

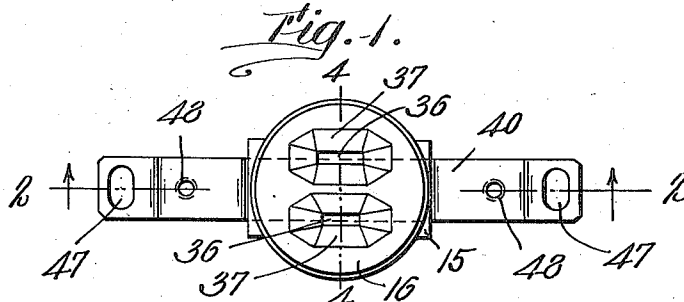
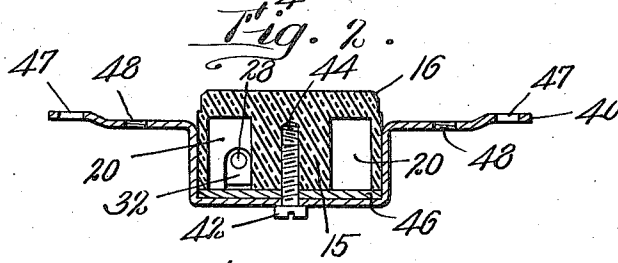
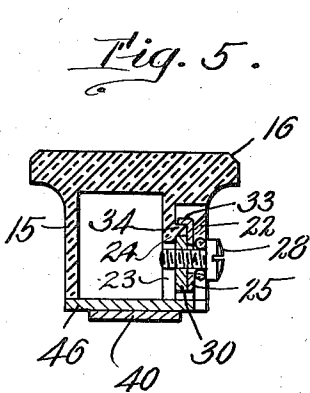
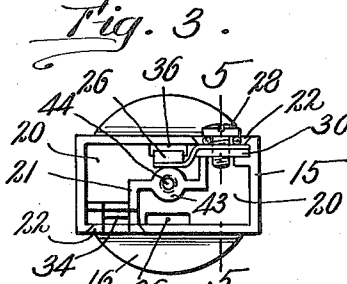
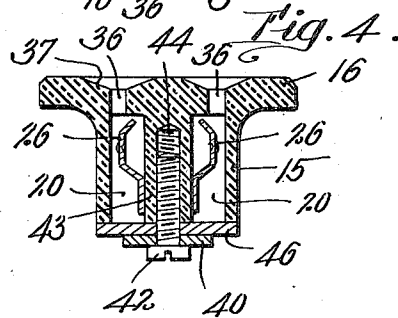
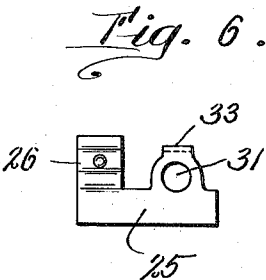
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ATTACHMENT PLUG RECEPTACLE

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ATTACHMENT PLUG RECEPTACLE

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8 Claims. (Cl. 173—330)

This invention relates to an attachment plug receptacle.

One of the important objects of the invention is the provision of a receptacle of the above character having a simplicity of construction which facilitates and expedites the making and assembling of the various parts and thereby effects a material saving in the cost of production.

Another object of the invention is the provision of an insulating body and contacts so formed that the contacts may, in the assembling process, be pushed edgewise into suitable contact chambers in the insulating body and interlocked to the said body when in final position, without requiring other fastening means.

A further object is the provision of a construction which permits the lead wire terminals to be connected to the contacts on the sides of the receptacle thereby facilitating this operation when the receptacle is being mounted in an outlet box and connected up to a wiring system.

Other objects of the invention will be more specifically set forth and described hereinafter.

In its preferred form, my invention contemplates a receptacle made up of an insulating body recessed from its bottom side to form contact chambers and contact plates mounted in said chambers from the bottom thereof, the insulating body and the contact plates having interlocking portions adapted for holding the contact plates locked to the insulating body when in operative position. Preferably, this is accomplished by providing plate contacts adapted to be inserted edgewise into the insulating body in planes parallel with the sides thereof, each contact plate having a portion adapted to lock over a shoulder formed on the side of the insulating body. Midway each side, the receptacle is preferably cut away to expose the contact plate and one or more binding screws may be mounted in said exposed portion so that lead wires may be attached at the side of the receptacle.

This construction has a number of advantages. It conduces to simplicity of construction by reducing the number of parts; eliminates all necessity for providing fastening means such as screws and the like for retaining the contact plates in proper position within the receptacle and it reduces the time and labor necessary for the assembling process.

