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W. A. FRANTZ  
ELECTRIC CONNECTION  
Filed Feb. 16, 1923

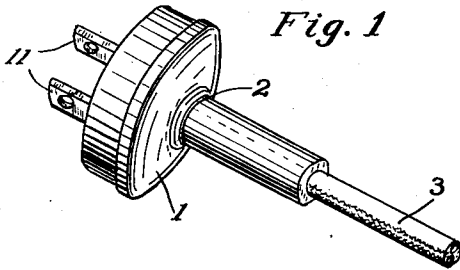


Fig. 1

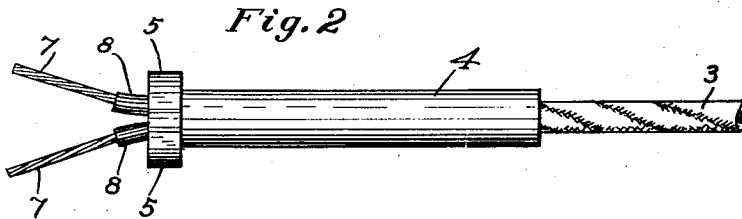


Fig. 2

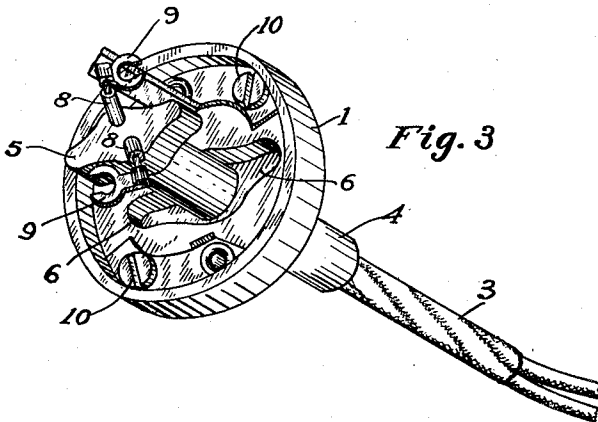


Fig. 3

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ELECTRIC CONNECTION.

Application filed February 16, 1923. Serial No. 619,427.

*To all whom it may concern:*

Be it known that I, WALTER A. FRANTZ, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Electric Connections, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to electric terminals and has for its object the provision of a reinforcement for the end of a flexible electric conductor at the point where it enters a terminal fitting. It is well known that the weak and troublesome part of an electric attachment is at the junction of the cable with the article to which it is attached, whether it be an electric fan, suction cleaner, washing machine, sad iron, heater, toaster or electric lamp socket or other device, and the objects of this invention are the provision of a reinforcement of this point which shall prevent the abrupt bending of the wires, prevent fraying or abrasion of the insulation, and support any longitudinal pull which may be imposed upon the device, while at the same time facilitating the assembling of the parts.

One embodiment of my said invention is illustrated in the drawings accompanying and forming a part of this application, although it will be understood that this constitutes only one of many physical structures in which it may be utilized and that I am not limited to its use with any particular kind of fitting. Fig. 1 represents my improvement as applied to a separable connection; Fig. 2 illustrates a flexible cable provided with my improved reinforcing sleeve and Fig. 3 illustrates the end fitting of Fig. 1 with my improved reinforcement partly inserted therein.

Describing the parts by reference characters, 1 represents an end fitting or terminal connection of any suitable or desired type, formed with an aperture 2 for the passage of the electric cord 3 which is here surrounded by a flexible rubber sleeve 4 molded and cured thereon, said sleeve having at its inner end a pair of laterally projecting ears 5—5. These ears may be of any desired longitudinal extent, but are preferably made sufficiently massive to exhibit a high degree of strength, the bottom or interior of the member 1 being recessed as at 6—6 to receive the same. They are preferably but not nec-

essarily of the same composition as the rest of the sleeve. The two (or more) subsidiary electric cables 7—7 of which the cord 3 is composed are extended beyond these ears, their individual sheaths 8—8 being likewise preferably continued beyond the rubber where they are there provided with end fittings 9—9 or attached directly to the screws 10—10 as may be desired. The fingers 11—11 are intended to typify any kind of electric connection, one of the same being broken away in Fig. 3 the better to show the parts of my invention.

