

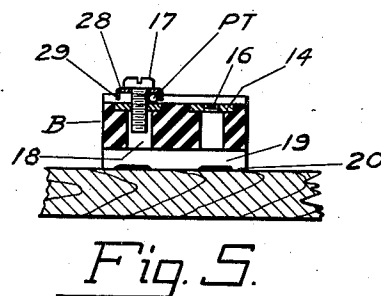
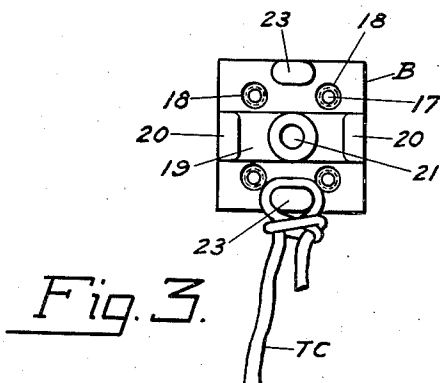
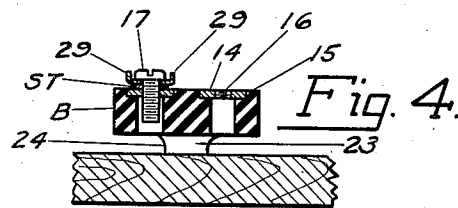
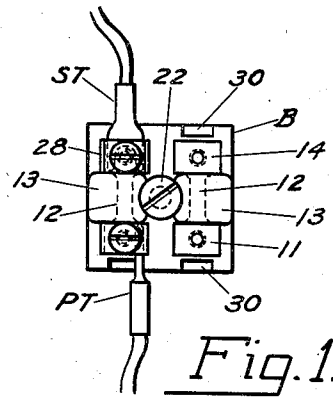
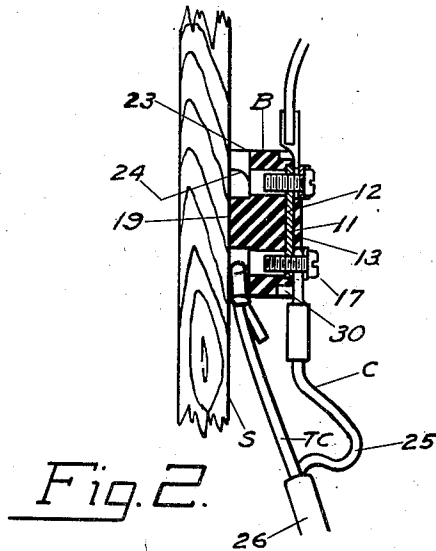
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2,158,305

CONNECTOR BLOCK

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CONNECTOR BLOCK

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1 Claim. (Cl. 173—322)

This invention relates to electrical connectors of the type used to interconnect electrical cords and relates more particularly to the interconnection of electrical cords comprising a pair of conductors, having formed terminals affixed to the ends thereof, and a tie or stay cord. The tie or stay cord is provided to be fastened to the connector to prevent the terminals from being withdrawn from the connector should the electrical cord be subjected to any undue strain.

The connector of my invention is particularly adapted for use with extension telephone sets or like instruments. They are usually furnished with an electrical cord several feet in length comprising two or more conductors one end of each of which is connected to the telephone set and the other ends of which are each provided with a terminal. These terminals may be of several types but the two chiefly used are the so-called spade terminal and prong type terminal. One of the problems of the prior art has been to provide a connector equally adaptable for use with several different types of terminals and one providing secure connections with each type. Another problem has been the manner of attaching the stay cord to a connector of this type. Applicant's connector is cheap to manufacture, substantial, though of low cost, and solves the above enumerated problems.

A feature of the invention is the provision of an integrally formed supporting member for the connector which serves as means for securing the stay cord to the connector.

Another feature of the invention is the provision of means which permit the efficient connection to the connector of various types of terminals.

Other features will be apparent from a perusal of the following specification and claims taken together with the accompanying drawing in which,

Fig. 1 is a top view of the connector showing two types of terminals associated therewith;

Fig. 2 is a cross-sectional side view of the connector;

Fig. 3 is a bottom view of the connector showing a stay cord fastened thereto;

Fig. 4 is a cross-sectional view showing a spade type terminal secured to the connector; and

Fig. 5 is a cross-sectional view showing a prong type terminal secured to the connector.

