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 baseboard 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 baseboard 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 here-  
in shown for the purpose of illustration as  
associated with the base board 20 of a com-  
partment 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 en-  
trance of connector plugs. A depending  
longitudinally extending rib 25 is carried  
by the lower wall 22 of the insulation chan-  
el member of the outlet for interlocking en-  
gagement 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 in-  
sulation 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 un-  
limited at 26 and provide side grooves  
while the inner face of the side wall 22 ad-  
jacent 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 contact strip 30 is  
of a resilient character being transversely  
curved with the side edges 31 thereof res-  
iliently projecting into the side grooves 26,  
while the resilient contact strip 30a is simi-  
larly 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 elec-  
tric 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 Fig-  
ure 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 out- 
et for an entire room and permit connec-  
tion therewith of any number of electrical  
devices desired and thereby eliminate the  
unsightly use of a plurality of outlets posi-  
tioned 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 from the channel member  
outlet with an opening 41 provided in the  
projecting portion for the reception of an  
implement or other device to facilitate place-  
ment of the insulation connector member 36.  

Another form of conductor plug is illus-  
trated in Figures 15 to 18, the plug 42 of  
insulation material being of flattened form  
and having side walls 43 to limit move-  
ment 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 there-  
of and is provided with guide grooves for  
electrical conductors 46 and 47, the conduc-  
tor 45 being connected to the end terminal  
47 carried by the blade 44 while the con- 
ductor 46 is connected to the side terminal  
45 carried by the blade 44, the terminals 47  
and 45 being respectively engageable with  
strip contacts 49 and 50 respectively. The  
strip contacts 49 and 50 projecting from one end  
of the insulation channel member of the out- 
let 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 construc-  
tion and operation thereof will at once be ap-  
avent, 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 lon- 
gitudinally extending confronting grooves  
formed therein and the bottom wall of the  
channel being likewise provided with longi-
itudinally 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.

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 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, 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 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, 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 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, 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 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,