

June 26, 1934.

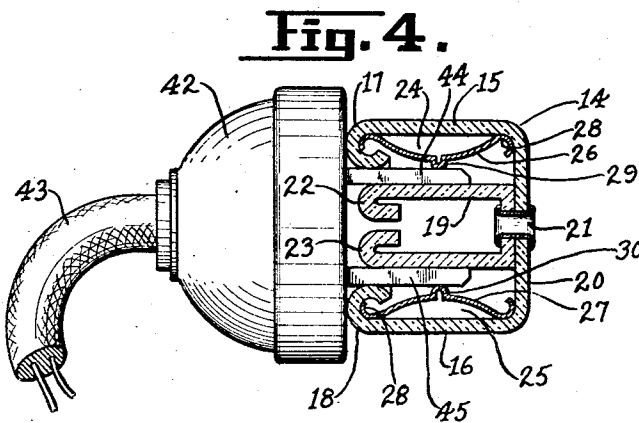
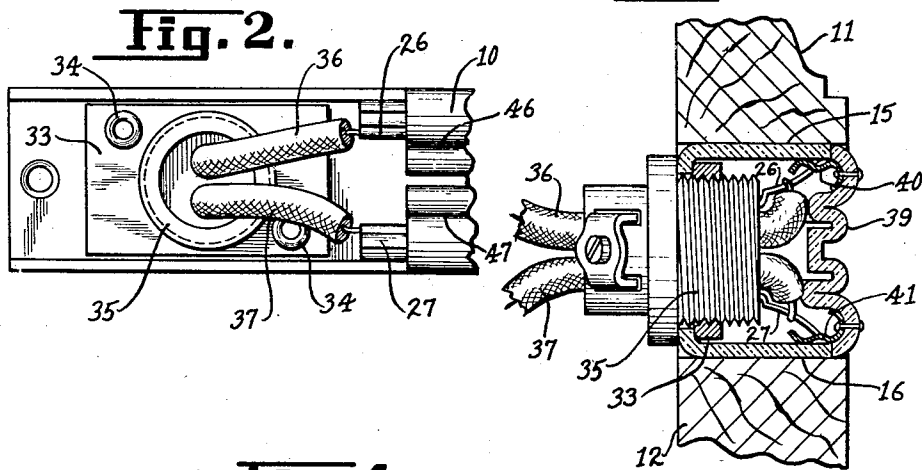
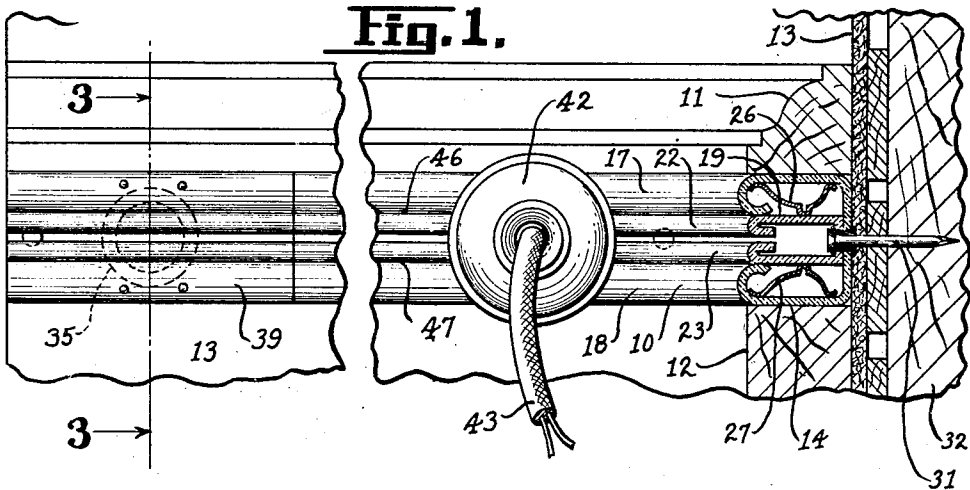
K. W. DU BOIS ET AL

1,964,042

CONTINUOUS OUTLET RECEPTACLE

Filed May 28, 1932

2 Sheets-Sheet 1



INVENTORS
Kenneth W. DuBois.
William L. Cooke.
 BY
H. G. Manning
 ATTORNEY

June 26, 1934.

K. W. DU BOIS ET AL
CONTINUOUS OUTLET RECEPTACLE

1,964,042

Filed May 28, 1932

2 Sheets-Sheet 2

Fig. 5.

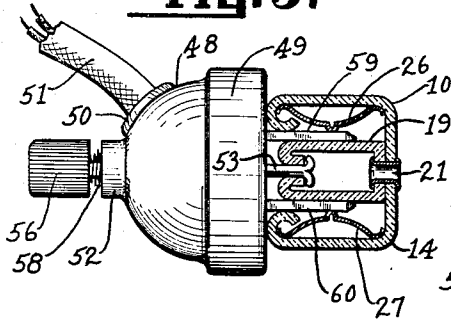


Fig. 6.