The preferred embodiment of our connector comprises a block B formed of molded insulating material in which are embedded a number of metallic conducting members 11. One of these

metallic conducting members 11 is provided for each pair of conductors it is desirous to interconnect. While the drawing shows but two such members it is to be understood that any number may be provided. These members 11 have portions 12, intermediate their ends, which are covered by insulating material 13 in the process of forming. Therefore, this portion 13 is raised above the remainder of the top 15 of the connector and the members 11. The ends 14 of the members 11 fit into the block and the tops are flush with the top 15. These ends 14 are provided with screw-threaded openings 16 adapted to receive a terminal screw 17. The block B is provided with orifices 18, which are of a suitable size to receive the screws 17, and which are located directly under the central portion of the ends 14.

A depending central portion 19 extending across the connector proper is provided and terminates in leg portions 20 which depend slightly more than the remainder of the central portion. An orifice 21 extends through the connector block B to receive a wood screw 22 to serve as means for fastening the block B in place. The orifice 21 is countersunk sufficiently to receive the head of the screw 22 to prevent any contact between the screw 22 and the conducting or terminal members. Depending portions 23 are integrally formed on each side of the connector block B with their outside edge flush with the edge of the block. The inside edge 24 is rounded off so that no sharp edges are present. When the block B is fastened in place on a surface S the depending portions 23 and the legs 20 engage the surface S to solidly support the block B. An opening or channel is formed by the surface S, the depending central portion 19 and the portion 23 of a size suitable to easily receive the end of the tie or stay cord TC which is looped back and tied upon itself. The stay cord TC is positioned so that the conductor C is longer than the stay cord TC and has a certain amount of slack 25 so that any strain on the cable 26 will be spent on the tie cord and will not pull the conductor C loose from the connector block B.

A generally U-shaped terminal member 28, the central portion of which is provided with an orifice of a sufficient size to receive the terminal screw 17, has its side members 29 formed at substantially right angles to the central portion. This terminal member 28 which is formed of metal of good electrical conducting material permits the efficient use of various types of terminals with

the connector block B; for instance, Fig. 4 shows the use of a spade terminal ST.

When used with a spade terminal the member 28 is placed on the terminal screw 17 with the side members 29 away from the connector block B. In this use the terminal member 28 serves as a washer and permits the proper positioning of the terminal screw 17 and the spade terminal ST to provide an exceedingly efficient connection. A notch 30 is provided, adjacent the ends 14 of the conducting members 11, in the block B for giving easier access to the terminal member 28 and to permit the use of a short terminal. In Fig. 5 the terminal member 28 is shown associated with a prong type terminal PT in which association the side members 29 of the terminal member 28 are toward the end 14 of the conducting member 11. The end 14, the terminal member 28, the side member 29, and screw 17, form a channel of a size to receive the prong type terminal PT. The turning of the screw 17 forces the member 28 against the terminal PT and a tight connection is provided.

Fig. 1 shows the use of both types of terminals simultaneously. The raised portion 13 which is located between the two terminal screws prevents the terminals ST and PT from being inserted in the connector B a distance sufficient to permit the terminals to engage the fastening screw 22 to cause any undesired connection.

The connector is equally applicable for use with conductors not provided with terminals as a single solid conductor can be inserted in the same manner as a prong type terminal and a stranded conductor can be attached by positioning the terminal member 28 in the same manner as when a spade terminal is connected to the block B.

It is obvious that the placing and spacing of studs 23 and depending portion 19 leaves an un-

obstructed space about the studs as well as channels between them and 19 which facilitates threading retaining cord TC between 19 and 23 and looping it about the latter, or removing it therefrom after the connector block has been secured in place by screw 22 and so avoids any necessity for attaching the retainer cord to the block before securing the latter in place, or for removing the block to attach the cord, if the block has been secured. Such necessity for removing the block from its support or from a part of itself has been a great disadvantage in the known forms of connector block.

While we have described our invention in certain particular embodiments we intend no limitations upon our invention other than those imposed by the appended claim.

Having described our invention, what we claim as new and desire to secure by United States Letters Patent is:

A connector for electrical conductors, comprising a block of insulating material for attachment to a wall or fixed support, having a front face on which are provided openly accessible means for applying two or more conductors in circuit, one with another, and a rear face to be turned to the wall and having a stud projecting toward the rear face so its end engages the wall so as to retain in place any closed loop engaging the stud, said stud being exposed laterally on three sides and spaced on its fourth side from the other wall engaging parts of the block, to facilitate threading a loopable connection about the stud, in combination with a conductor having a flexible stay cord, stiff enough to be threaded about the stud and flexible enough to be readily looped and secured.

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