

April 22, 1958

J. E. JACOBS

2,831,914

MULTIPLE RECEPTACLE CONNECTOR BLOCK

Filed July 13, 1956

Fig. 1

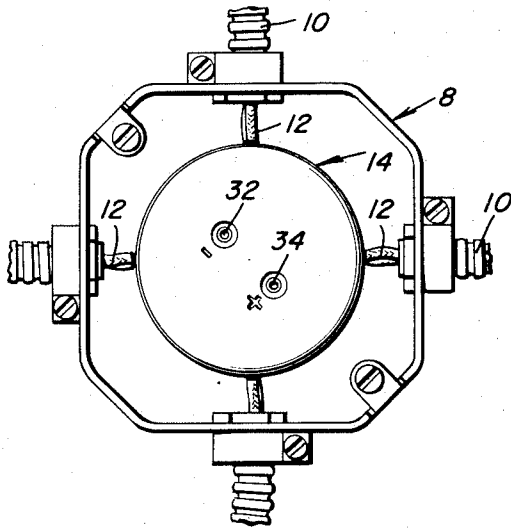


Fig. 2

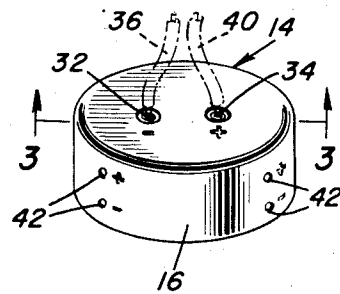


Fig. 3

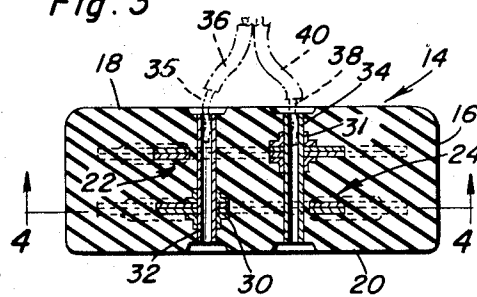


Fig. 4

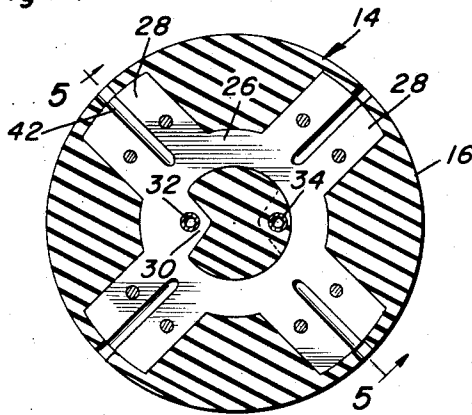


Fig. 5

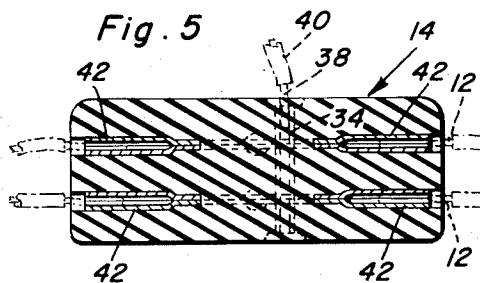
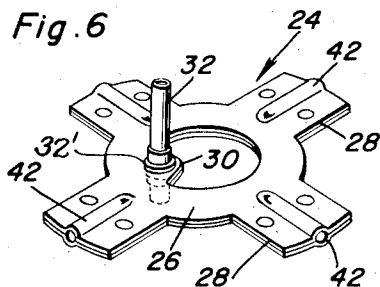


Fig. 6



John E. Jacobs

INVENTOR.

BY *Charles A. O'Brien*
and Harvey R. Jackson
Attorneys

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2,831,914

MULTIPLE RECEPTACLE CONNECTOR BLOCK

John E. Jacobs, Edgewood, Md.

Application July 13, 1956, Serial No. 597,799

2 Claims. (Cl. 174—59)

The present invention relates, broadly classified, to an electrical outlet box such as is used to accommodate current supplying and distributing cables or conductors and has reference, more particularly stated, to a wire-end connector, that is, a block of insulation material by way of which the stated wire-ends are distributively and effectually united.

As is reasonably well evident from the preceding general statement of the invention, current distributing and connecting devices, usually hub-like in form, have been used in conjunction with outlet boxes in a manner to overcome the customary, often objectionable, practice of splicing, soldering and taping wire-ends or terminals. The plural circuit connector block and insulator of Patent 2,699,533 of January 11, 1955, is a typical example of the state of the art as is also the junction box assembly of Patent 2,533,673 of December 12, 1950. It is an obvious object of the instant invention to structurally, functionally and otherwise improve upon the prior patented constructions set forth and similar prior art adaptations and, in so doing, to provide a seemingly more practical, reliable and efficient construction in which manufacturers will find their manufacturing requirements and economies met, and electricians will find the improvements time and labor-saving in effect.

