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F. A. CHIUCHIOLO  
ELECTRIC WIRE CONNECTION

2,486,115

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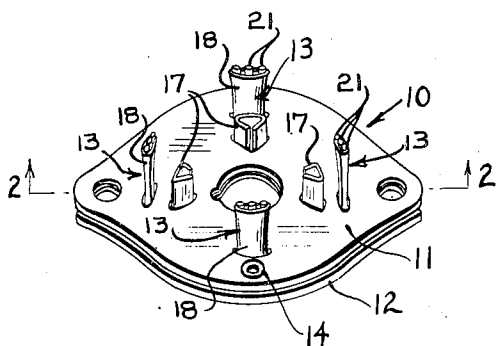


Fig. 1.

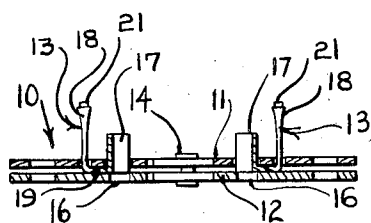


Fig. 2.

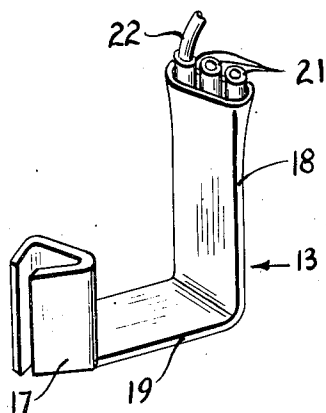


Fig. 3.

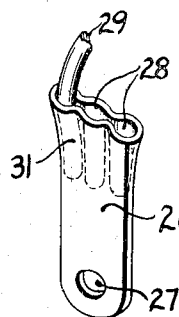


Fig. 4.

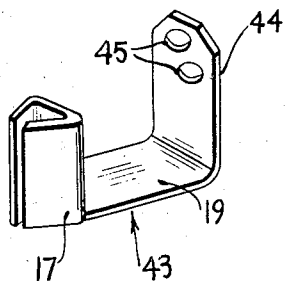


Fig. 5.

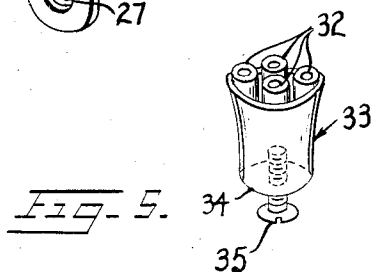


Fig. 6.

INVENTOR  
FRANK A. CHIUCHIOLO  
BY *John A. Plackey*  
ATTORNEY

# UNITED STATES PATENT OFFICE

2,486,115

## ELECTRIC WIRE CONNECTION

Frank A. Chiuchiolo, New York, N. Y.

Application August 3, 1946, Serial No. 688,321

1 Claim. (Cl. 173—328)

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This invention relates to a multiple wire connection or terminal wherein several wires can be connected with a live contact in such manner that one of the wires can be located or removed from the connection without disturbing any of the other wires.

It is accordingly an object of the present invention to provide a simple multiple wire connection wherein all wires will be independently located upon the connection so that the locating or removal of one wire can be effected independently of the remaining wires.

It is among the other objects of the invention to provide a multiple wire connection, which is simple to fashion, which is free of movable parts and of such parts as may require a threading operation, and a connection which is cheap to make.

According to one form of the invention, the portion where the wires are connected is of sleeve shape within which are contained a plurality of smaller sleeves to which the wires are respectively connected. The wires are secured within the small sleeves by means of solder and this same solder renders a better securement of the small sleeves to the main sleeve containing them.

In another form of the invention the openings for receiving the wires are merely small holes provided in the flat strip material. The holes are separated from one another and a wire can still be located in one hole or removed therefrom independently of the wires in the other holes.

In still another form of the invention the main sleeve portion is of round shape to accommodate small sleeves which are bunched in circular fashion. Any one of the several different arrangements shown can be provided for effecting the attachment of the terminal to a live contact.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claim in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing forming a material part of this disclosure:

Fig. 1 is a perspective view looking upon the bottom side of a radio tube socket employing the wire connections or terminals constructed according to the present invention.

Fig. 2 is a cross-sectional view taken on the line 2—2 of Fig. 1 and looking in the direction of its arrows.

