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THOMAS A. BROWN, OF LAKE CHARLES, LOUISIANA.

FIXTURE HANGER.

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This invention relates to insulated contact fixture hangers and it comprises a pair of suitably protected insulating blocks adapted to be secured together in end to end relation, one of said blocks being provided with projecting contacts, the other of said blocks being provided with socket contacts adapted to receive said projecting contacts.

An important object of the device is to provide a simplified construction wherein the parts are adapted for ready assembly and wherein efficient electrical contact is maintained.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the drawings I have shown one embodiment of the invention. In this showing:

Figure 1 is a side elevation,

Figure 2 is a central longitudinal sectional view,

Figure 3 is a section taken on line 3—3 of Figure 2, and,

Figure 4 is a detailed perspective of one of the contacts and its associated contact socket.

Referring to the drawings the numeral 10 designates an insulating block formed of any suitable insulating material and provided with an axial opening 11 extending therethrough. A protecting shell 12, preferably formed of malleable iron, surrounds the insulating block, as shown in Figure 2, and is provided with an upper end portion 13 contacting with the upper end of the block 10. The shell 12 is provided with an auxiliary extending portion 14 internally threaded as at 15 for connection with the end of the conduit or other element. The internally threaded opening of the portion 14 of the shell forms an extension of the opening 11 in the block 10. The lower end of the shell 12 is provided with an annular flange 16 for a purpose to be described.

In its lower end the block 10 is provided with an annular recess 17 having an upper wall 18 to which is secured at preferably opposite points, a pair of contacts 19. The contacts 19 are provided with horizontal ends 20 secured in position by screws or the like 21. Lead wires 22 extend through the opening 11 and the extension 14; and the lower ends of these wires are secured against the horizontal portions 20 of the contacts 19 by means of the screws 21 as shown in

Figure 2. The contacts 19 are provided with downwardly projecting ends 23 which are substantially parallel to the axis of the block 10 and project a substantial distance beyond the lower face thereof.

The numeral 24 designates a lower insulating block of substantially circular cross section and the upper end of this block is normally arranged against the lower face of the block 10 as shown in Figure 2. A protecting shell 25 surrounds the block 24 and this shell has its upper end offset outwardly as at 26 to form in effect an annular extension. The block 24 is provided at its upper end with an annular shoulder 27 substantially filling the annular extension 26 of the shell 25. The periphery of the extension 26 is threaded for reception within a clamping member 28 which is provided at its upper end with an inwardly extending annular shoulder 29 adapted to contact with the upper face of the annular flange 16. The clamping member 28 is provided with a hexagonal portion 30 by means of which the clamping member may be tightened to clamp the shells 12 and 25 together as will be obvious.

The block 24 is provided with an axial opening 31 and the lower end of the block is provided with a depending tubular member 32 threaded at its lower end as at 33 for connection with a suitable fixture. Wires 34 extend through the opening 31 and the opening within the tubular member 32 as shown in Figure 2. A preferably machine turned fiber insulating sleeve 35 surrounds the upper portion of the tubular member 32 and the lower end of the shell 25 is provided with an internal annular shoulder 35' having a central opening snugly receiving the sleeve 35.

As shown in Figure 2, the lower insulating block 24 is provided with preferably oppositely arranged recesses 36 adapted to receive contact sockets designated as a whole by the reference numeral 37. Referring to Figure 4, it will be seen that the members 37 comprise substantially horizontal upper ends 38 adapted to be secured against the face 39 of an annular recess 40 within the upper end of the block 24 by means of suitable screws 41. Each of the sockets 37 further comprises a depending portion 42 integral with the horizontal portion 38 and the metal of the depending portion is bent back upon itself to provide a member 43 substan-

tially parallel to the portion 42 and slightly spaced therefrom. The upper ends of the wires 34 are adapted to be secured to the contact sockets 37 by means of the screws 41 as

5 will be obvious.

In practice I prefer to form the contacts 19 and the shell 25 of brass and the contact sockets of copper but it will be obvious that I may employ any suitable material in making these elements. While I have shown and described a pair of projecting contacts and contact sockets, it will be obvious that I may provide any number of these members according to the requirements of each installation.

15 The operation of the device is as follows:

The upper portion of the shell 12 may be embedded in the ceiling of a room or mounted in any suitable manner as desired and the lead wires 22 are led into the upper insulating block 10 and their ends secured to the contacts 19 in the manner described. The lower insulating block 24 is then moved upwardly until its upper face engages the lower face of the insulating block 10 with the projecting ends 23 of the contacts 19 arranged within the sockets formed by the portions 42 and 43 of the contact members 37. The sleeve 28, which has previously been placed in position, is then screwed downwardly with its threads engaging the threads of the annular projection 26 of the shell 25. A wrench may be applied to the hexagonal portion 30 of the clamping member 28 to clamp the elements of the device in proper position. The fixture may then be connected to the lower end of the sleeve 32 as will be obvious. I have found that the arrangement of the contacts is such that firm engagement is maintained whereby perfect electrical contact is effected. The projection 14 and tubular member 32 are provided with internal and external threads respectively in order that the device may be turned end for end when installing, depending upon the form of outlet to which it is to be connected.

It is to be understood that the form of my

invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claim.

Having described my invention, I claim:

A device of the character described comprising upper and lower separable sections including shells and cylindrical insulating blocks arranged in end to end relation, said blocks being provided with relatively large axial openings extending throughout their length to receive lead-in wires, the adjacent faces of said blocks being provided with annular concentric recesses communicating with said axial openings, a pair of contacts formed of flat material having angular upper ends secured in the recess in said upper block, the lower ends of said contacts projecting a substantial distance downwardly beyond the lower face of said upper block, a pair of contact sockets formed of flat resilient material having angular upper ends secured in the bottom of the recess in said lower block, each of said sockets including a downwardly projecting portion bent back upon itself to provide parallel arms adapted to frictionally receive the lower end of one of said contacts, said parallel arms being arranged diametrically opposite each other and parallel to the axis of said blocks and spaced from the axial opening in said lower block, said lower block being provided with recesses corresponding in position to and snugly receiving said arms, the remote ends of said shells being provided with tubular axial extensions communicating with the axial openings in said block and constituting attaching members, and means for securing said separable members together, the lead-in wires being adapted to be connected to said contacts and contact sockets within said annular recesses.

In testimony whereof I affix my signature.

THOMAS A. BROWN.