

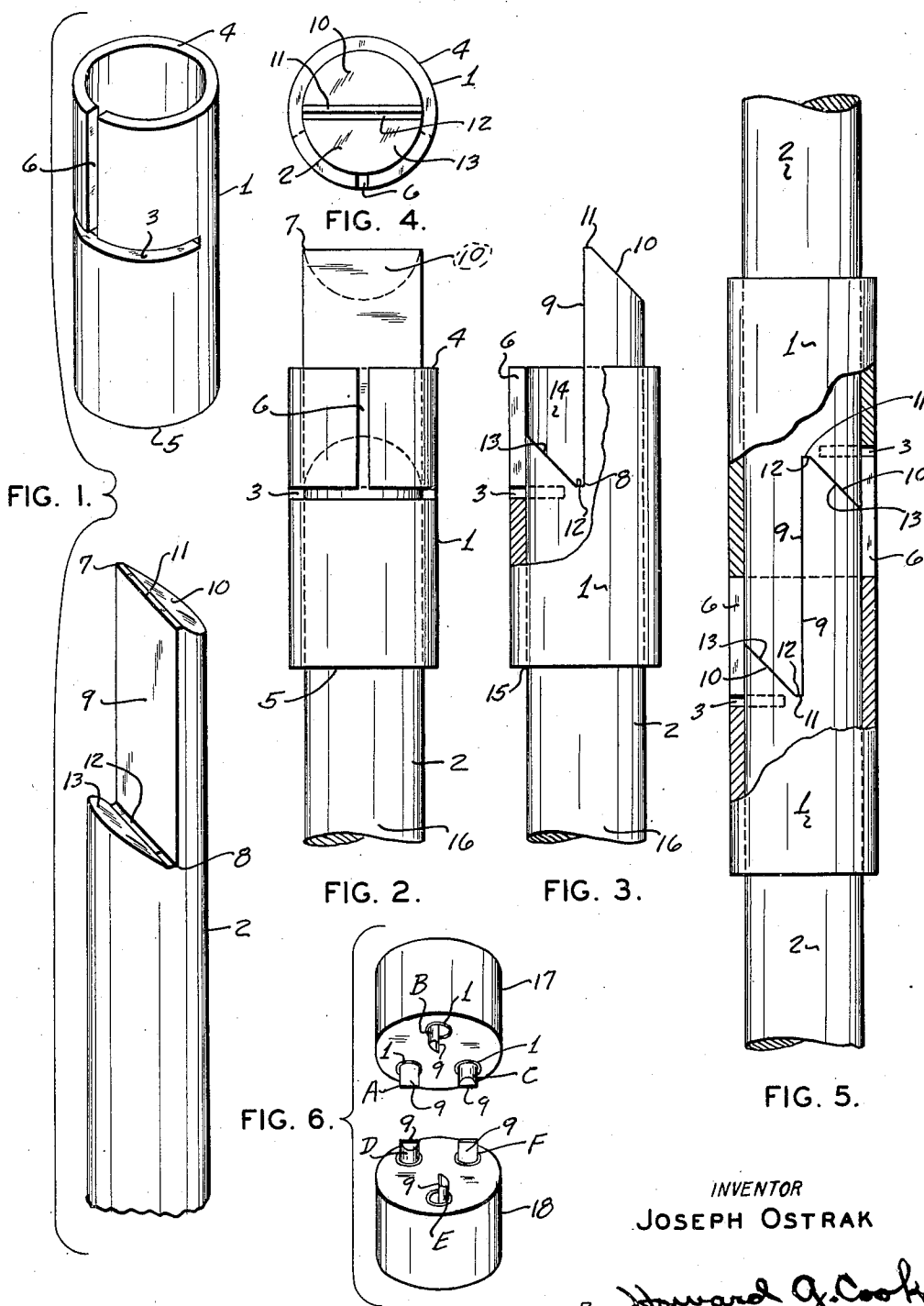
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UNIVERSAL ELECTRICAL CONNECTOR

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UNIVERSAL ELECTRICAL CONNECTOR

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3 Claims. (Cl. 287—126)

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This invention relates to electrical connectors, and particularly to universal cable connectors and electrical appliances to which said connectors could be attached; that is to say, through the use of my connectors, the ends of two cables may be connected, or a cable may be connected with the same connectors to an appliance. Any number of my connectors can be used in a cable, depending upon the number of wires in the cable, and any number of cables may be connected together, one to another. My connectors are so arranged in the various cables that any two of them may be connected together, and this is accomplished with the minimum of time and effort. When so connected, my connectors act as perfect conductors of electrical current through any number of cables.

In the drawings—

Fig. 1 is an exploded perspective view of my connector.

Fig. 2 is an elevational view of my connector as it appears when partially assembled.

Fig. 3 is an elevational view of the connector illustrated in Fig. 2 but taken from a different angle.

Fig. 4 is a top plan view of the connector illustrated in Fig. 2.

Fig. 5 is an elevational view, partly broken away, of the connector fully assembled.

Fig. 6 is a perspective view on a reduced scale of the component parts of the invention assembled in operative position.

