

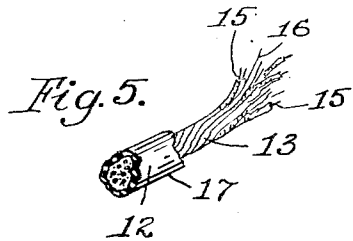
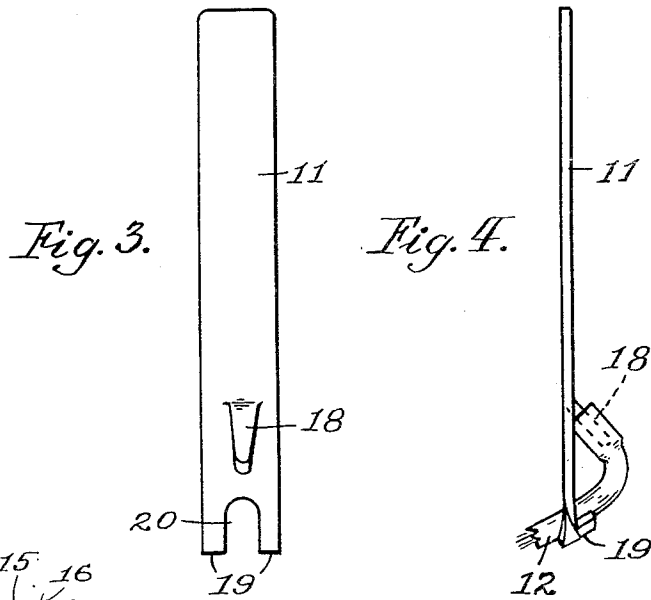
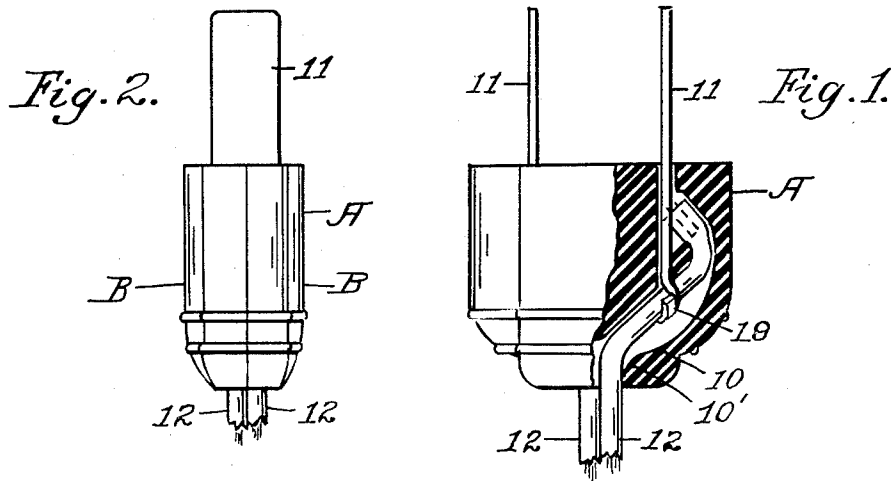
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TINSEL WIRE CONNECTOR FOR ELECTRICAL CONDUCTORS

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# UNITED STATES PATENT OFFICE

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## TINSEL WIRE CONNECTOR FOR ELECTRICAL CONDUCTORS

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1 Claim. (Cl. 339-100)

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Our invention relates to tinsel wire connectors for electrical conductors of that type having a cluster of very fine wire conductors which are formed into a cable and incased in insulation. In one form of insulation covered wire now in use, which is usually called "tinsel wire"; the core is composed of a bundle of very fine wires incased in rubberlike, or other flexible insulation tubing, the strands of very fine tinsel wire being wrapped spirally about the wadding composed of cotton or silk threads and formed into an insulated cable.

The primary object of this invention is to provide a serviceable conductor terminal on an exposed end of a flexible tinsel wire conductor, suitable for application as an electrical service conductor in many uses to which this type of electrical conductor is used, such as electrical hearing devices, microphones and other electric and electronic devices. Among further objects of our invention is to provide a form of terminal which is produced chiefly by an inexpensive stamping operation and which is produced so as to insure an extended area of substantially perfect electrical contact that will insure and maintain a permanent connection when attached for use as a tinsel wire conductor in the manner hereinafter described.