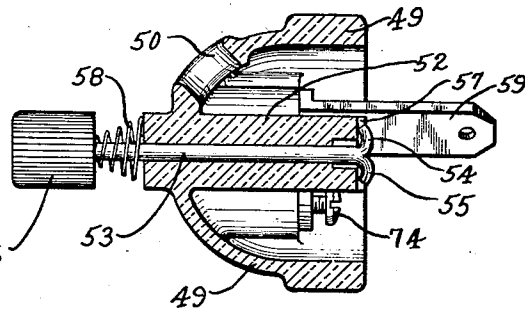


Fig. 7.

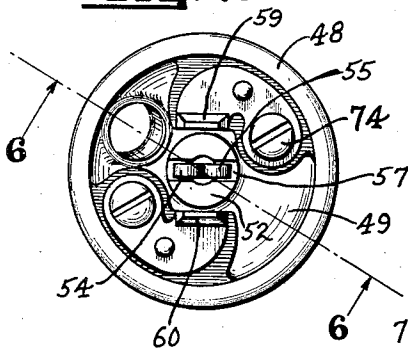


Fig. 8.

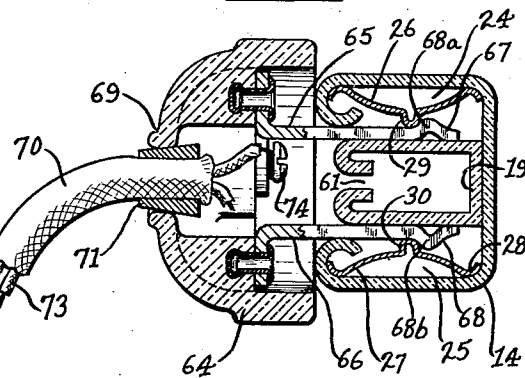


Fig. 9.

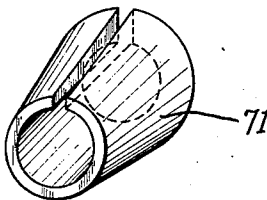


Fig. 10.

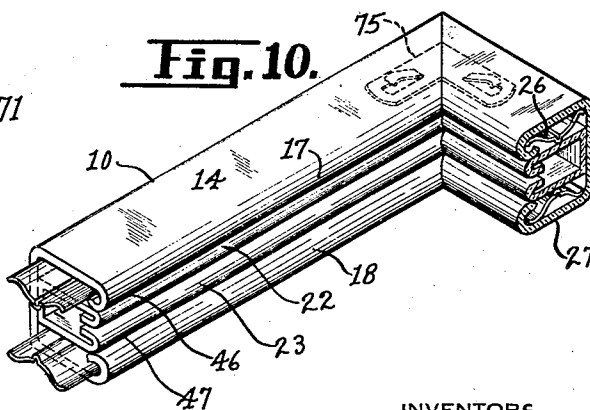
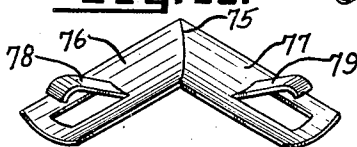


Fig. 11.



INVENTORS
Kenneth W. DuBois
William L. Cooke
BY
H. G. Manning
ATTORNEY

UNITED STATES PATENT OFFICE

1,964,042

CONTINUOUS OUTLET RECEPTACLE

Kenneth W. Du Bois and William L. Cooke,
Plainville, Conn.

Application May 28, 1932, Serial No. 614,154

2 Claims. (Cl. 247—3)

This invention relates to electric plug receptacles, and more particularly to a continuous elongated outlet device adapted to be located on top of a wall baseboard for permitting the attachment of electric plugs at any desired point along the length of the wall.

One object of this invention is to provide a convenience outlet device of the above nature having a pair of spaced bus bars located within an insulating casing which is provided with a central partition to form two slots for receiving the contact prongs of an electric plug or a series of such plugs for delivering current to any desired power consuming devices.

A further object is to provide a double-slot outlet strip of the above nature in which the interior of the casing is sealed from the outside to prevent the entrance of dirt or other injurious materials.

A further object is to provide a continuous outlet strip of the above nature which will be simple in construction, inexpensive to manufacture, easy to install and manipulate, compact, ornamental in appearance, and very efficient and durable in use.

With these and other objects in view there have been illustrated on the accompanying drawings one form of outlet strip and three forms of attachment plugs in which the invention may be conveniently embodied in practice.

In the drawings:

Fig. 1 represents a view, partly in elevation and partly in section, of the preferred form of continuous outlet strip as it appears in position upon a wall base-board and surmounted by a molding.

