

- [54] WALL SERVICE DUCTS 3,541,224 11/1970 July..... 339/22 T X
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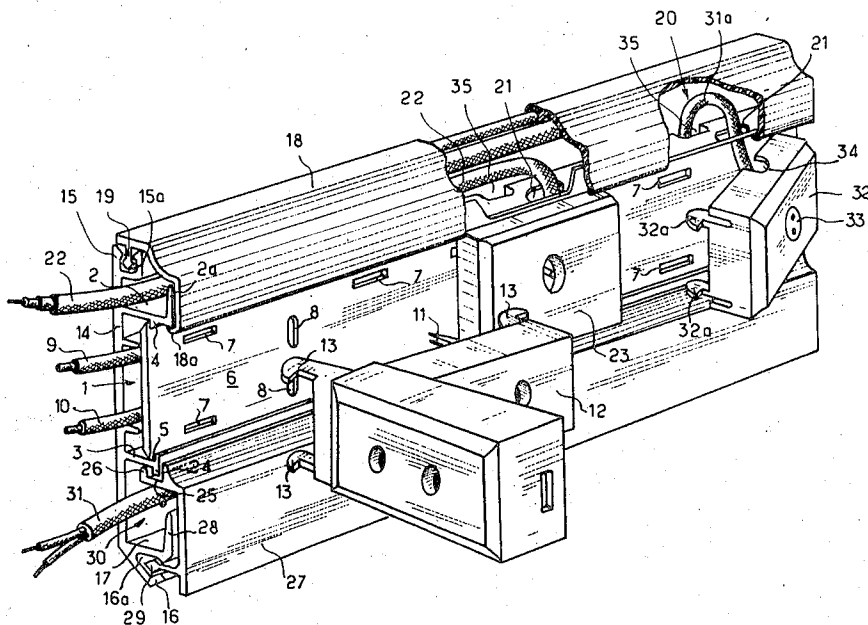
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[57] ABSTRACT

The invention provides a multi-purpose wall service duct for carrying electrical conductors or pipes for fluids. A moulding on which distribution elements can be fixed has an extension defining a lateral channel. One edge of the moulding is engaged by one edge of a cover and the other edge of the cover fits on to the extension of the moulding, and concealed passages are provided between the lateral channel and a connector fixed in position by a distribution element.

