

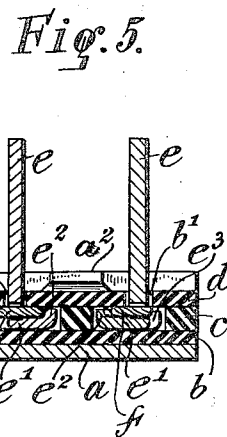
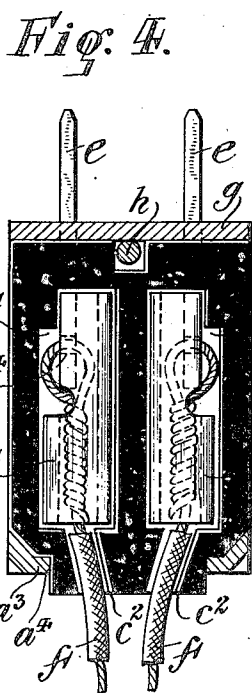
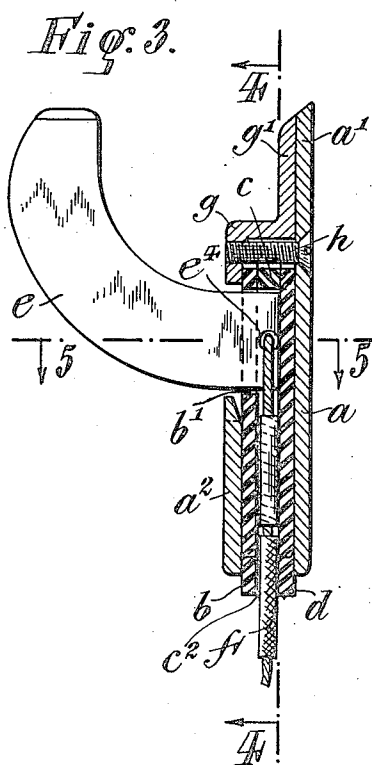
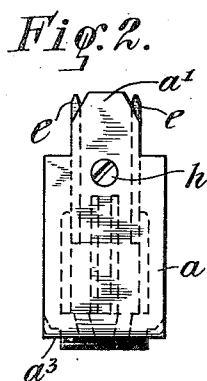
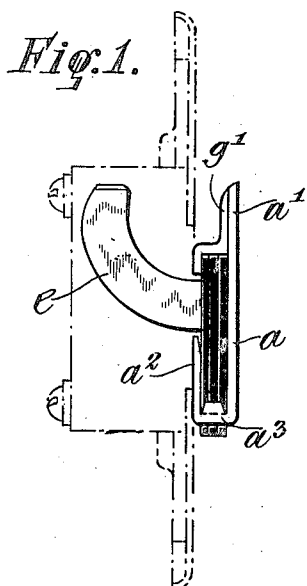
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E. C. WHITE

ELECTRICAL CONNECTING AND SUPPORTING PLUG

Filed March 28, 1921



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ELECTRICAL CONNECTING AND SUPPORTING PLUG.

Application filed March 28, 1921. Serial No. 456,055.

To all whom it may concern:

Be it known that I, ERNEST CANTELO WHITE, a citizen of the United States, residing in the borough of the Bronx of the city of New York, in the State of New York, have invented certain new and useful Improvements in Electrical Connecting and Supporting Plugs, of which the following is a specification, reference being had to the accompanying drawing, forming a part hereof.

In a copending application filed by the present applicant on March 5, 1920, Ser. No. 363,419, there is shown and described in some detail a suitable plug for use with electrical connecting and supporting devices of the character claimed broadly in U. S. Patent No. 1,361,426, dated December 7, 1920. The present invention is concerned with a plug of the same general character, but adapted for use under somewhat special circumstances and characterized by advantageous manufacturing details, such as simplicity of construction for assembling and disassembling, cheapness of cost and compactness. More particularly the invention is concerned with an improved demountable plug for use with wall brackets or sconces having comparatively flat back plates behind which, as is well known, remains very limited space for electrical connecting and supporting devices.

The invention will be described with greater particularity with reference to the accompanying drawing wherein is illustrated, by way of example, a suitable embodiment.

In the drawing:

Figure 1 is a view in side elevation of an improved plug in operative relation to the receptacle with which it cooperates, the outline of the receptacle being indicated in dotted lines.

Figure 2 is a view from the front and in elevation of the improved plug.

Figure 3 is a view in vertical section through the plug and showing particularly the relation of the insulation to the fixture wires and the curved conducting and supporting member.

Figure 4 is a view in section taken on the plane indicated by the line 4—4 of Figure 3 and looking in the direction of the arrows, the outline of the intermediate insulating ply being clearly shown.

Figure 5 is a view in horizontal section through the plug taken on the plane indicated by the line 5—5 of Figure 3 and looking in the direction of the arrows.

