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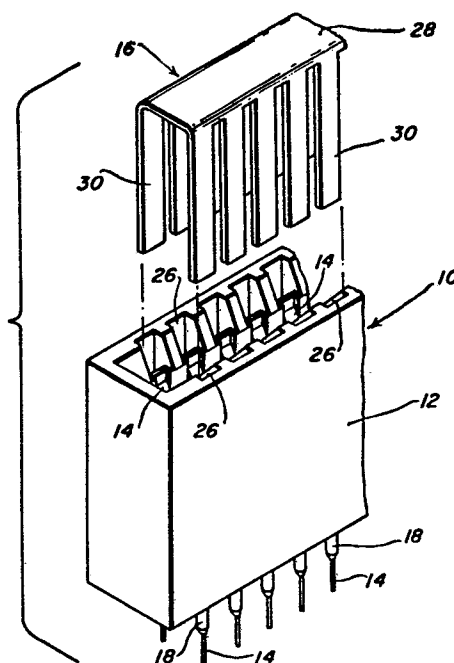
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⑤④ **Preassembled press fit connector with assembly insert.**

⑤⑦ A preassembled press fit connector and method of mounting the same on a printed circuit board in an array of plated thru holes (22) comprises a connector housing (12) and first and second adjacent rows of contacts (14) mounted within the housing. Each contact has a press shoulder portion (20) within the housing and a press fit section (18) extending downwardly below of the housing. A removable insert (16) includes a plate portion (28) for defining an external connector press surface above the housing and first and second rows of integral teeth (30) extending downwardly into the housing. The rows of teeth engage one each with the press shoulder portions of the first and second row of contacts. This allows the press fit sections of the contacts to be simultaneously forced into mating engagement with the plated thru holes of the printed circuit board by applying pressure to the connector press surface.



PATENTANWÄLTE

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PREASSEMBLED PRESS FIT CONNECTOR WITH ASSEMBLY INSERT

Priority Claim: May 18, 1981, United States of America,
Serial No. 264,584

The present invention relates to a preassembled press fit connector in accordance with the precharacterizing portion of claim 1 as well as to a method for mounting such a pre-assembled press fit connector onto a printed circuit board having rows of plated through-holes.

5 Preamsembled press fit connectors, which
comprise a plastic housing and a plurality of press fit
contacts mounted therein, are well known in the art.
Press fit contacts rely on a mechanical mating
engagement with plated thru holes on a circuit board in
order to establish electrical contact therewith. The
10 force required to mate the contacts of the preassembled
connector with the circuit board generally cannot be
applied to the connector housing without damaging the
connector. Conventionally, a plurality of connectors
are mounted on a circuit board by a press having a
15 comb-shaped head which enters each connector housing
to individually engage and exert a pressing force
simultaneously on each of the press fit contacts
therein. Accordingly, each connector must be precisely
aligned with the press head during pressing which slows
20 and adds to the complexity of the mounting operation.

It is an object of the present invention to
provide preassembled press fit connectors which
facilitate the connector mounting operation.

25 It is another object of the invention to
provide preassembled press fit connectors having
external press surfaces which may be gang pressed into
a printed circuit board.

30 Other objects and advantages of the present
invention will become apparent from the following
portion of the specification and from the accompanying
drawings which illustrate, in accordance with the
mandate of the patent statutes, a presently preferred
embodiment incorporating the principles of the
invention.

- 3 -

Referring to the drawings:

Figure 1 is an exploded perspective view of a preassembled press fit connector according to the teachings of the present invention; and

5 Figure 2 is a side view partially sectioned of a plurality of preassembled press fit connectors on a printed circuit board prior to pressing.

 The connector 10 generally comprises a plastic housing 12, two adjacent rows of press fit
10 contacts 14 mounted therein, and a removable insert member 16.

 The contacts 14 each include a press fit section 18 extending below the housing 12 and a
 shoulder 20 within the housing 12 to which a force is
15 applied to mate the press fit section 18 with a plated thru hole 22 of a printed circuit board 24. Vertical slots 26 within the housing 12 provide access to the contact shoulders 20 from above.

 The insert member 16 includes a plate portion
20 defining a single external press surface 28 for each connector above the plastic housing 12. First and second rows of teeth 30 are integrally formed with the plate portion 28 and extend downwardly therefrom into the housing slots 26. The two rows of teeth 30
25 individually engage the press shoulders 20 of the respective rows of connector contacts 14 to direct a force applied to the press surface 28 to the individual contacts. Accordingly, a press block 34 having a flat surface 36 parallel with the circuit board 24 which
30 rests on a suitable support 38 may be lowered to mate one or more loosely inserted connectors 10 with the arrays of plated thru holes 22 of the printed circuit board 24. In the preferred embodiment, the connector press surfaces 28 defined by the inserts 16 are
35 substantially flat so that the connectors are

0065146

- 4 -

automatically straightened as the flat press block surface 36 is lowered into engagement therewith. After the connectors are mounted, the inserts may then be removed.

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What is claimed is:

0065146

- 5 -

CLAIMS:

1. A preassembled press fit connector for mounting on a printed circuit board in an array of plated thru holes (22) wherein the connector comprises a connector housing(12), first and second adjacent rows of contacts (14) mounted within the housing, a press shoulder (20) formed on each contact within the housing, and a press fit section (18) formed on each contact extending downwardly below the housing, characterized in that a removable insert member (16) ~~is~~ is used to simultaneously force the press fit sections of the rows of contacts into mating engagement with the plated thru holes of the printed circuit board, wherein the insert member comprises a plate (28) defining an external connector press surface above the housing, and first and second rows of integral teeth (30) extending downwardly from the means and engaging one each with the press shoulders of the first and second row of contacts.

2.. A method for mounting a preassembled press fit connector of claim 1 onto a printed circuit board having rows of plated thru holes comprising the steps of loosely inserting the connector into the rows of thru holes of the circuit board, applying a pressing force to the flat connector press surface of the loosely inserted connectors with a press having a flat press surface parallel with the circuit board, and removing the inserts from the connectors.

0065146

