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CONNECTOR FOR ELECTRICAL CONDUCTORS

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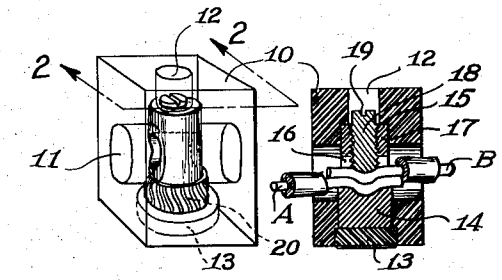


FIG. 1 FIG. 2

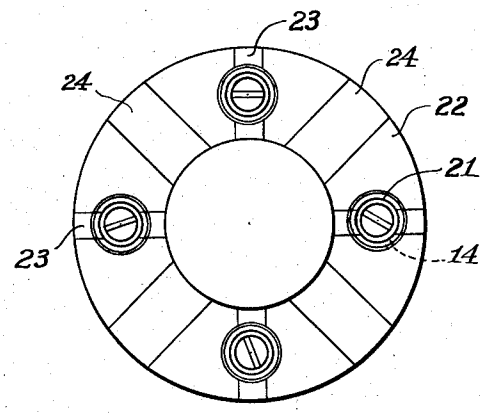


FIG. 3

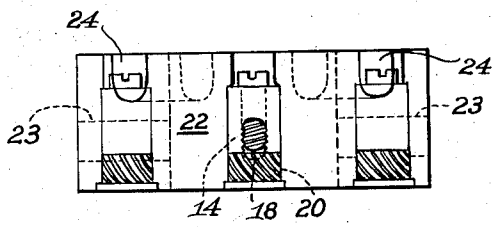


FIG. 4

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CONNECTOR FOR ELECTRICAL CONDUCTORS

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1 Claim. (Cl. 339—149)

This invention relates to connection means for electrical conductors and more particularly to connection means incorporating structure for obtaining improved mechanical and electrical connection of electrical conductors.

The principal object of the invention is the provision of an improved form of connectors for electrical conductors.

A further object of the invention is the provision of connectors for electrical conductors enclosed in an insulating body member and usable for establishing electrical and mechanical connection between wires, cables and the like without requiring additional insulating material at the point of connection.

A still further object of the invention is the provision of connectors for electrical conductors whereby one, two or more electrical conductors may be connected together.

The connectors for electrical conductors disclosed herein comprise an improvement in the art relating to connection means and particularly with respect to connectors operative without additional insulating material being applied to the area of connection.

The connectors disclosed herein may be utilized singly or in multiple units and, as such, used for connecting one, two or more electrical conductors together. Variations of the same form of connector disclosed herein may be employed in a common conductor body to permit the use of the device in junction blocks for electrical conductors and the like.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being the intention to cover all changes and modifications of the example of the invention herein chosen for purposes of the disclosure, which do not constitute departures from the spirit and scope of the invention.

The invention is illustrated in the accompanying drawing, wherein:

Figure 1 is a perspective view of a connector formed in accordance with the invention.

Figure 2 is a vertical section on the center line of the connector shown in Figure 1 and illustrating a pair of electrical conductors connected thereby.

Figure 3 is a top plan view of an annular grouping of connectors.

Figure 4 is a side view of the device shown in Figure 3.

By referring to the drawings and Figures 1 and 2 in particular it will be seen that the simplest form of the device comprises a block **10** of insulating material such as transparent plastic which has a transverse passageway **11** formed therethrough and a vertical passageway **12** formed therein, the lowermost portion of which is filled with a dielectric plug **13**. A metalic body member **14** having a cylindrical portion is positioned in the vertical passageway **12** above the plug **13** and below a shoulder **15** formed therein so as to be completely contained within the block **10**.

The metalic body member **14** has a transverse bore **16** therein and a vertical bore **17** which is internally threaded and adapted to receive a threaded plug **18**, the upper end of which is provided with a transverse slot **19** so that it may be rotated by a screw driver. The lower outer peripheral portion of the metalic body member **14** is slightly enlarged in diameter and knurled as at **20** so that the cylinder **14** is self-retaining in position in the insulating block **10**. It will be observed that the transverse bore **16** is in alignment with the transverse passageway **11** in the insulating block **10**.

In Figure 2 of the drawings a pair of electrical conductors A and B may be seen positioned in oppositely disposed relation in the transverse bore **16** with the plug **18** turned downwardly thereagainst so as to bend and force the conductors A and B into matching closely engaging mechanical and electrical relation and thereby achieve the electrical connection desired.

In Figures 3 and 4, the same metalic body members **14** may be seen to be installed in vertical openings **21** in an annular shaped block **22** of insulating material, the vertical openings **21** being circumferentially spaced with respect to one another and positioned vertically in the annular shaped block **22**.

Horizontally disposed passageways **23—23** extend radially through the annular block **22** and align with the transverse bore **16** in each of the metalic body members **14**, as heretofore described. Secondary horizontally disposed passageways **24—24** enable electrical conductors to be brought into the center area of the annular block **22** of insulating material.

It will thus be seen that the invention disclosed herein meets the several objects of the invention.

Having thus described by invention, what I claim is:

A connector for electrical conductors comprising an insulating body member having a vertical passageway therethrough and a horizontal passageway therethrough, said passageways being in cross communicating position in said insulating body member, a metallic body member having a cylindrical portion disposed in said vertical passageway with a screw threadably engaged in said cylindrical portion, said cylindrical portion having a transverse bore therethrough in axial alignment with said horizontal passageway in said insulating body member, said screw being adapted to be moved across said transverse bore when electrical conductors to be connected are positioned therein so as to be distorted by said screw, an insulating plug disposed in the vertical passageway in which said metallic body member is positioned and in the opposite end thereof in relation to said screw and on the opposite outer side of said metallic body member to insulate said member, said insulating plug lying on the opposite side of said transverse bore relative to said screw, the wall of said transverse bore opposite said screw forming a member against which said electrical conductors positioned in said transverse bore will become engaged when they are distorted by said screw in said cylindrical portion.

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