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[56]

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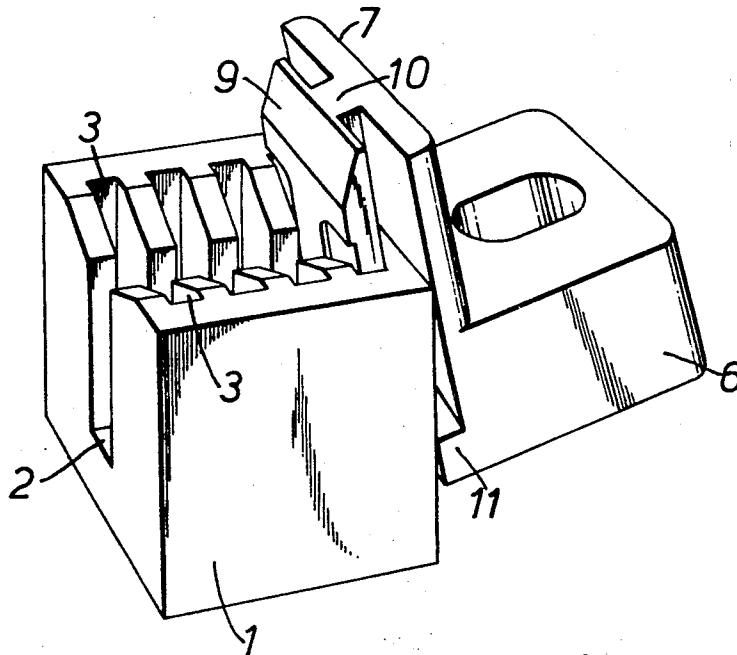
[54] **EDGE CONNECTOR FOR PRINTED CIRCUIT
 PANELS**
1 Claim, 6 Drawing Figs.

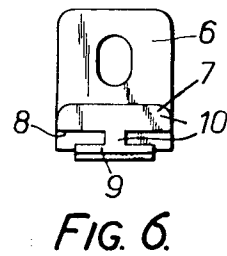
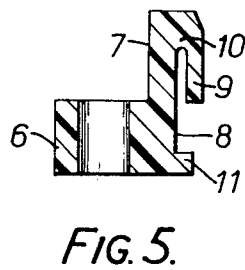
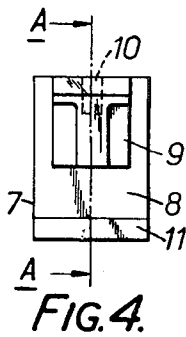
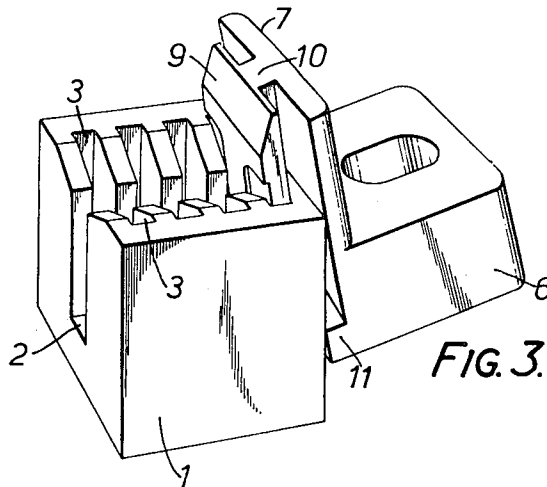
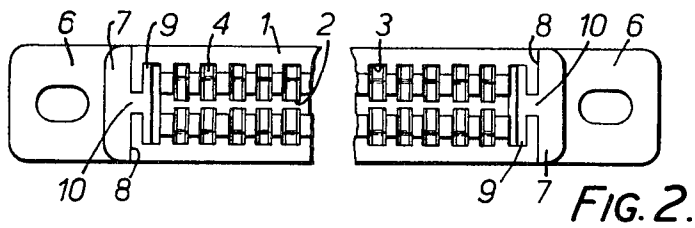
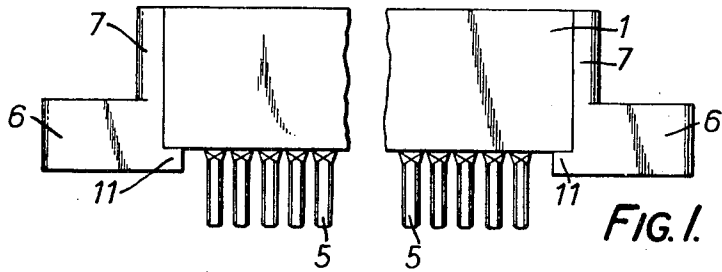
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ABSTRACT: A detachable endpiece for an edge connector comprises a base attachable to a support, the base having an arm carrying a resilient platelike element for sliding engagement into an edge recess in the connector and a lip for snapping under the underface of the connector.





EDGE CONNECTOR FOR PRINTED CIRCUIT PANELS

This invention relates to detachable endpieces for edge connectors, the connector being of the kind comprising an elongated body of insulating material formed with a central longitudinal slot for receiving a printed circuit panel and a plurality of recesses opening into the slot for housing contacts adapted to engage parts of the printed circuitry on the panel.