In the accompanying drawing forming part of this specification, Figs. 1 and 2 are side elevational views, Fig. 1 being partly broken away and in section showing one of our improved terminal wire connectors applied thereto; Fig. 3 is a side elevation of one of our improved contact terminals before the tinsel wire is connected thereto; Fig. 4 is another side elevational view of the contact terminal, illustrating the manner in which the tinsel wire is connected thereto, and Fig. 5 is a perspective view illustrating a short piece of tinsel wire to which our improvement is applied.

In the drawing our improved tinsel wire terminal is shown applied to a socket plug such as is employed for insertion in and connection to a lamp or wall socket in the usual manner. The body A of the plug is composed of insulating material and is provided with suitable longitudinal passages 10, for accommodating the socket connecting contact members 11-11 and the accompanying pair of tinsel wire cable conductors 12-12 as hereinafter described. The body A has two similar longitudinal sections B-B, between which the passages 10 are provided and which are cemented or otherwise fastened together. Said passages merge outwardly from the rearward end of the body A and provide a single passage 10'

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for holding the tinsel wire conductors 12-12 while the connecting contact members 11-11 are held in parallel separated relation projecting from the opposite forward end of the plug.

The tinsel wire conductor 12 with which our improved contact member 11 is provided is of usual type as shown in Fig. 5 and is formed into a cable 13 composed of extremely fine round or flat, flexible, metal wire conductors 15, spirally wound about a mass of fiber threads 16, which extend lengthwise. The resulting cable is encased in a flexible tube-like insulating covering 17, as shown in Fig. 5, said covering being composed of rubber or other insulating flexible material.

Each of the socket connecting members 11 as shown resembles a blade or shaft which is connected to one of the tinsel wire cable conductors 12, the method of connecting being by forming or stamping the companion blade or shaft 11 with a laterally and rearwardly extended pointed contact or impalement member 18 near its rearward end in cooperation with a pair of tinsel wire clasps 19. The clasps 19 are formed by cutting or stamping a channel 20 in the end portion of the blade or shaft 11 below the impalement member 18. In use the impalement 18 is thrust deeply into contact with the strands of tinsel wire in the exposed end of the tinsel wire cable conductor. While thus engaged the body portion of the insulated tinsel wire cable is bent through the crutch passage 20 between the arms 19, and said arms are then clasped tightly by wrapping them around and over the insulating covered tinsel wire as shown in Fig. 4. The tendency produced by wrapping the clasps 19 around the insulated tinsel wire is to draw and hold the impalement member 18 in tight electrical contact with the tinsel wire cable conductor 13.

The two sections B-B of the connecting plug are similar and are cemented or otherwise secured together after the contact members 11-11 and tinsel wire units are assembled therein. When thus bonded together the electrical conducting units are immovably held therein. It is to be understood that any suitable means may be provided for holding the sections together instead of by cementing.

Our invention is extremely simple and effective in construction and is applicable for various uses within the spirit thereof. Among such uses is the substitution of a single insulated wire conductor in place of the tinsel wire. Also another use is with a bare wire conductor. We therefore contemplate changes in construction and

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desire to have it understood that the construction shown is only illustrative and that the invention can be carried into practice by other means and applied to uses other than those above set forth within the scope of the following claim.

We claim:

An electric connector for tinsel wire comprising, in combination, a plug and a pair of conductor blades, each of said blades consisting of a flat, rectangular contact member having a downwardly and outwardly inclined pointed contact member on its side and a bifurcated lower end portion formed into a pair of clasps, said plug having a lower, common opening through which a pair of tinsel wires pass to enter the plug, a pair of separated, divergent-convergent passages for each of the tinsel wires branching upwardly through said plug from said common opening so that the tinsel wire takes a decided bend in the passage, a pair of blade passages each passing up through the plug and beginning substantially at the beginning of the bend in each wire passage, the bend in the wire passage ending in the upper

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part of the plug substantially midway of the length of the blade passage, the pointed contact member assuming, in assembly, the angle of the converging section of the wire passage and having the end of the tinsel wire impaled thereon at the upper end of the bend, said pair of clasps being wrapped around the tinsel wire at the lower end of the bend, so that the tinsel wire is bent and jammed in the bend of the convergent-divergent passage and thus securely impaled in connection with said inclined contact member.

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