Fig. 3 is an enlarged perspective view of one

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of the wire connections which is used with the radio tube socket.

Fig. 4 is a perspective view of another form of wire connection which can be used with binding posts, bus bars and the like where it is desired to make a multiple connection to the binding post or screw.

Fig. 5 is a perspective view of still another form of wire connection wherein the sleeve bearing the several wire holders has an internally threaded portion into which a screw for attaching the wire connection to a part is entered.

Fig. 6 is a perspective view of a modified form of wire connection adapted to be used with the radio tube socket shown in Figs. 1 and 2.

Referring now to the form of the invention shown in Figs. 1, 2 and 3, a socket 10 is formed of two pieces 11 and 12 of plastic sheet in which a plurality of openings have been cut. Terminal or wire connections 13 are disposed in place through the piece 11, which is the under side of the socket, then the piece 12 which is the top side of the socket is secured to the piece 11 by means of grommets 14. The socket is then ready for use. Holes 16 are located in the piece 12 and are adapted to receive the pins of a radio tube as the same are pushed into the socket for contact with a folded sheet portion 17 on the connections 13, (Fig. 3). Spaced from the folded sheet portion 17 is a sleeve 18, extending in the same direction from a spacing portion 19 of the connection as the portion 17 and which contains a plurality of small sleeves 21 into which wires 22 are inserted and made fast thereto by soldering. There are three such small sleeves 21 within the main sleeve 18 whereby three different wires can be connected to the terminal connection 13. Preferably these small sleeves are disposed in line and the main sleeve 18 containing them is flattened about the lined-up smaller sleeves. It will be apparent however that the small sleeves could be arranged somewhat in a different fashion and requiring thereby that only the main sleeve be changed to accommodate the different arrangement of such smaller sleeves.

In Fig. 4 there is shown a terminal adapted for connection to a binding post, bus bar, live contact or the like by projecting, through the opening 27 at one end thereof, a screw or other fastening means to secure the same to the part to which the wires are to be connected.

The upper end of the terminal 26 is fashioned the same as the portion 18 of the terminal 13 to receive a plurality of small sleeves 28 to which wires 29 are connected. The large sleeve por-

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tion, as indicated at 18 of Fig. 3 and 31 of Fig. 4, can be fashioned from a sheet of flat material and folded about the small sleeves so that the folded edges are lined with one another and sufficiently enclose the small sleeves 28 to retain them in place within the main sleeve. The solder which is disposed upon the small sleeves to retain the wires therewithin will fall between the small sleeves and the main sleeve to simultaneously fix the small sleeves in good contact with the main sleeve.

In Fig. 5 there is shown a wire connection in which several contact sleeves 32 are arranged in circular fashion and retained by a sleeve 33 of round shape. The bottom end 34 of the sleeve 33 is closed and is threaded to receive a removable screw 35 for securing the connection 33 to a live contact, bus bar or the like.

In Fig. 6 there is shown a connection 43 which may replace the terminal 13 of the radio tube socket 10. This terminal 43 has the usual folded sheet portion 17, the spacing portion 19, but its connecting portion 44 is only that of flat strip material and the multiple connection of wires thereto is effected through holes 45 punched from the portion 44. Wires are passed through these holes and made secure to them by solder. As many holes as desired can be placed on the portion 44. Also the portion 44 in order to provide the desired number of holes can be increased to any length.

It should now be apparent that there has been provided convenient means for fixing a plurality of wires to a single terminal whereby any desired wire may be located or removed independently of the remaining wires.

It is to be understood that, if desired, the small sleeves described may be entirely eliminated by merely inserting the wires directly into the large sleeve portion and then applying solder as before.

While I have illustrated and described the preferred embodiments of my invention, it is to be

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understood that I do not limit myself to the precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claim.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:

In a connector for connecting the bared ends of electrical wires to the projecting contact peg of an electronic tube or similar electronic element having a strip of metal including an intermediate portion and end portions bent at right angles to the intermediate portion and extended parallel to each other, a tubular socket portion formed on one of the end portions for receiving the projecting contact peg, a sleeve portion formed on the other end portion of the strip of metal, and a plurality of small sleeves anchored in said sleeve portion with their outer ends projecting slightly beyond the free end of said sleeve portion, whereby the bared ends of the electric wires may be extended into the open projected ends of said small sleeves and secured thereto.

FRANK A. CHIUCHIOLO.

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