The present invention provides a detachable endpiece for an electrical edge connector of the kind referred to comprising a base formed with means for attachment to a support, an arm extending substantially normal to the base, a resilient platelike element secured to one face of the arm in substantially parallel spaced relation thereto for sliding engagement into the space defined by an end pair of recesses in the body of the connector so as detachably to secure the endpiece to said body, the arm also being formed with a resilient lip extending from the same face of the arm as the platelike element for snapping under the underface of the body of the connector when the platelike element is slid into the said recesses.

The endpieces may be a one-piece molding of synthetic plastics which is sufficiently resilient to permit the flexing movement of the platelike element relative to the arm as it is assembled with the connector body.

The invention also includes an edge connector of the kind referred to having an endpiece as described in the preceding paragraphs attached to one or both its ends.

To enable the invention to be fully understood, it will now be described, by way of example, with reference to the accompanying drawings in which:

FIG. 1 is a side elevation of an edge connector having an endpiece assembled with each of its opposite ends;

FIG. 2 is a plan view of the edge connector illustrated in FIG. 1;

FIG. 3 is a perspective view on an enlarged scale illustrating the assembly of an endpiece;

FIG. 4 is an end view of an endpiece;

FIG. 5 is a sectional view on the line A—A of FIG. 4; and

FIG. 6 is a plan view of the end piece illustrated in FIG. 4.

As shown in FIGS. 1 to 3, the edge connector comprises an elongated body 1 of insulating material molded from synthetic plastics and having a central longitudinally extending slot 2 for receiving a printed panel. Recesses 3 for housing contacts 4 provided with tails 5 are arranged in opposed relation in each recess so that portions of the contact extend into the central slot 2.

The connector body may be formed in a continuous length and portions cut off according to the number of contacts required for a particular purpose. To enable the cut lengths to be secured to a support, it is known to provide endpieces which are detachably secured to the opposed ends of the connector body. It is common practice to sell connector body portions cut to a predetermined length to a customer together with end pieces to be attached. The endpieces may be stored and shipped separately from the connector bodies or may be temporarily attached by clips and only assembled with the connector body when the latter is to be secured to a chassis or other support. This practice has the disadvantage that the endpieces have to be removed from their temporary attachment and then attached to the connector body. This entails labor costs in addition to the cost of the temporary clip. Further, there is the danger that any pieces may inadvertently become detached or lost before use.

The endpiece to be described overcomes these disadvantages and, as shown, comprises a one-piece molding of

synthetic plastics, for example, nylon of generally L-shape.

One arm 6 of the 'L' is substantially rigid and forms the base and the other arm 7 has a flat face 8 provided with an integral platelike element 9 integrally connected to the face by a thin narrow web 10 located at the end of the arm remote from the arm 6. As shown more particularly in FIG. 5, the platelike element 9 is spaced from the face 8 of the arm 7 below the connecting web 10 (as viewed in FIG. 5) and is sufficiently flexible as to be capable of movement relative to the said arm.

The lower end of the arm 7 (as viewed in FIGS. 4 and 5) is also formed with an integral lip 11 extending at right angles to the face 8 in underlying relation to the element 9.

The width of the element 9 corresponds to the distance between the opposed end walls of the end pair of the recesses 3 and the width of the web 10 corresponds to the width of the slot 2.

An endpiece is assembled by entering the lower free edge of the element 9 into the endmost pair of recesses 3 and exerting pressure to slide the element downwardly. During this operation the lip 11 will abut the end face of the connector body but the flexibility of the element 9 will compensate for this and it will be noted from FIG. 3 that the lower end portion of the element 9 flexes so as to move away from the face 8 as the element slides into the recesses 3. When the element is fully inserted, the lip 11 will be located so as to snap over the lower edge of the connector body.

When assembled the element 9 will make a close fit in the endmost recesses and the web 10 will be located in the central slot 2. The lower free end of the element 9 will by abutment with the bottom of the recess 3 limit downward movement of the endpiece and the engagement of the lip with the under face of the connector body will prevent upward movement of the endpiece. Accordingly, it will be securely attached to the connector body against accidental removal but it can be purposely removed if desired.

It will be understood that an endpiece will be attached as described to each end of the cut length of a connector body and the connector body with the attached endpieces can be stored and transported as a unit ready for immediate use.

The body of the connector may be formed of glass filled diallyl phthalate or made of any other suitable form of synthetic plastics.

I claim:

1. An edge connector comprising an insulating body having top and bottom surfaces and end surfaces, said body having a longitudinal slot for receiving a circuit panel and said slot intersecting at least one of said end surfaces, said body having pairs of opposed laterally extending contact-receiving openings opening into said slot, a detachable mounting member having a base formed with means for attachment to a support, an arm extending normal to the base, a resilient platelike element connected to said arm by a web element, said web element having a thickness less than the width of said slot, said platelike element extending below said web and having a portion spaced from said arm, said platelike element having a width greater than said slot, but less than the distance between facing end walls of said pairs of contact receiving openings, and a lip element projecting from said base adjacent the bottom thereof on the same side of said arm as said platelike element, said lip element having a fastener engagement with said bottom surface of said body after said platelike element has been moved into the space defined by the pair of contact-receiving openings adjacent said end surface of said body intersected by said slot.