In the accompanying drawing, showing one form of the invention for the purpose of illustrating the principle thereof, Figure 1 is a top plan view of one form of receptacle constructed in accordance with my invention; Fig. 2 is a ver-

tical longitudinal sectional view thereof on line 2—2 in Fig. 1; Fig. 3 is a bottom plan view of the insulating body showing one contact plate mounted therein; Fig. 4 is a vertical cross-sectional view on line 4—4 in Fig. 1; Fig. 5 is a similar view on line 5—5 in Fig. 3; and Fig. 6 is a side elevation of a contact plate.

In the drawing, I have shown my invention as embodied in a single receptacle but it will be apparent that it may be applied to a duplex receptacle by making such changes as would be apparent to one skilled in the art and it is not my intention to limit my invention to any particular form of receptacle.

Referring to the drawing, 15 designates a one-piece insulating body of any suitable form provided on its upper face with a circular projecting boss 16 adapted to fit a circular opening in the ordinary face plate. In its bottom face the insulating body is recessed to form a chamber 20 in the center of which is formed a partition 21. This partition in its central portion runs longitudinally said insulating body and its two ends are turned in opposite directions at right angles to said central portion and then in opposite directions parallel with and adjacent to the side walls and are joined to the end walls, respectively. The insulating body is recessed at 22 in each side wall, the two recesses being at opposite ends of said body and each adjacent an end wall. The chamber 20 communicates with each of said recesses through an opening 23 in said partition. The openings 23 open out the bottom face of said body but do not extend to the full height of the partition 21 leaving a downwardly projecting portion 24 of said partition between the chamber 20 and each side recess 22 (Fig. 5).

Mounted in the chamber 20 are two contact plates 25, each comprising preferably an elongated body offset, curved portion having an upstanding portion 26 adapted to serve as a spring contact blade. These plates are preferably stamped from thin sheet metal and the blade formed at the same time in one operation. Each contact plate is mounted edgewise in the chamber 20 adjacent one side wall of the insulating body so that the contact blade is positioned midway between the end walls of the insulating body and the other end of the plate lies in the recess 22. The latter end of the plate is therefore exposed and this end is provided with an opening 31 for receiving a binding screw 28 to which may be attached a lead wire. Since the plate is preferably too thin to permit the hole 31 to be threaded, the binding screw is held in position

by a square nut 30 on the back face of the plate. Each contact plate is held fixed against lateral movement in said chamber 20 between one side wall thereof and one end of the partition 21.

5 For locking the contact plates in the insulating body, each of the plates is provided with an inwardly turned portion in the nature of a flange 33 (Fig. 6) adapted to snap over and lock on a shoulder 34 (Fig. 5) formed on the outer face
10 of the portion 24 of said partition in the recessed side of the insulating body above the opening 22. Below this shoulder the side of the insulating body may be bevelled so that when the contact plate is inserted edgewise, the edge of the flange
15 33 will ride up on the bevelled portion and snap over the shoulder, thereby locking the plate in permanent position without requiring any other fastening means.

The top face of the insulating body is provided with a pair of jack blade slots 36 opening into the chamber 20 and the face of the boss may be bevelled at 37 to facilitate applying a jack plug to the receptacle.

For supporting the insulating body in a suitable receptacle, such as an outlet box, a yoke 40 is fastened to the bottom face of the insulating body longitudinally thereof by a screw 42 threaded in a hole 44 formed in an enlarged central portion 43 of the partition 21. A sheet or
30 plate 46 of insulating material is interposed between the yoke and the bottom face of the insulating body. Each end of the yoke may be provided with a hole 47 for receiving means for fastening the yoke in an outlet box and with
35 threaded holes 48 for receiving screws for fastening a face plate over the top of the receptacle.

It will be observed that a receptacle constructed in accordance with my invention is of very simple construction comprising a minimum
40 number of parts, all of which may be assembled rapidly requiring the manipulation of one screw only. In assembling the receptacle, the contact plates with the nuts and binding screws are inserted edgewise in the bottom of the receptacle
45 and pushed inwardly until the flange 33 on each contact plate rides over its respective shoulder 34 and snaps into place thereby locking each contact plate in operative position. The insulating sheet 46 and yoke are then adjusted in position
50 and fastened by the manipulation of the screw 42 which completes the assembling.

In addition to the convenience in assembling, it will be observed that my invention permits the lead wires to be attached to the receptacle at the
55 sides thereof, a position which facilitates the installation of the receptacle in an outlet box and its connection to the wires of the circuit. The contact plate is of extremely simple construction and can be stamped out of ribbon metal in one
60 operation and the locking of those members in the insulating body does not require any screws or other fastening means but is accomplished by merely pushing the contacts into operative position.

65 It is to be understood that my invention is not to be limited to the construction hereinbefore shown and described since it may be embodied in various other forms all within the scope of the following claims.