Fig. 2 is a fragmentary elevation view of one end of the continuous outlet strip shown in Fig. 1 with the cover plate removed to show the method of connecting the feed cable to the bus-bars.

Fig. 3 is a vertical transverse sectional view of the same with the cover plate in place, the view being taken along the line 3—3 of Fig. 1.

Fig. 4 is a transverse sectional view of the same as it appears detached from the wall and showing a conventional electric appliance plug detachably connected thereto.

Fig. 5 is a view similar to Fig. 4 on a smaller scale showing a modified form of attachment plug having means for locking it to the continuous outlet strip.

Fig. 6 is a longitudinal sectional view of the modified form of plug shown in Fig. 5 as it appears when detached from the outlet strip, the view being taken along the line 6—6 of Fig. 7.

Fig. 7 is a bottom plan view of the same.

Fig. 8 is a longitudinal sectional view of a second form of attachment plug, showing another means for locking it to the outlet strip.

Fig. 9 is a detail perspective view of a split conical bushing adapted to be used for locking the electric cable to the plug member.

Fig. 10 is a perspective view of a corner plug receptacle, showing a means for electrically connecting the bus-bars of the two adjacent sections.

Fig. 11 is a perspective view showing a special form of angular strip for frictionally connecting the bus-bars at the mitered corners of two adjacent outlet strips.

It has been found difficult and expensive in the past to arrange the usual outlet sockets in a room in the most convenient positions. By means of the present invention the above and other disadvantages have been eliminated.

Referring now to the drawings in which like reference numerals denote corresponding parts throughout the several views, the numeral 10 indicates a continuous outlet casing adapted to be attached to a wall between an ornamental molding 11 and the upper edge of a base-board 12 secured to the wall 13 of a room.

The outlet casing 10 includes a U-shaped channel member 14 having the outer end of its side walls 15 and 16 inwardly curved to form a pair of semi-cylindrical large beads 17 and 18. The channel member 14 is adapted to be divided by means of a narrow center channel member 19 permanently attached to the base 20 of the casing 10 by a plurality of tubular eyelets 21. The main channel member 14 and the dividing channel 19 are constructed from resilient insulating material, preferably of fibre board. The outer ends of the dividing channel 19 are folded back inwardly upon themselves to form a pair of small beads 22 and 23, which are adapted to lie adjacent, and in contact with the large beads 17 and 18 when no plugs are inserted therein (see the right-hand of Fig. 1).

From this construction it is obvious that the casing 10 will be divided into a pair of separate sealed longitudinal compartments 24 and 25. Located within the compartments 24 and 25 are a pair of convex bus-bars 26 and 27. The bus-bars 26 and 27 have their outer edges 28 curled over to frictionally fit within the compartments 24 and 25, while the central portions of said bus-bars are provided with inwardly extending ribs 29 and 30 which are adapted to be normally pressed against the outside walls of the dividing channel 19.

The casing 10 is adapted to be secured to the wall 13 as by means of nails 31 or other suitable fastening means inserted through the tubular eyelets 21 and driven into the studding 32 of the wall 13.

In order to supply electrical current to the bus-bars 26 and 27, one end of one section in a series of attached outlet casings 10 is provided with a plate 33 secured to the base 20 of the channel member 14 by a pair of tubular eyelet rivets 34. The plate 33 has a central tapped hole within which is engaged a flanged threaded bushing 35 to permit the passage into the casing of a pair of lead-in cables 36 and 37 which are adapted to be electrically joined to the ends of the bus-bars 26 and 27, as by soldering.

The electrical junction just described is adapted to be concealed by a removable cover plate 39 having a pair of spring metal clips 40 and 41 securely riveted to the inside of said plate 39 and adapted to resiliently engage the inner walls of the outlet casing 10 for holding the cover plate 39 securely in place. Preferably, the cover plate 39 will have the same general shape as the face of the outlet casing 10.

As it is desirable to manufacture the continuous outlet receptacles in short lengths, such as four or ten feet, it will be necessary to electrically connect the enclosed bus-bars at the adjacent ends of the outlet casings 10. This electrical connection may be accomplished by extending the bus-bars on one end of each strip beyond the casing. This will permit the next casing to be frictionally and resiliently connected merely by telescoping the outwardly extending end within the end of the next casing.

Fig. 11 shows a special form of bus-bar connector 75 having a pair of convex legs 76 and 77 disposed at right-angles to each other and having resilient inclined tongues 78 and 79 struck up from said legs 76 and 77. The right-angle connector 75 is used for electrically connecting the bus-bars 26 and 27 at the mitered corners of any two angularly connected outlet casings 10, as clearly shown by the dotted lines in Fig. 10.