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6 Claims, 3 Drawing Figures



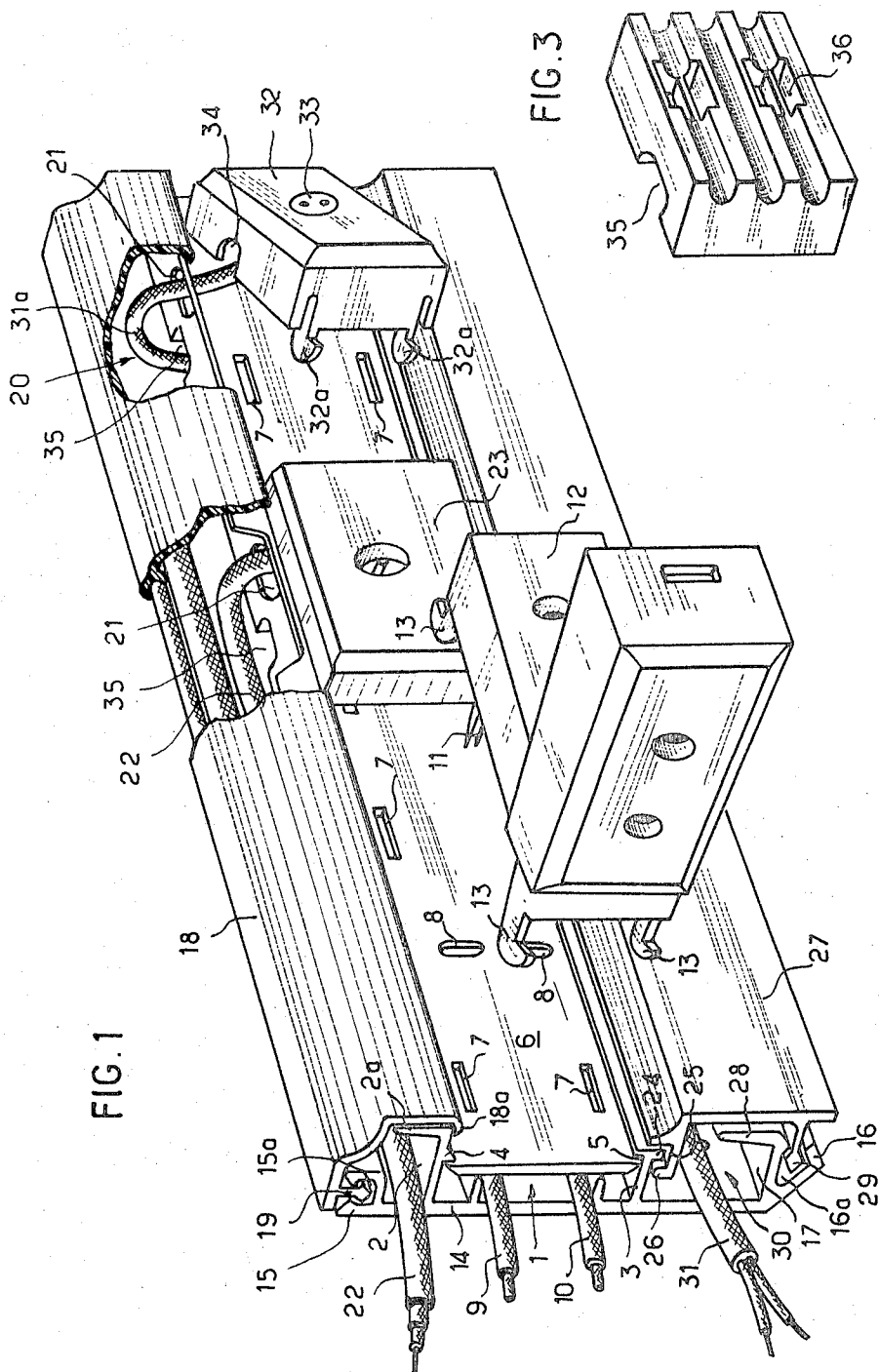
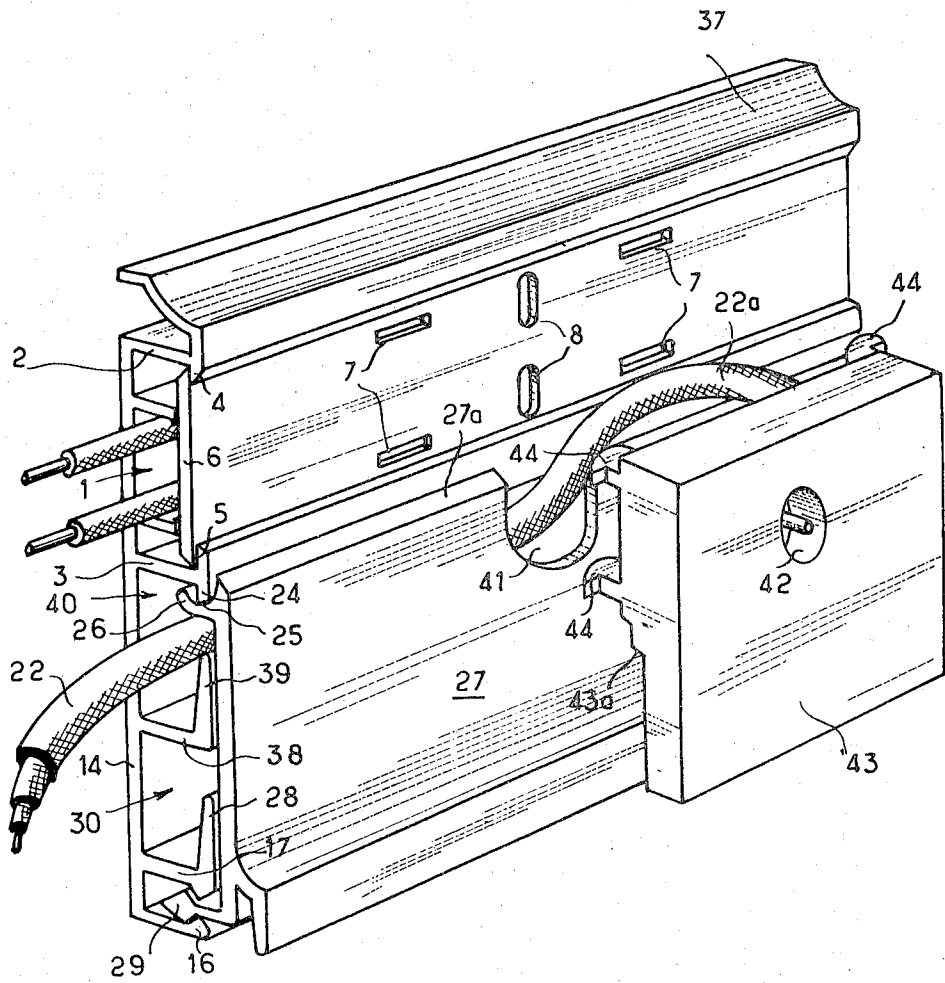


