantially the positions in which they are illustrated in Figs. 1 and 2, thereby preventing the retraction of said part 4 from said apertures. At the time the tongues 7 are through the aperture, the tongues 6, being also of resilient material, will be forced outward and the ends thereof forced upwards, from their initial and normal position, by being forced into contact with the upper surface of top or horizontal member 1 of the electric outlet box, and as said tongues 7 are released from the apertures in said top, the ends thereof are brought into contact with the lower surface of said top by the resilience of said tongues 6. The apertures in the wall of an electric outlet box are usually made by what is termed a knock-out; and the tongues 6 and 7 are arranged to co-act with the wall of the outlet box.

I claim:

1. In a connector, a cylindrical member provided with a plurality of tongues extending outward and upward and an additional plurality of tongues extending outward and downwards, said tongues being of resilient material, in combination with an additional member connected to said first named member and provided with means whereby it is attachable to the metal covering of an electric conductor.

2. In a connector, a cylindrical member provided with a plurality of tongues extending outward and upward, said tongues being of resilient material, and an additional plurality of tongues extending outward and downward, the bases of all said tongues being integral with said cylindrical member, in combination with an additional member integral with said cylindrical member and

provided with means whereby it is attachable to the metal covering of an electric conductor.

3. In a connector, a cylindrical member provided with a plurality of tongues extending outward and upward and an additional plurality of tongues extending outward and downward, said tongues being of resilient material, in combination with an additional member connected to said cylindrical member and provided with elements arranged to form a clamp.

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