The body of the plug may be considered as a one-piece metal stamping a which includes at its upper edge a reduced section a' forming an upstanding lug. The plate a in forming is reversely bent, terminating in a channel piece a^2 at the back of the plug. The web a^3 between the front plate a and the back piece a^2 is slotted, as at a^4 , to receive the reduced lower edges of the insulating plies b , c , d . In the preferred construction, there will be three such plies b , c , d , as illustrated, since this will afford maximum compactness and yet insure effective insulation against the metallic plates a , a^2 . Further, it enables the innermost ply d to be made in very simple form as a one-piece sheet adapted to rest snugly against the reverse face of the front plate a . In like manner the rearmost ply b may be formed of very simple shape but provided with apertures b' through which pass the curved conducting and supporting members e of the plug. The intermediate ply c , which is shown in solid black in Figure 4, is so formed as to receive within openings therein bearing flanges e' with which the inner ends of the conducting members e may be formed in accordance with certain improvements to be later described. Such openings in the ply c will conform in general outline to the inner flanges e' and are indicated in the drawing by the reference character c' . The lead wires f from the fixture to be supported may be carried into the improved plug for protecting electrical connection with the respective conducting members e , through channels c^2 provided in the intermediate ply c and extending from the respective openings c' therein to the lower edge thereof.

By stamping and forming the front plate

2
 5 a of the improved plug with a rear channel section a^2 , the insulating plies b , c and d , no matter what their number or shape, may be readily slipped in place and held in
 10 proper relation to one another and to the conducting members e by the confining channel piece a^2 . It will be understood that the conducting members e are passed through the respective openings b' in the
 15 insulating plate b and the fixture wires f connected electrically therewith before the insulating ply d is laid over the flanges e' and the three plies then slipped into the channel section a^2 in the manner suggested.
 20 In order to retain the parts against accidental dislodgment an angle piece g may be secured to the reverse face of the plate a as by means of a threaded stud h passing through the plate a and the angle piece.
 25 One flange of the angle piece g is adapted to engage the rearmost ply b and clamp all the parts in place. The other flange g' of the angle piece g may be stamped in complementary form to the lug a' so as to coincide
 30 with it when the parts are assembled and afford a strong engaging hook for the fixture to be supported. The upper edges of the lug a' and the flange g' may be beveled or otherwise formed for convenient engagement by the bridge of the fixture.

In addition to the features thus far described, particular attention is to be invited to the conducting and supporting members e . As indicated hereinbefore,
 35 these curved members at their inner ends are stamped and formed with broad flanges e' which may have substantial height and width and be generally channeled by opposed flanges e^2 , e^3 bent up at the opposite
 40 side edges as shown most clearly in Figure 5. The fixture wires f may be led along the channels thus formed and have their bare ends passed through apertures e^4 in the base of the curved members e proper before
 45 being reversely bent and twisted over upon themselves as most clearly indicated in Figure 4. The wiring connection secured in the manner described between the leads f and the conducting members e will be
 50 especially efficient and at the same time the greatest possible protection is afforded to the wires through the channels in the flanges e' and the overlying insulating plies b , d at opposite sides of intermediate plies c
 55 within whose confines the wires f rest. The mechanical strength afforded by the relation between the parts should be equally apparent. Compressive stresses alone are set up in the plug by the weight carried thereon and these compressive stresses are transmitted through the insulating plies to the broad flat flanges e' bearing against the face of the outermost ply d .

The detailed description given has been

devoted largely to manufacturing considerations in which cheapness, compactness and ease of assembling and disassembling are the outstanding characteristics. But aside from these advantageous features, it is to be emphasized that the improved plug
 70 will, in use, enter a field where compactness and simplicity are essentials. In cases where wall brackets or sconces having comparatively flat back plates are to be supported the space left behind them for electrical connecting and supporting devices is
 75 very limited. The improved plug can be adapted to the smallest space now generally required for wiring alone and no great space will be taken up by the wires f since they
 80 may be led straight out through the bottom of the plug. The manner of connecting and disconnecting the conducting arms e with the wires f of any particular fixture will be apparent to one unskilled in electrical
 85 practises. While the rewiring of plugs in this art to different brackets may not be of frequent occurrence, it is well to have the construction so simple that all of the parts may be readily removed or replaced. This
 90 is done in the plug described by removing the screw h and the angle piece g in a manner which is apparent from the foregoing description.

Rearrangements of parts and changes in form and dimensions are to be deemed within the spirit of the invention so long as the general objects are realized by means which fall within the scope of the appended claims.

I claim as my invention:

1. A plug for an electrical connecting and supporting device including curved conducting and supporting members, insulating plies between which the inner ends of said members extend, broad channeled flanges formed at the inner ends of said members to bear against the plies, and means to hold the plies in fixed relation to the members. 100
2. A plug for an electrical connecting and supporting device including curved conducting and supporting members, inner and outer insulating plies between which the inner ends of said members extend, flanges formed at the inner ends of said members, an intermediate ply provided with recesses to receive said flanges and with openings to receive electrical wires for connection with said members, and means to hold the plies in fixed relation. 110
3. A plug for an electrical connecting and supporting device including curved conducting and supporting members and comprising a metal body stamped and reversely bent to form a channel, insulating means to carry the conducting and supporting members and a detachable flange secured to the metal body and opposed to said channel to confine the insulation. 120

4. A plug for an electrical connecting and supporting device including conducting and supporting members and comprising a metal body having a front wall formed with a hook and a reversely bent portion to form a channel, the web of the channel being slotted and plies of insulating material mounted in the channel and carrying the conducting and supporting members, said plies having their lower edges engaging the slotted web of the channel. 10

This specification signed this 25th day of March A. D. 1921.

ERNEST CANTELO WHITE.