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R. GLADULICH

2,288,259

CONNECTING DEVICE FOR ELECTRICAL CONDUCTORS

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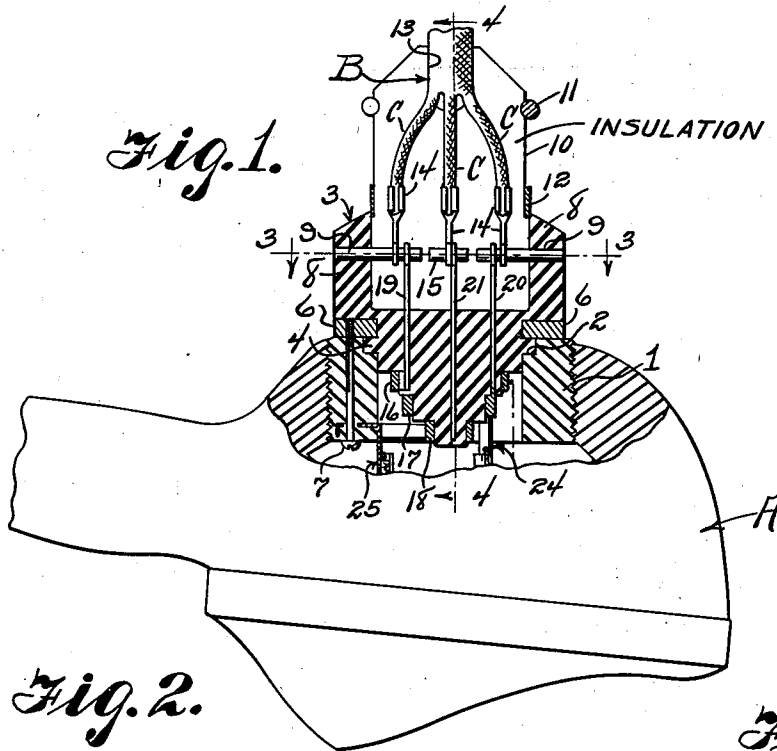


Fig. 2.

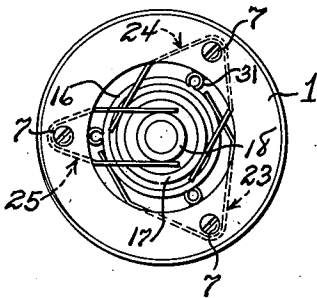


Fig. 4.

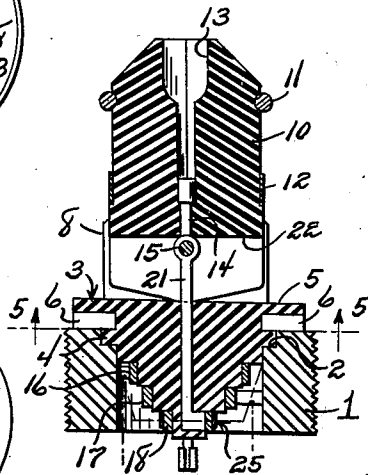


Fig. 3.

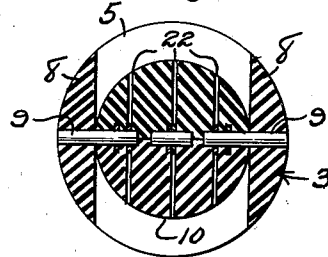


Fig. 5.

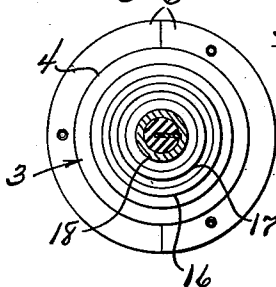
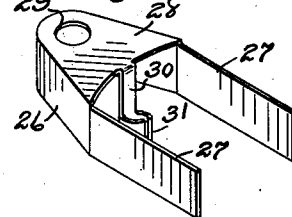


Fig. 6.



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UNITED STATES PATENT OFFICE

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CONNECTING DEVICE FOR ELECTRICAL CONDUCTORS

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1 Claim. (Cl. 173—324)

This invention relates to swiveled connecting devices for electric conductors, and its general object is to provide a device that is primarily designed for use with telephones, particularly of the so-called French type, for swivelly connecting the conductor cord thereof to the combined transmitter and receiver member, so as to prevent the cord from becoming braided or entangled on itself, thus overcoming the difficulties in that respect to the user, as well as preventing premature wear and damage to the cord, as regardless of the number of times said member is rotated, the cord remains free from kinks and the like.

A further object is to provide a swiveled connecting device for the purpose set forth, that is simple in construction, inexpensive to manufacture, easy to apply to electrical apparatus including telephones and is extremely efficient in operation, use and service.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawing and specifically pointed out in the appended claim.

In describing the invention in detail, reference will be had to the accompanying drawing wherein like characters denote like or corresponding parts throughout the several views, and in which:

Figure 1 is a fragmentary horizontal sectional view taken through the device which forms the subject matter of the present invention and illustrates the device threaded in the transmitter head of the combined transmitter and receiver member of the phone.

Figure 2 is a bottom plan view of the device per se.

Figure 3 is a sectional view taken approximately on line 3—3 of Figure 1, looking in the direction of the arrows.

Figure 4 is a sectional view taken approximately on line 4—4 of Figure 1, looking in the direction of the arrows.