As shown in Figs. 1 and 4, the outlet casing may be tapped at any desired point along the length thereof by "plugging in" any common form of plug 42 attached to the end of an electric cable 43 for operating any desired power consuming device. The plug 42 is provided with the usual parallel prongs 44 and 45 which are adapted to be inserted in the parallel slits 46 and 47 located between the contacting large and small beads 17, 22 and 18, 23, respectively. The prongs 44 and 45 will thus be caused to engage the bus-bars 26 and 27 within the casing 10.

A modified form of electric appliance plug 48 is shown in Figs. 5, 6 and 7 which is adapted to be locked in position within the outlet casing 10, so that the plug cannot be accidentally pulled out. The plug 48 is provided with a special shaped cap member 49 of insulating material having a beaded side aperture 50 through which an electric cable 51 is adapted to pass. The cap 49 is provided with an integral central shaft 52 within which is slidably fitted a rod 53 having its inner end split to form two opposed tines 54 and 55. The outer end of said rod 53 has a knob 56 by means of which the tines 54 and 55 may be brought into registry with a transverse slot 57 formed on the inner extremity of the shaft 52, and said tines 54 and 55 are normally held within said slot 57 by means of a spiral spring 58 abutted between the locking knob 56 and the outer face of the shaft 52.

The modified plug 48 is provided with the usual prongs 59 and 60 which are adapted to contact with the bus-bars 26 and 27 for completing the circuit through an electric appliance. After the plug 48 has been pushed into the receptacle casing 10 as far as it will go, the plug may be locked in this position merely by pushing in and manually twisting the knob 56 to rotate the tines 54 and 55 within the central insulating channel 19 to the locking position shown in Fig. 5. The parallel inturned ends of said channel 19 will then prevent the spring 58 from retracting the tines to the normal position shown in Fig. 6. This type of attachment plug is especially useful if the outlet strip 10 is located on the ceiling for suspending a lighting fixture therefrom.

A further modified form of plug is shown in Fig. 8 for use in connection with the improved outlet strip. In this form, provision is made of an insulated cap 64 having a pair of parallel contact prongs 65 and 66, which have converging extremities 67 and 68 terminating in shoulders 68a and 68b which are adapted to detachably fit behind the grooved ribs 29 and 30 of the bus-bars 26 and 27 when the cap 64 has been "plugged in" as far as it will go (see Fig. 8).

The cap 64 is provided with a central aperture 69 through which a two-wire electric cable 70 is passed, and said cable 70 may be locked within said aperture 69 by means of a hollow conical split bushing 71, which is passed over the end of the cable 70 before the conductors 72 and 73 thereof are attached to the binding posts 74.

It will be obvious from the above construction that when the cable is pulled outwardly from the cap 64, the split conical bushing 71 engaging within the aperture 69 will be pressed inwardly against the cable 70, and the harder the cable is pulled, the tighter will the cable be clamped within the bushing 71.

One advantage of the present invention is that the position of an attachment plug may be changed merely by pushing it along in the outlet receptacle without the necessity of pulling out the plug and reinserting it at another point.

A further advantage is that the conductor cable may be securely held in the outlet plug without knotting the cable.

While there have been disclosed in this specification several forms in which the invention may be embodied, it is to be understood that these forms are shown for the purpose of illustration only, and that the invention is not to be limited to the specific disclosures but may be modified and embodied in various other forms without departing from its spirit. In short, the invention includes all the modifications and embodiments coming within the scope of the following claims.

Having thus fully described the invention, what is claimed as new and for which it is desired to secure Letters Patent, is:

1. In an electric connecting device, an outer insulating channel, an inner smaller insulating channel having its base secured to the base of said outer channel, the side walls of said inner channel having a pair of inturned ribs, a pair of bus bars located in said outer channel outside said side walls, an attachment plug having a pair of longitudinal prongs for engaging said bus bars, said plug having a central sliding rotatable rod between said prongs and provided with a pair of lateral tines for detachable engagement with said ribs to lock said plugs against accidental removal when said rod is rotated a quarter turn.

2. In an electric connecting device, an outer

insulating channel, an inner smaller U-shaped insulating channel having its base secured to the base of said outer channel, the side walls of said inner channel having a pair of inturned ribs on 5 their upper edges, a pair of bus bars located in said outer channel outside said side walls, an attachment plug having a pair of longitudinal prongs for engaging said bus bars, said plug hav-	ing a central sliding rotatable rod between said prongs and provided with a pair of lateral tines for detachable engagement with said ribs to lock said plug against accidental removal when said rod is rotated a quarter turn.	80
	KENNETH W. DU BOIS. WILLIAM L. COOKE.	
10		85
15		90
20		95
25		100
30		105
35		110
40		115
45		120
50		125
55		130
60		135
65		140
70		145
75		150