The invention comprises a pair of identical sleeves 1 and a pair of identical members 2 for insertion into said sleeves. Describing first one of the sleeves, it is of tubular formation and made of any suitable conducting, resilient material. The sleeve 1 is provided with a transverse slot 3 extending part-way around its circumference approximately midway of its ends 4 and 5. A longitudinal slot 6 extends from the slot 3 to the end 4 of the sleeve 1, the slots 3 and 6 permitting expansion of a portion of the sleeve for a purpose to be hereafter set forth.

Describing now the member 2, this is formed of a suitable material having electrical conductivity, and is of generally cylindrical shape. At its end 7 the member 2 is longitudinally cut away for half of its thickness to the point 8 (Fig. 1), providing a flat, longitudinal face 9. The top face of the member 2 is cut away at an angle of approximately 40 degrees to provide an angular face 10, but leaving a narrow strip 11 between the faces 9 and 10.

When the member 2 is cut to provide the face 9, at the point 8 a narrow, horizontal strip 12 is cut, and adjacent the strip 12 the cylinder 2 is cut so as to provide a diagonal, upwardly extending face 13 having the same degree of angularity as the face 10 at the top of the member 2, said

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strip 12 being of the same size and shape as the strip 11.

All of the above is most clearly illustrated in Fig. 2.

In operation the procedure is as follows:

The assembly as above described is to be used in pairs. One of the members 2 is inserted into one of the sleeves 1 so that the slot 3 will be parallel with the point 8 and the strip 12. The angular face 10, the strip 11, and one-half of the face 9 will protrude beyond the sleeve 1, and the face 13, the strip 12, and the other half of the face 9 will be positioned within the sleeve 1, leaving a cavity 14 within said sleeve shaped identically but in reverse exactly like the protruding portions of the member 2, all as shown clearly in Fig. 3. At its lower portion 15 the sleeve is secured in any preferred manner to the member 2, and the end 16 of the member 2 extending beyond the end 3 of the sleeve is connected to electrical wires (not shown). The assembly is now in condition to be placed in position in a plug 17 of any suitable non-conducting material.

The inside diameter of the sleeve 1 is the same as the outside diameter of the member 2, and the slots 3 and 6 permit of the slight expansion of the resilient material of which the sleeve is made which is necessary for the insertion of the member 2, and also provide for gripping engagement of the slotted portion of said sleeve with that part of the member 2 which is positioned therein.

A second sleeve 1 and member 2 are now assembled in the same manner as above described and also secured to electrical wires (not shown) and placed in position within an aperture at the end of a cable or electrical appliance to provide a socket 18.

When the connection is to be made, the two pairs of sleeves 1 and members 2 as above described are engaged to form the assembly shown in Fig. 5: that is to say, the two faces 9 of the member 2 are positioned adjacent each other, so that the protruding angular face 10, strip 11, and half of the face 9 of each member 2 is pushed into the cavity 14 formed by the engagement of the other sleeve 1 and its member 2, when the entire assembly will be engaged as shown in Fig. 5, with the respective faces 9, strips 11 and 12, and faces 10 and 13 contacting each other.

For the purpose of this specification we will suppose that the plug 17 and the socket 18 are each provided with three of my connectors, although it is to be understood that there may be any number of connectors employed without departing from the spirit of the invention.

In the plug 17 I will identify the connectors as A, B, and C, and in the socket 18 I will call the

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connectors D, E, and F, as illustrated in Fig. 6. From this view it will be apparent that the flat faces 9 of the connectors A and D face each other, the flat faces 9 of the connectors B and E face each other, and the flat faces 9 of the connectors C and F face each other, where these faces protrude from their sleeves 1, so that when the plug 17 and the socket 18 are engaged in the faces 9 of the respective pairs of connectors A and D, B and E, and C and F will contact each other and thus act as conductors of current from the plug 17 to the socket 18, or vice versa. However, if desired any pair of opposite connectors may be turned in the plug and socket to accommodate a different style or type of connection, always maintaining their faces 9 in juxtaposition, from which it will be understood that the plugs and sockets may be varied to suit various types without changing the number of connector assemblies.

I claim:

1. An electrical connector consisting of two identical interfitting parts, each consisting of a contact member of cylindrical shape, having a semi-cylindrical end projection with an axial planar face extending backward along the axis from the end of the projection, the outer end of the projection having an end face formed by a plane that extends outwardly and backwardly from the axial planar face, and at an acute angle thereto, the inner end of the projection having an end surface formed by a plane that extends outwardly and forwardly from the axial planar face, parallel to the outer end face, a cylindrical split sleeve surrounding the projection, the sleeve extending forwardly along the projection a predetermined distance, the sleeve cooperating with the cut-away part of the projection to form a semi-cylindrical socket portion with a wedge-shaped bottom end, and a slit extending backward from the forward end of the sleeve to sub-

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stantially the bottom of the socket portion, the sleeve being of resilient material, whereby when the projection of each connector part is inter-fitted into the socket of the other, the interfitting wedge-like projection ends engaging the wedge-like socket bottoms will force the axial planar faces together, and the resilient sleeves will resiliently hold the axial planar faces together.

2. The combination of claim 1 wherein the sleeves extend half way out along the projections so that when the connector parts are fitted together the ends of the two sleeves will meet.

3. The combination of claim 1 wherein the sleeves extend from the innermost part of the projections forwardly, and the axial slit extends backward over the overhanging part of the socket bottom to approximately the most backward part of the socket, and a transverse cut intersects the axial slit.

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