FIG. 2



WALL SERVICE DUCTS

BACKGROUND OF THE INVENTION

The invention relates to multi-purpose wall service ducts having the form of a moulding generally associated with lateral channels, so that the parallel pipes or conductors enclosed in the moulding and in the channels fulfil different needs. More particularly, the invention applies to plinths or moulding intended to surround industrial, commercial or residential premises and to distribute therein conduits of various types, usually electrical, but also pipes carrying fluids.

Such wall service ducts are generally fixed close to the floor in the form of plinths, or beneath a window, and they are closed by covers, preferably of clip-on type, which allow easy access to the conductors or pipes which are thus concealed and protected. An electrical service duct in the form of a moulding associated with a lateral part formed as a plinth is described in French Pat. No. 2,097,279. However, if a channel lateral to the distribution system contains conductors which are to be terminated at a specific point of use, it is necessary to make an aperture on the face of the plinth in order to attach it either to a special power outlet point or to a junction box, or to make a connecting cable pass beyond the said aperture. This practice, apart from the time and equipment necessary for its execution, has the disadvantage of leaving visibly ugly holes and prejudicing the protection of the conductors.

Where the distribution system involves power outlet points, the outlet points may be adapted for plugging-in in a standardised manner, that is to say, that they are clipped on to the conductors by through apertures provided at equal distances along the distribution system. Furthermore, in the system there may be one or more lateral channels intended for conductors which are to connect one specific point to another (for example, telephone instrument connections, loud speaker connection, circuits for signalling, for regulation, for alarm, or for remote control) or which it is necessary to effect a branching at the end of the cable by means of a connection box or a special outlet point. There is difficulty of in reconciling the power distribution part of the system with plug-in outlets at regular intervals, and the outlet of the end of the cable in a lateral channel. Furthermore, if two lateral channels are provided one on each side of the distribution part, it is impossible to pass a conductor from one lateral channel to the other.

The invention overcomes these disadvantages and its main object is to provide a practical and elegant construction of a service duct assembly, the cable outlets of which are invisible. A further object is to provide an arrangement of invisible prefabricated holes for the cables of a lateral channel while preventing dust or foreign bodies from falling into the interior of the plinth.

SUMMARY

The invention provides a multi-purpose wall service duct comprising a moulding for enclosing distribution conductors on to which pin-type distribution elements can be fixed, and there being a lateral channel associated with the moulding to house electrical, or fluid supplies for controlling particular functions. At least one external edge of the moulding is adapted to receive

one edge of a cover, the other edge of which fits on to an extension of the moulding which forms the lateral channel, and concealed passages are provided between the interior of the lateral channel and at least one connector for control of a particular function, which connector is fixed in position by a distribution element on the moulding.

Preferably, the moulding is constructed to receive pointed distribution connectors which penetrate the insulation of the cables, and are of the kind described in French Pat. Specification No. 2,097,279, the cover of the moulding having an alternating sequence hooking perforations and passage apertures for the pointed pins, and the connectors for control particular functions are fitted with hooks for engaging in the hooking perforations.