70 What I claim is:

1. In a device of the character described, an insulating body recessed in its lower face to form a chamber having side and end walls and having a central longitudinal partition having its ends
75 offset in opposite directions parallel with and ad-

jacent said side walls and joined to said end walls, said side walls being each recessed adjacent one end thereof to expose the adjacent end of said partition, a shoulder formed on the outer face of each of the exposed ends of said partition,
5 a contact plate mounted edgewise in each of said side recesses between one end of said partition and a side wall and having its other end projecting into said chamber and provided with a contact blade, said contact plate having a flange
10 projecting over said shoulder to lock said contact plate in said insulating body without requiring other supporting means the upper face of said insulating body being provided with a pair of jack-blade slots in alignment with said con-
15 tact blades.

2. In a device of the character described, an insulating body recessed in its lower face to form a chamber having side and end walls and having a central longitudinal partition having its ends
20 offset in opposite directions parallel with and adjacent said side walls and joined to said end walls, said side walls being each recessed adjacent one end thereof to expose the adjacent end of said partition, a shoulder formed on the
25 outer face of each of the exposed ends of said partition, a contact plate mounted edgewise in each of said side recesses between one end of said partition and an adjacent side wall and having its other end projecting into said chamber
30 and provided with an offset contact blade, said contact plate having a flange projecting over said shoulder to lock said contact plate in said insulating body without requiring other supporting means, said plate having that portion in said
35 recess provided with a binding screw held therein by a backing nut, the upper face of said insulating body being provided with a pair of jack-blade slots in alignment with said contact blades.

3. In a device of the character described, an insulating body recessed in one face to form a chamber, said chamber opening out each side of said body and said openings being in offset relation to each other, a pair of contact plates
45 mounted edgewise in said chamber and each provided with a binding screw registering with one of said side openings, a partition in said chamber having offset end portions for holding said contacts in engagement with the side walls of said body, each of said offset portions having
50 an outer shoulder and each of said contact plates having a flange adapted to lock over one of said shoulders to hold said plate in said chamber without other retaining means, said insulating body having a pair of jack-blade slots in its other
55 face in alignment with said contact plates.

4. In a device of the character described, an insulating body recessed in one face to form a chamber opening out the side of said body, a contact plate mounted edgewise in said chamber
60 and provided with a binding screw registering with said opening, a partition in said chamber having an offset end portion for holding said contact plate in engagement with the side wall of said body, said offset end portion having an
65 outer shoulder and said contact plate having a flange adapted to lock over said shoulder to hold said plate in said chamber without other retaining means, said insulating body having a jack-blade slot in its other face in alignment with said
70 contact plate.

5. In a device of the character described, an insulating body recessed in its bottom face to form a chamber, a central partition in said chamber having oppositely offset end portions, 75

each of said end portions being provided with an outer shoulder and said body being provided with an opening in each side wall in register with the adjacent offset end of said partition, a contact plate mounted edgewise in said chamber between each side wall thereof and an offset end of said partition, each of said contact plates having a portion projecting over said shoulder to lock said plate in said chamber without requiring other supporting means, the face of said body being provided with jack blade slots in alignment with said contact plates.

6. In a device of the character described, an insulating body recessed in its bottom face to form a chamber and having a pair of jack-blade slots in its top face entering said chamber, a central partition in said chamber having oppositely offset end portions, each of said end portions being provided with an outer shoulder and said body being provided with an opening in said side wall in register with the adjacent offset end of said partition, a contact plate mounted edgewise in said chamber between each side wall thereof and an offset end of said partition, each of said contact plates being reversed in relation to the other of them and each having a blade portion in register with one of said slots and a flange projecting over said shoulder to lock said plate in said chamber without requiring other supporting means.

7. In a device of the character described, an insulating body recessed in its bottom face to form a chamber and having a pair of jack-blade slots in its top face entering said chamber, a partition in said chamber having oppositely off-

set end portions, each of said end portions being provided with an outer shoulder and said body being provided with an opening in each side wall in register with the adjacent offset end of said partition, a pair of contact plates mounted edgewise in said chamber, said plates being in reversed relation to each other and each being held against lateral movement between a side wall and an offset end of said partition and each of said contact plates having a contact blade in register with one of said slots and a portion projecting over said shoulder to lock said plate in said chamber without requiring other supporting means.

8. In a device of the character described, an insulating body recessed in its bottom face to form a chamber and having a pair of jack-blade slots in its top face entering said chamber, a central partition in said chamber having oppositely offset end portions, each of said end portions being provided with an outer shoulder and said body being provided with an opening in each side wall in register with the adjacent offset end of said partition, a contact plate mounted edgewise in said chamber between each side wall thereof and an offset end of said partition, each of said contact plates having at one end a contact blade in register with one of said slots and at its other end a flange projecting over said shoulder to lock said plate in said chamber without requiring other supporting means, said contact plates being mounted in reversed relation to each other.

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