Figure 5 is a sectional view taken approximately on line 5—5 of Figure 4, looking in the direction of the arrows.

Figure 6 is a perspective view of one of the wiping contact members.

Referring to the drawings in detail, the letter A indicates a transmitter head of a French type telephone, and which has a threaded opening in the back thereof for threadedly receiving the fixed member or base of my device, the base being in the form of a relatively thick collar 1 of in-

5 sulating material having an internal annular shoulder 2 at its outer end, and the collar may have an exteriorly annular abutment flange at its outer end to limit movement of the collar within the head, as will be apparent, or any other suitable means may be provided for that purpose. While I have illustrated my device as being applied to a telephone, it will be obvious that it can be applied to any type of electrical apparatus for connecting a conductor cord with respect thereto.

10 Swiveled to the collar 1 is a body member 3 of insulating material and for that purpose, the body member is provided with an annular rib 4 seated upon the shoulder 2, and an annular groove which is provided by the rib and the upper face of the base, as well as a flange 5 formed on the body member, has a sectional ring 6 therein for holding the body member on the collar 1 for rotation of said body member, as will be apparent upon inspection of Figure 1, and the ring is secured to the collar by screw bolts 7.

Formed on and rising from the body member is a pair of spaced uprights 8 provided with registering bores having pins 9 therein, that provide shafts mounted in diametrically opposed bores of a sectional substantially cylindrical upper member 10 of insulating material for rocking movement of the cylindrical member between the uprights. The bottom of the cylindrical member is inclined in diverging relation from opposite sides to allow for free rocking movement thereof, as will be apparent upon inspection of Figure 4, with the result it will be seen that the base or collar 1 is fixed, the body member 3 is swiveled and the cylindrical member is rockably mounted.

45 The cylindrical member 10 is made up of a pair of sections each constituting a half thereof and the sections are held together by fastener rings 11 and 12. The upper end of the cylindrical member is preferably reduced in beveled formation and extending centrally within the top thereof is a bore 13 communicating at its lower end with three branch bores, the bore 13 receiving the conductor cord B therein and the branch bores the conductors C which together with a covering make up the cord B of the usual construction, as will be apparent. The conductors C have eyed terminals 14 on the inner ends thereof and the eyed ends of the outer terminals 14 are pivoted to the pins 9, while the eyed ends of the central terminal 14 is pivoted to a pin 15 mounted within the cylindrical member 10 for disposal in alignment with and between the 55 pins 9, as clearly shown in Figure 1.

The portion of the body member 3 that extends into the collar 1 is reduced in conical formation to provide three annular steps of decreasing diameter from the upper step to the lower step and the steps have secured thereon in surrounding relation thereto, contact rings 16, 17 and 18, respectively. Each ring is provided with a conductor strip, and the strip 19 is secured to the upper ring 16, the strip 20 to the intermediate ring 17, and the strip 21 to the lower ring 18. The conductor strips extend through the body member for disposal in slots 22 in the cylindrical member 10 to allow for the rocking movement of the latter, and the upper ends of the conductor strips terminate in eyes. The eye of the strip 19 is mounted on one of the pins 9, the eye of the strip 20 on the other pin 9, and the eye of the strip 21 on the pin 15.

A substantially U-shaped contact member of a type as best shown in Figure 6 is provided for each of the contact rings and the U-shaped contact members which are broadly indicated by the reference numerals 23, 24 and 25, respectively, each have their bight portion embedded within the base or collar 1, for disposal of the arms 27 in wiping engagement upon diametrically opposite sides of the contact rings, the arms of the member 23 being engaged with the ring 16, the arms of the member 24 with the ring 17, and the arms of the member 25 with the ring 18, as clearly shown in Figure 2, which likewise illustrates that the U-shaped contact members gradually decrease in size, so that the arms will be spaced a proper distance apart to engage their particular contact ring.

The bight portions of the U-shaped contact members each have formed on or otherwise fixed in bridging relation thereto a plate 28 having an opening 29 therein and the openings provide passages for the screw bolts 7, but the plates are spaced from the bolts as shown in Figure 1. Formed on and depending centrally from the inner edges of the plates are conductor strips 30 that terminate at their lower ends in split collar terminals 31 for receiving conductors leading to the transmitter and receiver of the telephone, as will be apparent.

From the above description and the disclosure in the drawing, it will be obvious that my device prevents the conductor cord B from becoming braided or entangled upon itself due to the free rotation of the body member 3 on the collar 1, thereby prolonging the life of the cord, as well as materially facilitating the use of the telephone.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

What I claim is:

In a swiveled electrical connecting device, a collar like base, a body rotatably mounted on the base and provided with an annular groove, a sectional ring secured to the base and mounted in the groove for detachably securing the body to the base, a substantially cylindrical upper member divided along the longitudinal center thereof to provide a pair of sections, said member having bores therein for receiving conductors and for disposal of the latter between said sections, said member being rockably mounted on the body, spaced aligned pins mounted within said member and between the sections, certain of the pins providing pivots for said member and extending through diametrically opposite sides thereof and mounted in the body, eyed terminals for the conductors and having the eyes thereof pivotally mounted on the pins, contact rings carried by the body, conductor strips having one end connected to the rings and their opposite ends terminating in eyes having the pins pivotally mounted therein, said member being slotted longitudinally and the strips being mounted in the slots to allow rocking movement of said member, and contact members fixed to the base and disposed in wiping engagement with the contact rings.

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