The present invention relates to electrical connectors and particularly to printed circuit connectors. In such connectors, the receptacle is designed to receive the leading edge of a printed circuit board having conductive segments disposed therealong, so that the board itself functions as the plug of the connector.

It is among the primary objects of the invention to provide a printed circuit receptacle of improved design, capable of supporting the circuit board inserted therein in a manner to provide better electrical contact, better physical support and consequently greater reliability than obtainable with printed circuit receptacles of types heretofore commonly employed.

A further object of the invention is to provide an improved receptacle for a printed circuit connector wherein the several parts are so arranged and related that the leading edge of the circuit board is accurately guided into engagement with the individual contacts of the connector so that any likelihood of damage to the parts in coupling or uncoupling is substantially reduced. Also, greater uniformity of insertion and withdrawal forces is obtained.

A still further object of the invention is to provide a unique and simplified arrangement for polarizing a printed circuit connector so that the printed circuit card or board may be quickly, easily and conveniently inserted, yet will not be received by the receptacle if improperly oriented or in reverse position.

The foregoing and other related objects are accomplished according to the present invention by an electrical connector as illustrated in the drawings attached to and forming a part of this specification, wherein:

FIGURE 1 is a perspective view of the receptacle of a printed circuit connector constructed in accordance with the present teachings;

FIGURE 2 is a cross-sectional view taken substantially on the plane of the line 2—2 of FIGURE 1;

FIGURE 3 is a cross-sectional view taken substantially on the plane of the line 3—3 of FIGURE 2; and

FIGURE 4 is a cross-sectional view similar to FIGURE 2, but showing a slightly modified form of the invention.

The connector receptacle, generally indicated at 10 in the drawings, includes an elongated body portion 11 extending between a pair of oppositely disposed vertical uprights 12 and 13. Mounting pads 14 and 15 are ordinarily provided and these are illustrated as including screw holes 16 and 17, as is common practice in the connector art.

The connector body or central portion 11 includes a relatively long, narrow, deep contact channel 18, arranged to receive the leading edge of a mating circuit board which may be of any conventional construction. As illustrated, the contact channel 18 is centrally disposed in the connector body and extends the entire distance between the opposed inner faces 21 and 22 of the uprights 12 and 13, respectively. The contact channel 18 may be of any conventional configuration, but as illustrated it is provided with multiple pairs of contact recesses 23 and 24, each extending from the upper surface of the body portion 11 to the bottom of the channel 18, so that each pair of recesses 23, 24 coat to receive a metallic contact of the "tuning-fork" type, as best shown at 25 in FIGURE 3.

The conventional tuning-fork contact illustrated in-
a plurality of conductive contacts spaced-apart from each other along said channel;
a pair of uprights perpendicular to the receptacle body said uprights being carried on the receptacle body adjacent the opposite ends of the central contact channel and molded integrally with said body;
each of said uprights having a narrow vertical guide slot along its inner surface whereby the open sides of said guide slots in said pair of uprights face each other;
said guide slots each lying in the plane of the central contact channel; and each slot extending from the top of one of the uprights at least part of the way toward said contact channel,
whereby the upper end of said slots may coact to receive opposite edges of a circuit board entering the receptacle and thus guide the leading edge of the board into the contact channel thereof; the slot in one of the uprights terminating at a point above the contact channel whereby the slots in said uprights are of unequal vertical dimensions, whereby said slots coact with dimensional variations of the opposite edges of the circuit board for polarizing the receptacle with respect to the board.

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