By this means it is at intervals possible for example 1, 2, 3 or 4 times per linear metre, to fix in the same position either a connection box with terminals or with a connector, or simply with a cable clamp receiving the end of a telephone or a signalling serial conductor, or else a power outlet point directly supplied with the customary distribution voltage. In both cases, according to the invention, there is interdependence between the distributive part of the mouldings and the control part or parts for special functions which employ the lateral channels.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a multi-purpose wall service duct according to the invention with two lateral conduits,

FIG. 2 is a perspective view of a multi-purpose wall service duct according to the invention in the form of a plinth, and

FIG. 3 is a constructional detail, view in perspective, of an interior arrangement of the moulding of FIG. 1.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIG. 1, a moulding generally designated 1, which may be constructed either of metal or of an extruded moulded material, has an upper edge 2 and a lower edge 3 which are parallel to the floor. The edges 2 and 3 respectively have beads 4 and 5 directed towards the longitudinal axis, of the moulding, which retain clipped-on a flat cover 6 which is provided alternately along its length with hooking apertures in the form of slots 7 and with passage apertures 8 for pins of power outlet points. Distribution conductors 9 and 10 are housed inside the moulding and may be penetrated by needle-type pins 11 of distribution connectors 12. Reference should be made to French Pat. Specification No. 2,097,279 for further details of the connector device.

A connector 12 is fitted with hooking lugs 13 which engage in the parallel slots 7 of the cover 6.

The base 14 of the moulding 1 is extended outwardly in its plane to constitute grooved edges, a top edge 15 and bottom edge 16 respectively. The edge 15 is formed with an upwardly directed groove 15a along the total length of the moulding. The edge 16 is formed obliquely with respect to the vertical support face of the bottom of the moulding, and comprises a groove 16a which is directed horizontally towards the front of the service duct and forms the floor 17 of a bottom channel.

The top edge 2 of the moulding forms the bottom of a top channel. Moreover, the edge 2 overhangs the front face of the cover 6 and terminates in a vertical flange 2a. Thus the edge 15, the top face of the side 2 and the flange 2a constitute a gutter-shaped section defining the top channel 20, which is closed by the cover 18, having a suitably moulded profile for aesthetic purposes and which comprises a step-shaped rib 19 adapted to clip into a groove 15a formed for that purpose, and a folded edge 18a adapted to engage beneath the projecting edge 2. As is clearly shown on the fragmented parts of the cover 18 in FIG. 1, the projecting edge 2 is provided at intervals with apertures 21 opening in front of the cover 6. A cable 22 is shown in the top channel 20 and it passes through the aperture 21 located above a television power outlet point 23, which outlet point has a plinth which is suitably pierced to allow the cable 22 to pass. As FIG. 1 clearly shows, the connector 12 may occupy the position defined by the first two hooking perforations 7 on the left-hand side of the Figure, whereas the plinth of the outlet point 23 will occupy the next adjacent position defined by the pitch of the perforations 7.

The bottom edge 3 of the moulding has a downward vertical flange 24 which engages in a groove 25 of a part 26, the latter being the right-angled extension of a cover 27 formed as a plinth beneath the moulding 1. The internal face of the cover 27 bears upon a vertically oriented flange 28 of the floor 17 of the bottom channel, and a longitudinal rib 29 formed on the inside of the cover 27 engages in the groove 16a both being formed for this purpose. A bottom channel 30 is thus defined, in which a two-way cable 31 is illustrated.

FIG. 1 also shows in the right-hand section, another special connector 32 provided with an outlet socket 33, and half engaged by its fixing means. One side of the plinth of the connector 32 is formed with an indentation 34 for the passage of a cable 31 which passes first along the channel 30 and which ascends into the top channel 20 by passing behind the plug-in device of the moulding. The end 31a of the cable arrives through a passage 35, makes a loop in the channel 20, then passes out again through an aperture 21, through the projecting edge 2 of the moulding. Thus, when the connector 32 is held in position by its hooks 32a, the connection of the cable 31 is completely invisible.

FIG. 3 illustrates a block comprising a plug-in device for the moulding 1, which is not described in further detail since it is not a part of this invention. The said block comprises plug-in cavities, the position of which, in a transverse plane, are located opposite the plug-in apertures 8 of the moulding. It also comprises, at its rear face a small tunnel 35 with a vertical axis, which permits the passage of conductors between a channel such as 30 and a channel such as 20, or vice-versa.

