

June 6, 1933.

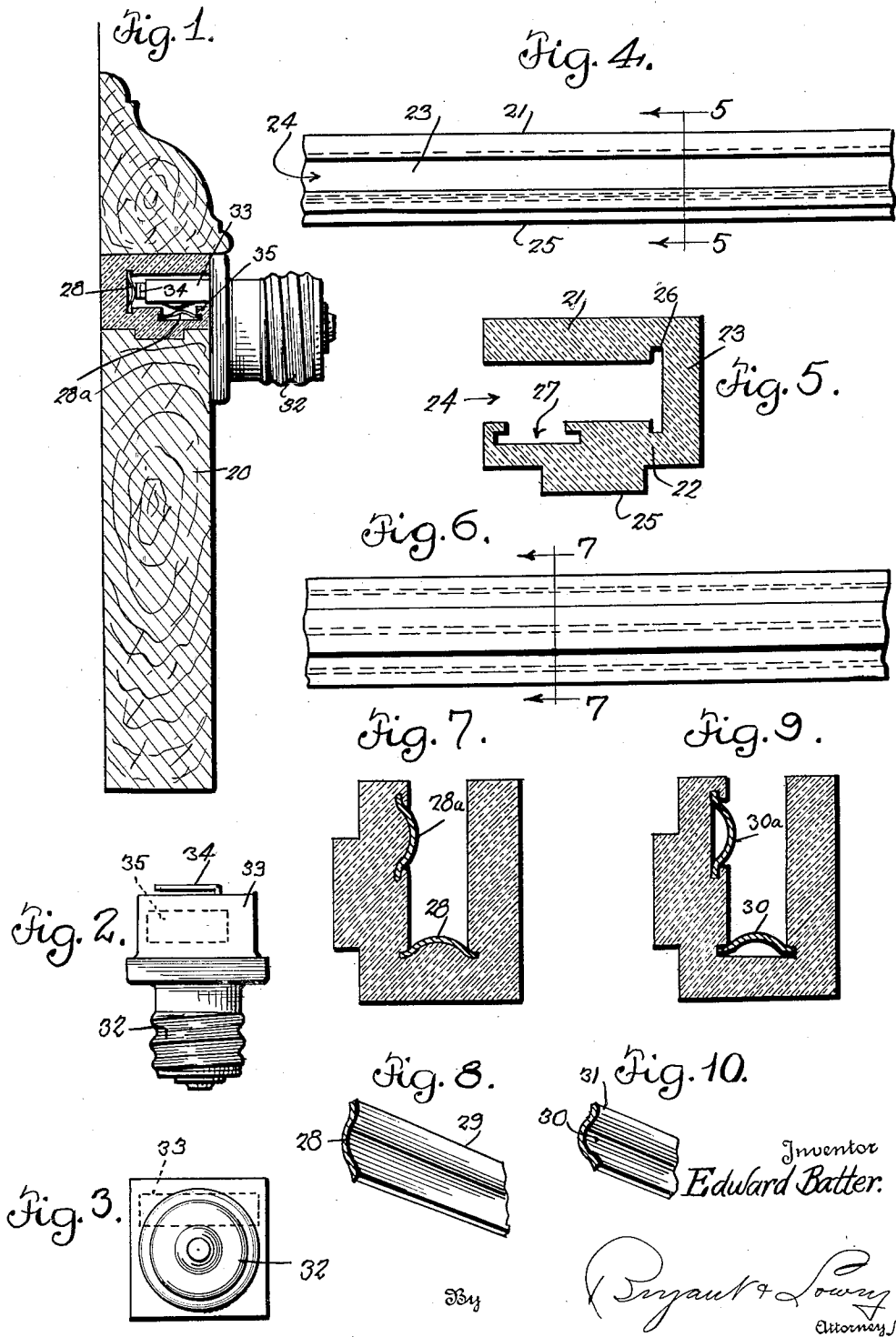
E. BATTER

1,912,424

UNIVERSAL ELECTRIC OUTLET

Filed Dec. 9, 1931

2 Sheets-Sheet 1



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Fig. 11.

