

UNITED STATES PATENT OFFICE

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ELECTRICAL TERMINAL BLOCK

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1 Claim. (Cl. 173—324)

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The present invention relates to an electrical connector block and it consists in the combinations, constructions and arrangements of parts herein described and claimed.

Generally there is provided a rectangular shaped body of dielectric material having a centrally disposed longitudinally and upwardly extending ridged portion upon either side of which is affixed a connector plate. Extending laterally from each side of the ridged portion is a block having a plurality of recesses extending inwardly from the outer side thereof and a plurality of relatively small vertical openings extending from the top into the recess therebelow and a plurality of relatively large openings likewise communicating with the recess. Immediately below the large openings in each case is an eyelet which affixes within the recess an upwardly and outwardly extending spring plate which is adapted to be moved downwardly by a non-conducting tension post which is threadably mounted in the adjacent relatively small opening heretofore referred to. The device is provided at either end with a pair of connecting posts which are adapted to bear against the spring plates to frictionally engage therebetween the bared ends of wires which may be placed between the spring plates and the connector plate above referred to.

It is accordingly an object of the invention to provide a device of the character set forth which is simple in construction, easy to manufacture and yet effective and efficient in use.

Another object of the invention is to provide a device of the character set forth wherein means is provided for connecting appliances and the like thereto without the necessity for disconnecting the power supply.

A still further object of the invention is the provision of a novel one-piece body of dielectric material forming a part of the invention.

A further and important object of the invention is the provision of novel eyelet fastening means forming a part of the invention.

Other and further objects of the invention will become apparent from a reading of the following specification taken in conjunction with the drawing, in which:

Figure 1 is a perspective view of an embodiment of the invention,

Figure 2 is an exploded perspective view thereof,

Figure 3 is a sectional view taken along line 3—3 of Figure 1,

Figure 4 is an enlarged fragmentary perspective view similar to Figure 3 and illustrating the

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manner of insertion of a lead wire to be connected to the device forming the present invention, and

Figure 5 is a view similar to Figure 4 but showing the lead wire in locked condition.

Referring more particularly to the drawing, there is shown therein an elongated rectangular body 10 of dielectric material having a vertically and longitudinally extending ridge 11 centrally disposed thereon. The ridge 11 is preferably and as shown formed integrally with the body 10.

Extending laterally from each side of the ridge 11 is an integrally formed block 12 whose lower surface is in parallel spaced relation to the adjacent upper surface of the body 10. The ridge 11 is provided with a pair of vertically extending openings 13 which extend entirely through the same and through the body 10 so that the device may be fastened to a wall or the like and each of the blocks 12 is provided with a plurality of relatively large openings 14 adjacent the ridge 11 and a plurality of relatively smaller threaded openings 15 in spaced parallel relations to the openings 14, and outwardly therefrom with respect to the ridge 11.

In each of the blocks 12 immediately below each of the openings 14 and 15 there is provided an inwardly extending recess 16 which communicates with the openings 14 and 15 immediately thereabove and immediately below each of the openings 14 there is provided an eyelet 17 which extends upwardly from a relatively shallow recess 18 provided in the body 10 below each of the recesses 16 to fasten the inner end of a spring contact member 19 which is centrally provided with an opening 20. The free end of the member 19 is biased upwardly to normally bear against a tension post 21 of dielectric material which is threaded in the opening 15 thereabove. Each of the tension screws 21 is provided with a bifurcated head 22.

Below each of the blocks 12 there is mounted atop the body 10 an elongated conductor plate 23 which is fastened to the body 10 at either end by means of an eyelet 24, openings 25 being provided for this purpose. At either end of each of the plates 23 there is an integrally formed inward extension 26 likewise provided with an opening 27 through which, in each case, a connector post 28 is threaded into the body 10.

In operation, it will be apparent that power lines may be connected to the connector post 28 at one end of the device and that thereafter a pair of bared lead wires 29 may be inserted into a pair of opposed recesses 16. In Figure 4 one

of such lead wires 29 is shown about to be inserted into one of the recesses 16. During this operation the same will enter the recess 16 and continue on until it passes through the opening 20 in the spring contact member 19 thereupon the member 21 will be screwed downwardly, as shown in Figure 5, to lock the bared portion 29 of the lead wire between the spring contact member 19 and the connector plate 23. Thus it will be seen that a circuit is provided from the power lines (not shown) through the respective plates 23 and to the lead wires 29. It will also be apparent that the openings 14 are provided for easy access to the eyelets 17 whereby the same may be readily applied to mount the spring contact members 19. Clearance is provided for the lower portions of the eyelet 17 by means of the recesses 18. When it is desired to extend the power supply beyond the device hereinabove described, it is only necessary to connect suitable wires to the other pair of connector posts 28 to a similar device to thereby provide additional outlets. It will also be apparent that it is unnecessary to disconnect the power supply when mounting the bared wires 29 in the device as aforesaid.

While but one form of the invention has been shown and described herein, it will be readily apparent to those skilled in the art that many minor modifications may be made without departing from the spirit of the invention or the scope of the appended claim.

What is claimed is:

A device of the character described comprising a rectangular body of dielectric material, a longitudinally and upwardly extending ridged portion centrally disposed on said body, a block extending outwardly from each side of said ridged portion in spaced parallel relation to the top of said body, a longitudinally extending connector plate mounted atop said body below each of said blocks, a connector post extending through each end of each of said plates and each threadably connected to said body, and means for removably electrically connecting a plurality of pairs of lead wires to said plates, said means including a plurality of inwardly extending re-

cesses in the lower portion of each of said blocks, upwardly biased spring connector members each affixed to the body and each positioned in one of said recesses, and a tension screw of dielectric material for each of said spring connectors each threadably and vertically mounted in said blocks immediately above one of said recesses, said connector members each having a flat first portion provided centrally with an opening extending therethrough, said block having vertical openings therethrough in each recess, said blocks having access openings one above each of said vertical openings, eyelets extending through each central and vertical opening and fixed to secure said flat first portion to said body, said connections each including a second portion obtusely angled relative to said first portion, said second portions each having a lead wire receiving aperture therein, and each connector having a third flat portion obtusely angled relative to said second portion and normally substantially parallel to said first portion, said tension screws abutting said third portions to bias the edges of the same into engagement with the associated lead wires, whereby two edges of said third portion and the edges of said apertures engage said wire fixedly to clamp said wire in electrical association with said connector plate.

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