

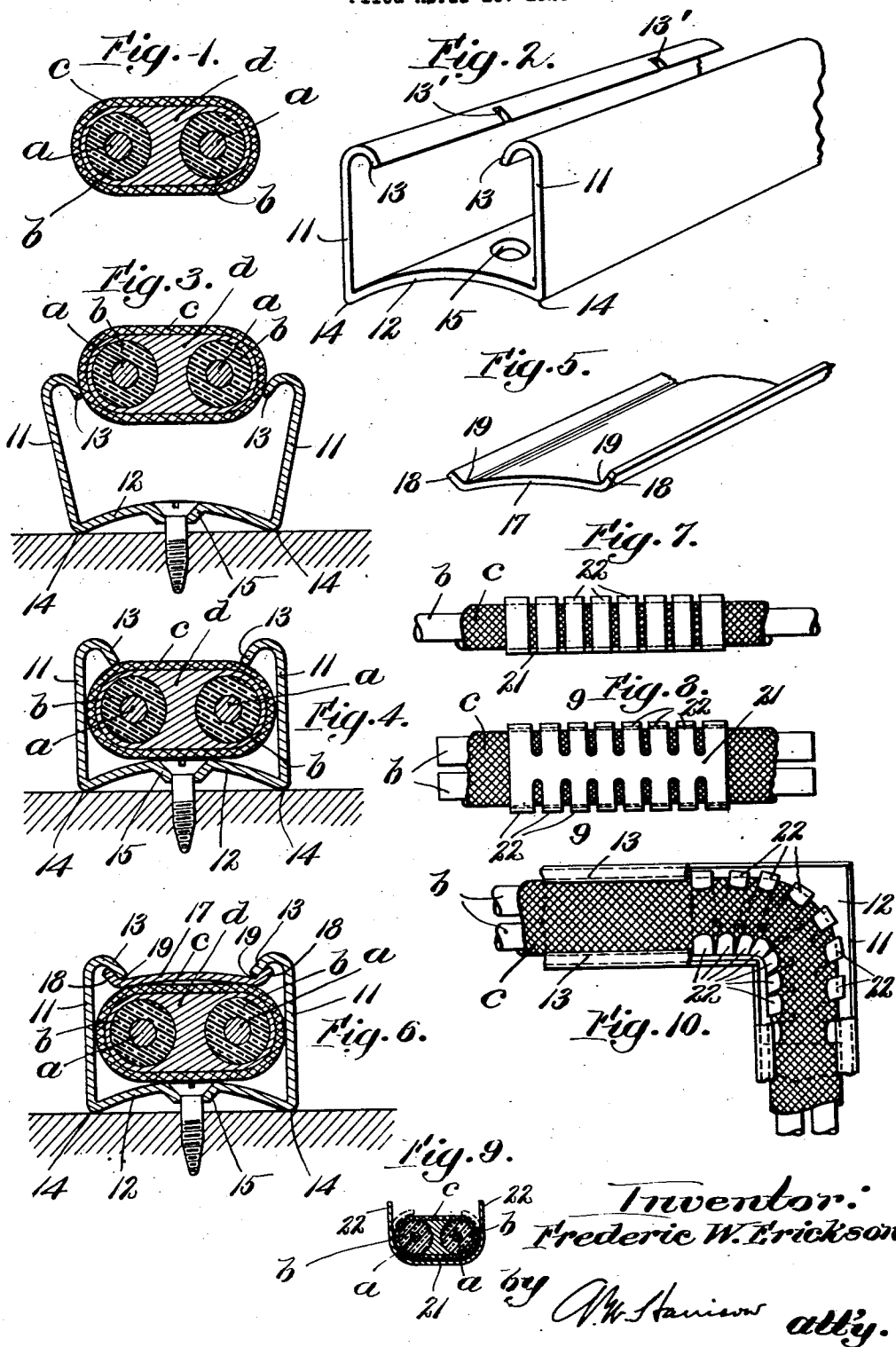
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MOLDING FOR ELECTRIC CABLES

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MOLDING FOR ELECTRIC CABLES.