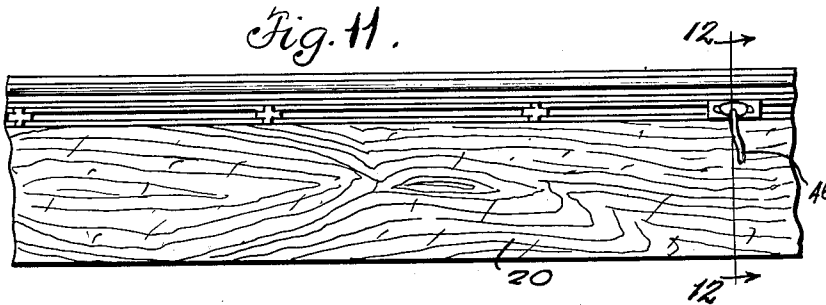


Fig. 12.

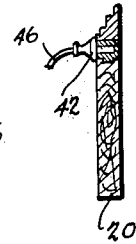


Fig. 13.

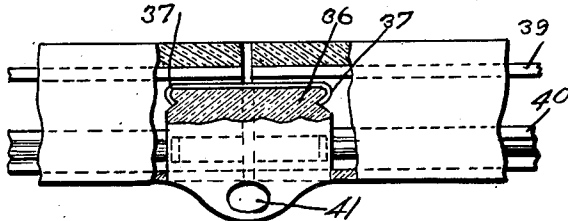


Fig. 14.



Fig. 15.

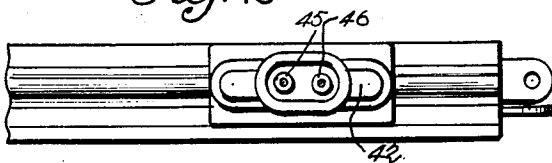


Fig. 17.

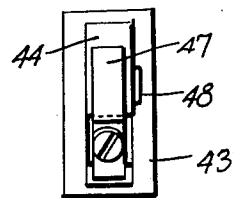


Fig. 16.

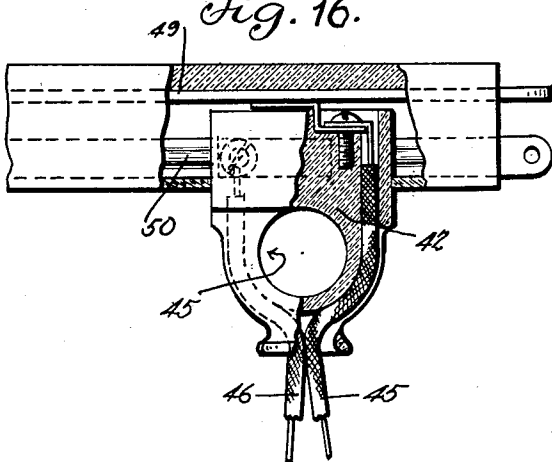
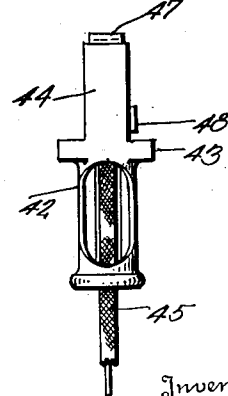


Fig. 18.



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UNIVERSAL ELECTRIC OUTLET

Application filed December 9, 1931. Serial No. 579,935.

This invention relates to certain new and useful improvements in universal electric outlets.

The primary object of the invention is to provide a universal electric outlet for house, factory or other wiring in the form of an insulator of elongated formation carrying strip conductors permitting selective plugging-in whereby the length of conductor cord from the socket or outlet may be greatly reduced in length resulting in the reduction of fire hazard and permitting the connection of numerous electrical devices to a single outlet.

It is a further object of the invention to eliminate the use of the present form of unsightly plug receiving outlet and in lieu thereof substitute a channel-form of outlet adapted to be built into the usual base board of a wall structure, or wherever desired for use so that a plurality of connector devices may be attached to a single outlet. The invention further has an important object to eliminate the use of plug boxes and to eliminate unnecessary wiring of a room, the outlet requiring only a single lead-in from a source of potential for the outlets of one room.

With the above and other objects in view that will become apparent as the nature of the invention is better understood, the same consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawings and claimed.

