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3,270,313

CONNECTOR FOR PRINTED CIRCUIT PLATES

Filed April 3, 1964

2 Sheets-Sheet 1

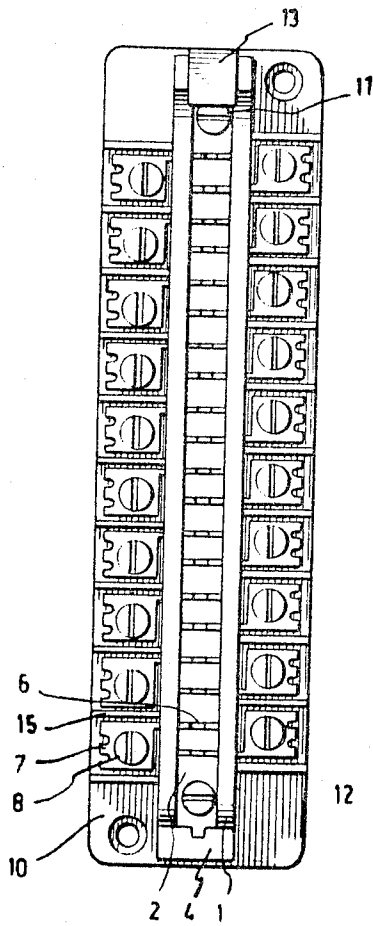


FIG. 1

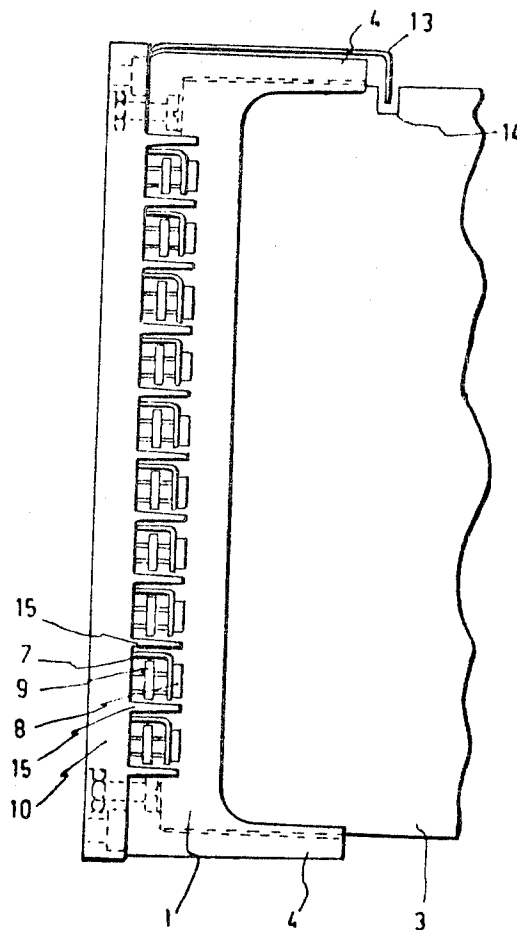


FIG. 2

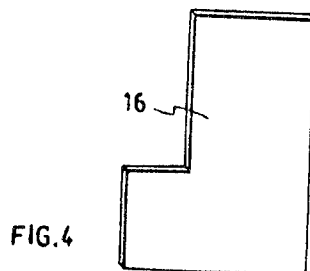


FIG. 4

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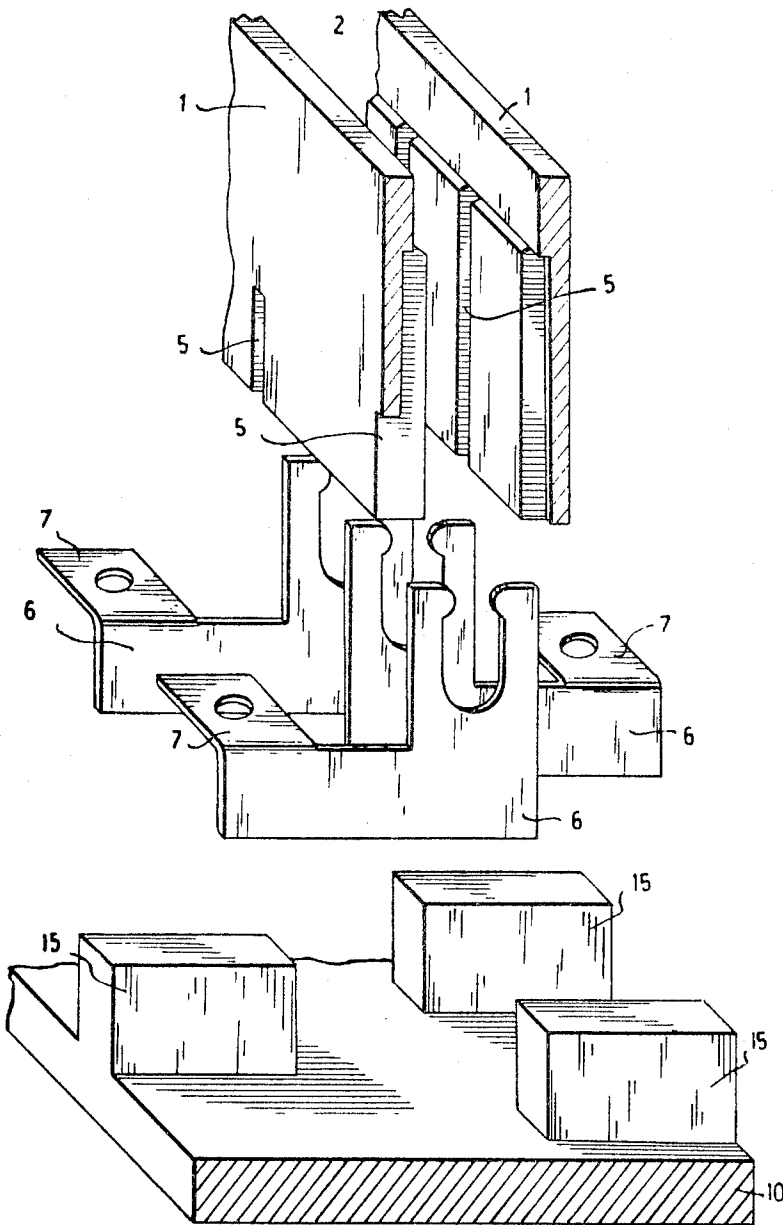


FIG. 3

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CONNECTOR FOR PRINTED CIRCUIT PLATES

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505,487, Patent 631,447

5 Claims. (Cl. 339—176)

The instant invention relates to a connector for printed circuit plates comprising a strip member adapted for the reception of spring clamps for use in making an electric contact with the conducting lines on the printed circuit plate. Connectors of this general type are known for use in the case where the connection lines are to be welded to the spring clamps in the extension of the printed circuit plate.

The invention relates to a connector for printed circuit plates in the case where the connection lines are to be screwed or brazed to spring clamps located on the side of the connector wherein the printed circuit plate is introduced. It is particularly directed to such a connector of simple and cheap conception.

The invention is characterized in that the strip member comprises a longitudinal slot for the insertion of the printed circuit plate and a plurality of transverse dorsal slots adapted to house the spring clamps, in that the said strip member thus provided with spring clamps is secured on a base plate retaining the clamps in their slots and in that the base plate comprises a plurality of compartments for the terminals to be screwed or brazed constituted by fins integral with the spring clamps.

The invention is hereinafter explained with reference to the annexed drawing of a non-limitative embodiment.

In the drawing:

FIG. 1 is a plan view of the connector for printed circuit plates;

FIG. 2 is a side elevation view of the connector;

FIG. 3 is a perspective exploded view of a part of the connector;

FIG. 4 illustrates coding plate capable of replacing a spring clamp.