More specifically, the invention pertains to a simple circular or equivalent block of insulation material having metallic spiders embedded therein, said spiders having cooperating socket members to accommodate the positive and negative wire-ends of the supply cable, and having a plurality of circumferentially spaced receptacles for corresponding wire-ends of the current take-off conductors which are joined with and lead away from the outlet box.

Other objects, features and advantages will become more readily apparent from the following description and the accompanying sheet of illustrative, but not restrictive, drawings.

In the drawings:

Fig. 1 is a plan view of an outlet box having the improved connector block mounted therein and showing the manner in which the same is used;

Fig. 2 is a perspective view of the block by itself;

Fig. 3 is a section on a slightly enlarged scale taken on the plane of the line 3—3 of Fig. 2;

Fig. 4 is a section on the horizontal line 4—4 of Fig. 3 looking in the direction of the arrows;

Fig. 5 is a section on the line 5—5 of Fig. 4; and,

Fig. 6 is a perspective view of one of the spiders by itself.

Referring now to the drawings and first to Fig. 1, the numeral 8 designates what may be treated as a conventional junction or outlet box which serves to accommodate the customary cables 10 with their conductors 12 leading into the wire-end connection portion or area of the outlet box. Prevailing practice usually necessitates that the bared wires of the conductors be spliced by twisting or otherwise, soldered and, for the most part, insu-

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lated by taping. This invention, as already mentioned, pertains to the use of a simple and practical connector block 14. Although this may be of some other shape it is preferably circular or somewhat disk-like in form. The peripheral surface is denoted at 16 and the flat top and bottom surfaces are denoted at 18 and 20. It is desirable to provide this block so that it functions as a sort of a hub. The primary aim, however, is to equip the block with receptacles into which the bared wire-ends may be removably plugged. To accomplish this so-called upper and lower spiders are provided and the upper spider is of steel, let us say, and is denoted by the numeral 22 while the lower one, which is perhaps of copper is denoted by the numeral 24. They are embedded in superposed spaced parallelism as is evident from the showing made in the drawing. In fact, each spider comprises a collar and ring 26, as seen in Fig. 6, having radial equidistant circumferentially spaced arms or extensions 28. In the inner periphery there is a lug 30 carrying an up-standing tube 32 which is suitably fixed to the member 26 at 32' and provides a socket member for reception of the wire terminal 35 of the conductor 36, as shown in Fig. 3. The upper spider is provided with a similar tube or socket member 34 mounted on an appropriate lug 31 to accommodate the wire-end 38 of the conductor or wire 40. The socket member 32 may be said to be on the negative side and the socket member 34 on the positive side as marked in the drawings. Also, these spiders are preferably made up of laminations of sheet material suitably stamped and secured together. More particularly, the radial arms are provided with opposed channel-like indentations which together provide horizontal circumferentially spaced receptacles which are here conveniently denoted by the numerals 42 whether they be positive or negative. Therefore, by embedding the two spiders and providing them with suitable socket members to receive the terminals 35 and 38, the spiders are suitably electrified and function as distributing members for the current take-off conductors or wires 12. More specifically, the receptacles 42 permit the wire-ends to be removably plugged therein and to thereafter function in an obvious manner. Consequently, this simple block with embedded spiders having receptacles opening through the marginal edge of the block makes for a practical and satisfactory wire-end assembling and current distributing type connector block.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. An electric block adapted for use in an electric outlet box, said block being constructed of an insulating molded material having two flat parallel sides and a continuous marginal edge, the block having a pair of thin flat electric conductors embedded at different levels therein, the outer edge of the block extending slightly beyond the outer edge of the electric conductors to provide insulation of the outer edge of the electric conductors, the two metal conductors having corresponding apertures extending inwardly from the perimeter thereof and an aperture in the marginal edge of the block opposite the apertures in the conductors adapted to receive an electric wire conductor, a second pair of conductors in a form to receive an electric conductor wire extending laterally through the block from one flat side to the other, one of the second mentioned conductors being connected with one of the first mentioned flat metal conductors and the other second

mentioned conductor being connected to the other first mentioned flat metal conductors.

2. In an article of manufacture as set forth in claim 1 in which the thin flat first mentioned electric metal conductors are constructed of two relatively thin flexible sheets fixedly attached to each other having oppositely disposed indentations to form the apertures therein for receiving the wire conductor.

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