In the drawings:—

Figure 1 is a vertical cross-sectional view of a base board having the universal electric outlet built therein and illustrating a conductor plug mounted in the socket or outlet;

Figure 2 is a side elevational view of the plug shown in Figure 1 and illustrating end and lateral terminals for engagement with strip contacts in the outlet;

Figure 3 is an end elevational view of the conductor plug;

Figure 4 is a fragmentary front elevational view of the insulation channel member forming the outlet;

Figure 5 is a cross-sectional view taken on line 5—5 of Figure 4, showing sockets in the insulation channel member for the reception of the strip contacts;

Figure 6 is a side elevational view of the insulation channel member with the strip contacts illustrated by dotted lines;

Figure 7 is a cross-sectional view taken on line 7—7 of Figure 6, showing the strip contacts embedded in insulation member;

Figure 8 is a fragmentary perspective view of one of the contact strips illustrated in Figure 7;

Figure 9 is a cross-sectional view, similar to Figure 7, having resilient contact strips set into pockets in the insulation channel member;

Figure 10 is a fragmentary perspective view of one of the contact strips shown in Figure 9;

Figure 11 is a front elevational view of the baseboard of a room showing the universal outlet built therein and connector devices between adjacent ends of contact strips and a conductor plug mounted in the channel outlet;

Figure 12 is a cross-sectional view taken on line 12—12 of Figure 11;

Figure 13 is a fragmentary top plan view, partly in section of the insulation channel member showing a connector device between adjacent ends of contact strips;

Figure 14 is a fragmentary front elevational view, partly in section of the insulation channel member shown in Figure 13;

Figure 15 is a fragmentary front elevational view of the insulation channel member showing a novel form of conductor plug inserted therein;

Figure 16 is a fragmentary top plan view of the channel member shown in Figure 15, partly in section to illustrate another form of conductor plug;

Figure 17 is an end elevational view of the conductor plug shown in Figure 16; and

Figure 18 is a side edge elevational view of the conductor plug shown in Figure 16.

It is to be understood that the universal electric outlet may be embodied in building structures of any character and for house,

factory or shop wiring, the same being herein shown for the purpose of illustration as associated with the base board 20 of a compartment or room. The outlet includes an insulation member of channel formation U-shaped in cross-section as shown in Figures 1 to 9, comprising upper and lower walls 21 and 22 respectively that are connected by a side edge wall 23, the other side of the outlet being open as at 24 for the free entrance of connector plugs. A depending longitudinally extending rib 25 is carried by the lower wall 22 of the insulation channel member of the outlet for interlocking engagement with the base board 20 as shown in Figure 1, the open side 24 of the channel member being flush with the exposed face of the base board.

Strip contacts are confined within the insulation channel member and as shown in Figure 5, the inner ends of the inner faces of the side walls 21 and 22 at the inner face of the side edge connecting wall 23 are undercut as at 26 and provide side grooves while the inner face of the side wall 22 adjacent the entrance opening 24 is provided with a longitudinally extending dove-tailed recess 27.

In the form of insulation channel member illustrated in Figure 7, the contact strips are molded or embedded in the channel member, the contact strips 28 having the side edges 29 thereof received in the side grooves 26 for permanent anchorage while the contact strip similarly mounted in the dove-tail groove 27 is designated by the reference character 28a.

In the form of insulation channel member illustrated in Figure 9, the strip contact 30 is of a resilient character being transversely curved with the side edges 31 thereof resiliently projecting into the side grooves 26, while the resilient contact strip 30a is similarly received in the dove-tailed groove 27.

A conductor plug 32 that may be of the screw type as illustrated in Figures 1 to 3, or of the socket type if desired, carries a blade extension 33 provided with an electric terminal 34 upon its end and a lateral terminal 35 upon a side face thereof. The blade extension 33 is insertable in any part of the entrance opening 24 of the insulation channel member of the outlet shown in Figure 1, the end terminal 34 being engageable with the contact strip 28 or 30 while the side terminal 35 is engageable with the side contact strip 28a or 30a. The contact strips within the insulation channel member of the outlet are in communication with a source of potential and as such channel members may extend the entire length of the base boards 20, it will be seen that the conductor plugs may be inserted in the channel members at any point over the length thereof. With a device of this char-

acter, it is possible to provide a single outlet for an entire room and permit connection therewith of any number of electrical devices desired and thereby eliminate the unsightly use of a plurality of outlets positioned in spaced relation over the base board.