FIGS. 1, 2 and 3 illustrates a strip member 1 made of insulating material and comprising a longitudinal slot 2 for the insertion of a printed circuit plate 3. In the case where strip member 1 is thin, as it is the case in the instant example, two extensions 4 are provided at the two ends thereof for ensuring adequate guiding of the plate. A series of transverse slots 5 are provided at the back of strip member 1 for the reception of flexibly conductive spring clamps 6. The said spring clamps have terminals 7 which can be either screwed or brazed. The transverse slots 5 are provided alternatively on the two sides of the strip member whereby the terminals are disposed in staggered arrangement on one and the other side of the strip member (FIG. 1).

Fins which are integral with spring clamps 6 form the terminals 7 through which extend screws 8 on which are threaded nuts 9. Square nuts 9 are prevented from rotating with screws 8 as they extend lengthwise and close to the main lead of spring clamp 6.

Strip member 1 is secured on a base plate 10, made of insulating material or covered with insulating material, by means of two screws 11 and 12. Screw 11 retains, simultaneously with the strip member, a resilient retain-

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ing leaf 13 which is pressed between strip member 1 and base plate 10 and which extends alongside one of the extensions 4 of the strip member 1 to enter, by its free curved end, into a notch 14 provided in the printed circuit plate. Base plate 10 comprises, on the other hand, a series of ribs 15 forming, together with member 1, compartments for terminals 7. This is best illustrated in FIG. 2.

In view of coding of the connector, it is possible to replace one or several of the spring clamps 6 by angled barrier plates 16 (FIG. 4) not provided with terminals 7.

Although a specific embodiment of the invention has just been described, it will be understood that various modifications may be made thereto without departing from the spirit of the invention, the scope of which is set out in the appended claims.

I claim:

1. In a connector for printed circuit plates including a strip member housing spring clamps adapted to establish an electric contact with conducting lines on said printed plates, the combination comprising:

- (a) such a strip member provided with a longitudinal slot for the insertion of a printed circuit plate and a plurality of dorsal transverse slots; said strip member having upward extensions at each end thereof, normal to said longitudinal slot, adapted for guiding said printed circuit plate in the said longitudinal slot;
- (b) a retaining resilient leaf mounted at one end of said strip member to extend above the adjacent guiding extension and having a bent extremity adapted to be housed in a notch formed along one edge of the printed plate;
- (c) spring clamps inserted in said slots in spaced alignment along said strip member; said clamps each having a fin projecting out of said strip member and slots;
- (d) a base plate over which said strip member and clamps are secured with said clamps housed in said slots, said base plate including a plurality of compartments spaced therealong so as to contain said fins to form electrical terminals.

2. A connector as claimed in claim 1, wherein said dorsal transverse slots extend through the strip member alternately on one side and the other of said longitudinal slot whereby the terminals of said clamps are disposed in staggered arrangement along said strip member.

3. A connector as claimed in claim 1, wherein one or more of said spring clamps is a barrier plate for use in the coding of the connector.

4. In a connector for printed circuit plates including a strip member housing, spring clamps adapted to establish an electric contact with conducting lines on said printed plates, the combination comprising:

- (a) such a strip member provided with a longitudinal slot for the insertion of a printed circuit plate and a plurality of dorsal transverse slots in spaced alignment along the base of said longitudinal slot;
- (b) spring clamps inserted in said dorsal transverse slots; said clamps each having a fin to form an electrical terminal projecting out laterally of said strip member and dorsal transverse slots;
- (c) a solid base plate over which said strip member and clamps are secured for retaining said clamps housed in said dorsal transverse slots;
- (d) a plurality of ribs, each being located along said strip member, said ribs together with said strip mem-

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ber and said base plate forming compartments for
said electrical terminals.
5. A connector as claimed in claim 4 wherein said ribs
are secured to said solid base plate.

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