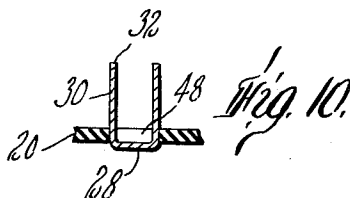
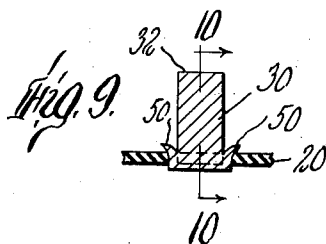
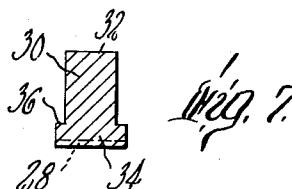
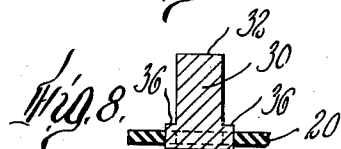
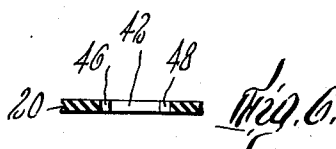
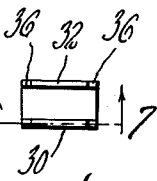
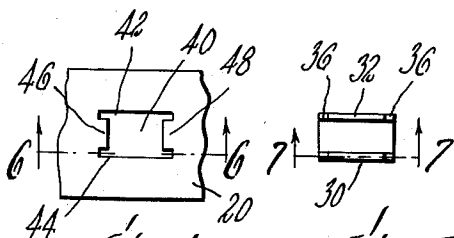
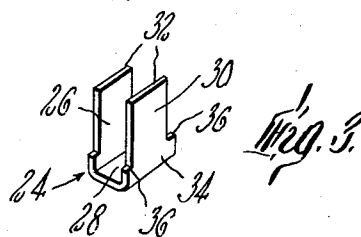
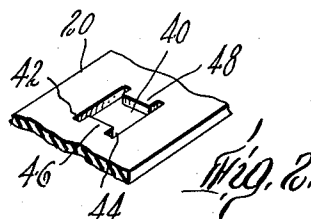
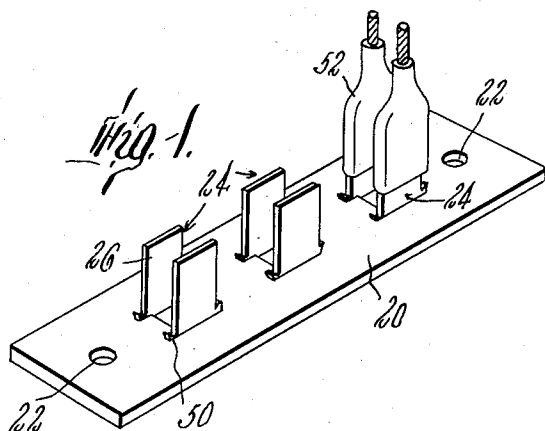


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ELECTRIC JUNCTION BLOCK

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2,840,794

ELECTRIC JUNCTION BLOCK

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3 Claims. (Cl. 339-220)

This invention relates to a junction block adapted to facilitate the assembling of electrical appliances of various kinds which have more or less complicated wiring. Appliances such as radios, refrigerators and the like usually include a number of parts with terminals which must be connected by wires in assembling the appliance. In many cases it is necessary or convenient to connect two wires to each other in assembling the appliance or to disconnect such wires in removing a part for replacement or repair. The present invention relates to a simple device by which pairs of wires can quickly and easily be connected or disconnected. Effective electrical connections can be made by the use of certain connectors of the male and female type, the male member consisting of a flat rectangular tongue which enters a shallow channel in the female member and is pressed by the latter into firm interfacial engagement therewith. According to the present invention one or more strips of brass or other suitable conducting material are bent to rectangular U-shaped and then secured to a plate of insulation which can be mounted where desired. The arms of the U are arranged to form parallel tongues each of which constitutes a male connector member ready to receive a corresponding female connector member secured on the end of a wire.

The sheet or strip of insulation may be of any desired size and shape according to the number and arrangement of the connectors desired. The resulting junction block is compact and effective and can be made at a low cost.