The sleeve 4 being made of soft rubber, it is flexible and permits the ready but gradual bending of the cord; being tightly adherent to the insulation of the cord it prevents fraying or unraveling of the same. Owing to the ears 5 or their equivalent, any longitudinal pull is taken up by the entire body of the cord and does not fall upon the contacts. These terminals can be molded rapidly and inexpensively upon the cords and when so applied facilitate greatly the assembling of the parts.

It will be understood that many changes can be made in the construction without departing from my inventive idea.

Having thus described my invention, what I claim is:

1. An electric cord having a fabric sheath and a flexible soft rubber protecting sleeve molded upon and adhesively attached to said sheath adjacent to its end, the remainder of said sheath remaining naked.

2. A flexible electric cord comprising a conductor and a fabric sheath in combination with a flexible rubber protecting sleeve molded around the ends of the conductor members and adhesively connected to said sheath, said conductor members and sheath projecting beyond the opposite ends of said sleeve.

3. A flexible electric cord comprising a conductor and fabric sheath in combination with a flexible insulating sleeve molded about the end of said sheath and provided with a lateral projection adapted to engage the body of a terminal fitting, said sheath extending beyond said sleeve in one direction and the conducting elements of said cord extending beyond said sleeve in the other direction for attachment with the conducting elements of the fitting.

4. In a device of the character described, in combination, an end fitting having an

aperture therein, a flexible electric cord projecting through said aperture and comprising a conducting element and a fabric sheath about the same, and a flexible protecting soft rubber sleeve molded upon said cord and surrounding the portion of the same which traverses said aperture and adhesively engages said sheath, said sleeve fitting snugly in said aperture and the conducting elements of said cord projecting beyond the end of said sleeve for attachment to said end fitting.

5. In a device of the character described, in combination, an end fitting having an aperture therein, a flexible insulating electric cord projecting through said aperture, a flexible rubber protecting sleeve molded upon said cord and surrounding the portion of same which traverses said aperture, said sleeve fitting snugly in said aperture and the conducting elements of said cord projecting beyond the end of said sleeve for attachment to said end fitting, said fitting having an internal cavity and said sleeve having a projection adapted to be received in said cavity whereby longitudinal pull is supported.

6. The combination with a rigid hollow fitting having an aperture and having internal contact members, of a flexible insulated electric cord traversing said aperture, said cord comprising conducting members and a fabric covered sheath, and a flexible protecting sleeve of plastic material molded about said cord where it traverses said aperture, said sleeve being mechanically attached to said fitting and adhesively attached to said fabric covering.

7. A flexible insulated electric cord comprising conductor members surrounded by an insulating sheath, said members projecting beyond the end of the sheath, in

combination with a flexible soft rubber protecting sleeve molded thereon adjacent to the end of said cord and adhesively attached both to the exterior of said sheath and to said members.

8. A flexible insulated electric cord comprising a conductor member surrounded by an insulating sheath excepting for a short distance at its end, and a flexible soft rubber protecting sleeve molded thereon so as to overlap the end of said sheath and adhere both to said sheath and to said member, said sleeve having at its forward end an enlargement for mechanical connection to a fitting, and having said sheath projecting from its other side.

9. The combination with an electric fitting having an aperture therein, of a flexible insulated electric cord projecting through said aperture and comprising a conductor member and a fabric covered sheath of insulating material surrounding the same, and a flexible soft rubber protecting sleeve molded about the portion of said cord which traverses said aperture, said sleeve being mechanically secured in said aperture and adhesively secured to said sheath and projecting a sufficient distance beyond the same to prevent abrupt bending of the cord.

10. The combination with an electric fitting of a soft rubber sleeve projecting therefrom and a flexible electric cord projecting through said sleeve into said fitting, said cord comprising one or more conducting strands and an insulating sheath and the sleeve being molded upon said cord and adhesively secured to said sheath and strands.

In testimony whereof, I hereunto affix my signature.

WALTER A. FRANTZ.