If desired, the contact strip may be of standard length such as three, four or six feet and when disposed in the insulation channel member illustrated in Figures 11 to 14, the spaced ends of the contact strip are electrically connected by connector members 36 provided with spaced metallic strips 37 and 38 for engagement with contact strips 39 and 40 respectively. Each insulation connector member 36 has a portion thereof extending outwardly of the channel member outlet with an opening 41 provided in the projecting portion for the reception of an implement or other device to facilitate placement of the insulation connector member 36.

Another form of conductor plug is illustrated in Figures 15 to 18, the plug 42 of insulation material being of flattened form and having side flanges 43 to limit movement of the blade portion 44 thereof into the channel member of the outlet. The plug member 42 has a center finger opening 45 in its outer end to facilitate mounting thereof and is provided with guide grooves for electrical conductors 45 and 46, the conductor 45 being connected to the end terminal 47 carried by the blade 44 while the conductor 46 is connected to the side terminal 48 carried by the blade 44, the terminals 47 and 48 being respectively engageable with strip contacts 49 and 50 respectively. The strips 49 and 50 projecting from one end of the insulation channel member of the outlet as illustrated in Figures 15 and 16 are to be placed in communication with a source of potential. With this form of conductor plug, it is possible to insert the same in any part of the channel member of the outlet for engagement with the contact strips of the channel member.

From the above detailed description of the invention, it is believed that the construction and operation thereof will at once be apparent, and while there are herein shown and described the preferred embodiments of the invention, it is nevertheless to be understood that minor changes may be made therein without departing from the spirit and scope of the invention as claimed.

I claim:—

1. An electric outlet comprising a channel member of insulating material having a channel opening at one side and of generally rectangular formation in cross-section, the inner angles of the channel having longitudinally extending confronting grooves formed therein and the bottom wall of the channel being likewise provided with longitudinally extending spaced confronting

grooves adjacent its forward end, and contact strips extending along the bottom and inner end of the channel and having their lateral edges seated in said grooves.

5 2. An electric outlet comprising a channel member of insulating material having a channel opening at one side and of generally rectangular formation in cross-section, the inner angles of the channel having longitudinally extending confronting grooves
10 formed therein and the bottom wall of the channel being likewise provided with longitudinally extending spaced confronting grooves adjacent its forward end, and contact strips extending along the bottom and
15 inner end of the channel and having their lateral edges seated in said grooves, said contact strips being transversely arched throughout their length with the crowns of the arches projecting toward the center of the channel.

3. An electric outlet comprising a channel member of insulating material having a channel opening at one side and of generally rectangular formation in cross-section, the inner angles of the channel having longitudinally extending confronting grooves
25 formed therein and the bottom wall of the channel being likewise provided with longitudinally extending spaced confronting grooves adjacent its forward end, and contact strips extending along the bottom and
30 inner end of the channel and having their lateral edges seated in said grooves, said contact strips being transversely arched throughout their length with the crowns of the arches projecting toward the center of the channel, the arches of said contact strips being free from the insulating member to provide spring action in said strips.

4. An electric outlet comprising a channel member of insulating material having a channel opening at one side and of generally rectangular formation in cross-section, the inner angles of the channel having longitudinally extending confronting grooves
45 formed therein and the bottom wall of the channel being likewise provided with longitudinally extending spaced confronting grooves adjacent its forward end, and contact strips extending along the bottom and
50 inner end of the channel and having their lateral edges seated in said grooves, said contact strips projecting from one end of the insulating member and terminating at an equal distance short of the other end of the insulating member whereby a plurality of
55 said outlets may be assembled in line with the contact strips of one entering the grooves of the next member and contacting with the contacts therein.

5. An electric outlet comprising a channel member of insulating material having a channel opening at one side and of generally rectangular formation in cross-section,

the inner angles of the channel having longitudinally extending confronting grooves formed therein and the bottom wall of the channel being likewise provided with longitudinally extending spaced confront grooves
70 adjacent its forward end, and contact strips extending along the bottom and inner end of the channel and having their lateral edges seated in said grooves, said contact strips being transversely arched throughout their
75 length with the crowns of the arches projecting toward the center of the channel, the arches of said contact strips being free from the insulating member to provide spring action in said strips, in combination with a
80 plug having an insulating tongue provided on its end with a contact to engage the contact strip of the end wall of the channel and further provided on its under side with an arched contact engaging the remaining contact
85 strip slightly behind the crown of its arch to retain the plug in position.

In testimony whereof I affix my signature.

EDWARD BATTER.

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