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This invention relates to systems of interior electric conductor distribution in which insulated conductor cables are supported by moldings secured to the walls or ceilings of office or other buildings.

Until quite recently, the cables most generally approved by fire underwriters have been of the metal armored type. A very recently approved type of conductor cable however requires no metal armor. It is relatively inexpensive, being a non-metallic sheathed cable, and includes a plurality of conductor wires (usually two) each enclosed in rubber insulation, the whole surrounded by a tough protective braid, with a suitable filling material between the rubber and the outside braid. This cable is amply flexible to enable it to be bent quite sharply.

The principal object of my present invention is to provide a guiding or encasing molding for this type of improved cable, which molding is economical in its cost of production, is easy to secure to walls or ceilings of a building, and which will retain the cable in place without risk of wearing or otherwise injuring the outside braid or any other part of the cable.

With the above object in view, and others hereinafter referred to, the invention consists in the construction and combination of parts substantially as hereinafter described and claimed.

Of the accompanying drawings:—

Figure 1 represents a transverse section of the particular type of cable for the holding of which my improved molding is provided.

Figure 2 is a perspective view of a portion of a section of the improved molding.

Figure 3 represents a transverse section of the molding and cable, illustrating the method of assembling them.

Figure 4 is a similar view showing the cable and molding assembled.

Figure 5 is a perspective view of a piece of cap strip which may be employed when conditions such as hereinafter described render its use desirable.

Figure 6 represents a transverse section of the cable, molding, and cap strip.

Figure 7 is a side elevation of my improved flexible armor on a piece of cable, said armor being designed to cooperate with the molding, at times, as illustrated by Figure 10.

Figure 8 is a view looking upward from Figure 7.

Figure 9 represents a section on line 9—9 of Figure 8.

Figure 10 is a view of the molding mitered to hold the contained cable and armor in angular form.

Similar reference characters indicate similar parts or features in all of the views.

The cable illustrated by Figure 1, said cable being of the recently approved type hereinafter described, comprises two wire conductors *a* each having insulation *b*, the two being enclosed in protective braid *c* with filler material *d*.

The molding is made in sections of suitable length each section being of resilient sheet metal bent to present normally parallel sides 11 rising from a bottom 12 which is convexed toward the interior for three reasons presently described. The upper edges of the side walls 11 are bent inward to form beads 13. About midway between the base corners 14 the bottom 12 is provided with countersunk holes 15 for screws to fasten the molding in its desired location.

The reasons for the formation of the bottom 12, curved substantially as illustrated, are first that the corners 14 shall bear properly against the surface to which the molding is secured, second providing space for the countersinks 15 which receive the heads of the attaching screws, and third to contribute to the resilience of the molding as a whole, ample lateral resilience being desirable to enable the molding to be utilized in the following manner: When the required sections of molding are secured in place, end to end, the cable can be located therein by a simple pushing action. As indicated in Figure 3, the cable is pressed against the beads, spreading them and the side walls as illustrated, and further pressure snaps the cable into place where it will be securely retained (Figure 4) by the resilient returning of the walls and beads to normal position. The edges of the beads grip the sheathed cable and hold it in place flatwise. It is to be noted that the beads are not formed by rolling the edges of the molding strip into complete tubular form. Instead, said beads, in cross section, are substantially semi-circular, and therefore the edges of said beads, and not rounded surfaces thereof, bear against or bite into the cable. The non-metallic braid sheathing of the cable is sufficiently strong and durable to withstand the gripping action of the edges of the beads.

The molding is so proportioned, relatively to the cross section of the cable, that the inner surfaces of the side walls 11 bear against, or are so close to, the sides of the sheathed cable as to prevent lateral shifting of the cable, and the edges of the beads 13 hold the cable against the convex surface of the bottom 12.