FIG. 2 illustrates a simplified service duct comprising only bottom channels beneath the moulding and provided with a cover in the form of a plinth. It is clearly apparent that the general structure is similar to that of the embodiment previously described. The moulding designated 1 has a cover 6 fitted with hooking perforations 7 and with pin passage holes 8. The floor 14 of the moulding is prolonged vertically downwardly, and the top edge 2 with its fixing bead 4 for the cover is formed upwardly as a cornice 37 for decorative purposes. The bottom edge 3 of the moulding is fitted with a bottom flange 24 capable of engaging in a groove 25 of a pro-

jection 26 of the bottom cover 27, which is formed as a plinth to reach to ground level, and has in its bottom part a stepped bead 29 which engages horizontally by catching between two fins 16 and 17 which extend at right angles from the floor 14 of the moulding. The fin 17 is complemented by a vertical longitudinal flange 28, against which the internal face of the cover 27 bears, so that the floor 14 and the parts 17 and 28 form a gutter-shaped section defining a first bottom channel 30. Between the channel 30 and the edge 3 of the moulding, another horizontal fin 38 and another vertical flange 39 are provided, thus defining a second channel 40 in which the cable 22 is shown. This cable 22, which is a co-axial television cable, is located appropriately beneath the orifices 8 by an indentation 41 made in the cover 27 and in proximity of the bottom face of the edge 3. A television outlet 42, fitted into a plinth 43, receives the end of the cable 22. The plinth 43 is provided with hooks 44 which engage in the perforations 7, and the plinth is extended downwardly to form a hood which can cover the indentation 41. As is clearly apparent in FIG. 2, the plinth 43 is appropriately shouldered to fit on to the edge 27a of the cover 27 and on to the bead 5 of the edge 3. In this manner, the television outlet, which is fixed in the perforations of the distribution system, can be connected on the channel 40 so as to conceal the exit of the cable 22a.

Regulations in force require conductors supplying power outlet points to be located at a certain distance from the ground, and it is therefore advantageous in the case of a plinth to utilize the available bottom space to house conductors carrying weaker voltages e.g. telephone or aerial. In the embodiment according to FIG. 1, these latter conductors are brought back into the top channel, as was explained hereinbefore. In the case of FIG. 2, the channels 30 and 40 and connectors with a downwardly extended hood may be used.

I claim:

1. A multi-purpose service duct comprising a moulding member with walls defining a first longitudinal cavity for enclosing distribution cables, and a cover enclosing said first cavity and including means for securing pin type distribution elements into said cover at predetermined locations thereon, said moulding member including an extension with lateral walls and a front cover defining a second longitudinal cavity, adjacent the first said cavity, for enclosing a further cable in isolation from the cables in said first cavity, said second cover having opposite longitudinally extending edges, one of said walls which defines the first cavity having an edge engaged with one edge of said front cover of the second cavity, the other edge of said second cover being engaged with said extension, and passage means for establishing communication between the interior of said second cavity and the exterior of the duct for passage of said further cable from a further distribution element into said second cavity, said further distribution element being secured to said first cover by said means for securing the pin-type distribution elements, said passage means being so positioned with respect to said means which secures the distribution elements onto the first said cover that said passage means is covered by said further distribution element when it is fixed in position on said first cover at one of said predetermined locations.

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2. A service duct according to claim 1, wherein the second cavity is above the first cavity, one of the walls of the moulding member defining the first cavity being an upper wall projecting beyond said first cover to form a projection, said passage means being constituted by holes provided in said projection, said further distribution element having a lateral aperture corresponding to said hole and fitting against said projection.

3. A service duct according to claim 1, wherein said passage means is constituted by at least one frontal aperture provided in said cover of the second cavity, said further distribution element having a plinth with a downward prolongation which covers said frontal aperture.

4. A service duct according to claim 1, wherein said moulding member has two said extensions with respective second covers to form two further said longitudinal cavities flanking said first cavity, said moulding mem-

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ber having apertures permitting the passage of a further cable from the one to the other of the longitudinal cavities.

5. A service duct according to claim 1, wherein said cover of the first cavity is provided with apertures to receive conductors with needles adapted to penetrate the insulation of a cable, said means for securing distribution elements to the first cover including an alternating sequence of hooking perforations and passage apertures for pointed pins, the said further distribution element including hooks for engaging said hooking perforations.

6. A service duct according to claim 4, wherein said wall of the first cavity contains a plug-in device for the cables, said plug-in device comprising a plinth carrying parallel conductors and provided with a passageway at the rear of the plinth.

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