For a more complete understanding of the invention reference may be had to the following description thereof and to the drawing of which—

Figure 1 is a perspective view of a junction block embodying the invention;

Figure 2 is a fragmentary view of the insulating plate forming a part of the junction block;

Figure 3 is a perspective view of a conducting member before it is mounted on the insulating plate;

Figure 4 is a plan view of the portion of the plate shown in Figure 2;

Figure 5 is a plan view of the conducting member shown in Figure 3;

Figure 6 is a section on the line 6-6 of Figure 4;

Figure 7 is a section on the line 7-7 of Figure 5;

Figure 8 is a sectional view showing the parts illustrated in Figures 6 and 7;

Figure 9 is similar to Figure 8 except that the conducting member has been staked to secure it to the plate; and

Figure 10 is a section on the line 10-10 of Figure 9.

For convenience of description the junction block illustrated in Figure 1 will be thought of as mounted in a vertical position, this being the customary position in which it is employed. The device comprises a plate 20 of rigid insulating material which plate may be of any desired length or width. Screw holes 22 may be provided by which the plate can be secured to a vertical

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wall for frame. Mounted on the plate 20 are any desired number of conducting members 24, three such members being shown in Figure 1. Each member consists of a strip of suitable metal such as brass bent to U-shape so that it has two parallel arms and a connecting portion 28. The latter is preferably plane with sharp right angles between it and the arms. Each arm has a portion 30 of narrowed width extending from its free end 32 to a wider portion 34 which is contiguous to the connecting part 28 of the conducting member 24. Between the narrower portion and the wider portion of each tongue are a pair of shoulders 36. The shoulders are spaced from the connecting portion 28 by a distance slightly greater than the thickness of the insulating plate 20.

As indicated in Figures 2 and 4, the insulating plate has an aperture 40 therethrough for each conductor mounted thereon. Each aperture 40 consists essentially of two parallel slots 42 and 44 which are each shaped to receive and be fitted by the wider portion 34 of the arm 26. As shown in Figure 4 the portion of the plate between the slots 42 and 44 is for the most part cut away so that the aperture 40 of which the slots are part is H-shaped. This aperture forms a pair of tongues 46 and 48 which project toward each other.

The conducting member 24 is mounted on the plate 20 by pushing the arms 26 through the slots 42 and 44 from behind the plate until the connecting portion 28 bears against the rear face of the tongues 46 and 48 and the arms project through the slots and out in front of the plate 20. A suitable staking tool (not shown) is employed to cut into shoulders 36 where they meet the side edges of the narrow portions 30 of the arms 26 and to wedge outward the elements 50 thus formed, as indicated in Figure 9. The engagement of the connecting portion 28 of the conductor against the rear face of the tongues 46 and 48 prevents further forward movement of the conductor relative to the plate 20. The elements 50 which have been wedged outward from the edges of each arm 26 prevent rearward movement of the conductor. Hence, the conductor is securely anchored in place on the plate 20, the arms 26 projecting forward therefrom.

Each arm 26 is preferably rectangular in shape and is adapted to act as the male member of an electrical connector to receive a corresponding female member 52 which may be in the form of a shallow channel with inturned flanges on the side walls. Connectors of this description are well known.

When a junction block of the type described has been mounted in an appliance such as an electric refrigerator, and the various electrical units of the refrigerator have been installed therein with wires projecting from such units having female connector members secured on the ends thereof, suitable connections between these wires may be quickly and easily made by thrusting the female connector elements on the forwardly extending arms 26 of a junction block, these arms being in the form of complementary male connector members.

I claim:

1. A junction block comprising a plate of insulation having an H-shaped aperture therethrough forming two tongues projecting toward each other, and a conducting member consisting of a metal strip bent to U-shape with two plane parallel arms and a connecting portion, said connecting portion bearing against the rear face of said tongues, said arms projecting forwardly through said aperture, the side edges of said arms having struck-out marginal portions adjacent the front face of said plate providing side edges, each of which terminates in a shoulder with a portion of each arm, said side edges adjacent the shoulders being wedged outwardly from the arms and downwardly into engagement with opposing

surfaces of said plate to prevent rearward movement of said conducting member relative thereto.

2. A junction block as claimed in claim 1 wherein the portion of each arm projecting from said aperture forwardly of said struck-out portions is narrower than the portion within said aperture. 5

3. A junction block comprising a plate of insulation and a conducting member mounted thereon, said member consisting of a metal strip bent to U-shape with two plane parallel arms and a plane connecting portion at right angles to said arms, said member being mounted on said plate so that said connecting portion bears against the rear face of said plate and said arms project forwardly through and out in front of said plate, the side edges of said arms having struck-out marginal portions adjacent the front face of said plate providing side edges 10 15

each of which terminates in a shoulder with a portion of each arm, said side edges adjacent the shoulders being wedged outwardly from the arm and downwardly into engagement with opposing surfaces of said plate.

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