In some locations, or for some purposes where it is desirable to completely conceal the cable, sectional cap or cover strips 17 may be employed (Figures 5 and 6). Said strips are laterally curved and have curved or bent marginal portions 18 forming channels 19 in the surface which is outermost when the strips are in place. Such a strip can be snapped to position (Fig. 6) by an operation similar to that which effects positioning of the cable, and said strip is then held in place by the edges 18 extending under the edges of the molding beads, the latter extending into the channels 19. The resilience of the molding, and the resilience of the cable covering itself, coact in permitting this easy location of the cap strip. Both the cable and such a cap strip are held tightly in the relative positions shown in Figure 6. Of course the outer surface of the molding, and of the cap strip when the latter is employed, may be painted or otherwise finished to harmonize with the architectural interior of the building or rooms.

To complete installation of the molding and cable it is frequently necessary to provide angular portions such as illustrated by Figure 10. For this purpose the molding is mitered. The operation of mitering sometimes leaves jagged edges of the metal at the joint. And of course the metal is rather sharp along the inner side of the joint of the miter. To protect the cable from abrasion at such joints, or elsewhere when needed, I have provided a flexible armor comprising a short bendable metal strip 21 having fingers or ribs 22 extending in opposite directions (Figs. 7, 8 and 9) said ribs or fingers being bendable from the full to the dotted line positions indicated in Figure 9, to cause said ribs or fingers to grip the braid covering *c* of the cable. This armor as a whole is quite thin and when attached to the cable it can, with the cable, be sprung or snapped to place in the molding, either in a mitered portion of the molding as indicated in Figure 10, or elsewhere. And if more or less longitudinal adjustment of the cable in the molding is required, the armor can be slid along in the molding, with the cable to which it has been attached. As illustrated by Figure 10, the cable will be fully protected against wear or abrasion in angular mitered portions of the molding.

To facilitate the snapping of the cap or cover strip 17 to position as hereinbefore described, the edges of the beads 13 are slitted at intervals. Figure 2 illustrates such slits at 13'. Preferably both of the beads 13 are similarly slitted. Such slitting of the beads divides the resiliency of the edges of the beads into sections. By spacing the slits at intervals such as 2" to 4", a cap strip 17 which may be 5' or 6' long can be readily snapped to the position indicated in Figure 6 by pressure applied progressively along the strip.

It will be apparent, upon consideration of Figures 2, 3 and 4, that I have provided a resilient sheet metal molding having a transverse area to snugly embrace a substantially flat cable having a plurality of conducting wires, said molding having a longitudinal slot or opening between the inner faces of the beads 13, the width of said slot being such that the cable can be snapped through it to contained position where it will be instantly and automatically retained in position for use. And the molding is one that is low in cost of production and that can be quickly secured in such positions as desired along walls or ceilings.

Having now described my invention, I claim:—

1. A molding for non-metallic-sheathed electric cables, consisting of a strip of resilient sheet metal bent to provide a bottom portion and normally parallel side walls spaced to admit a duplex-conductor cable between them, the margin of each side wall being bent toward the other side wall and toward the bottom portion and forming beads to engage and retain said cable.

2. A molding for a non-metallic-sheathed electric cable, consisting of a strip of resilient sheet metal bent to provide a bottom portion and normally parallel side walls spaced to admit a duplex-conductor cable between them, the bottom portion which connects said side walls being convexed toward the interior of the molding and having holes for attaching screws, the margin of each side wall being bent toward the other side wall and toward the bottom portion to form cable-engaging beads.

3. The combination with a resilient sheet metal molding having normally parallel side walls the marginal portions of which are bent inward toward the interior of the molding, of a cap strip having its edge portions bent away from the interior of the molding and extending under the edges of the bent marginal portions of the molding.

In testimony whereof I have affixed my signature.

FREDERIC W. ERICKSON.