

C L A I M S

1. Electrical connector, comprising a housing (2) of
5 electrically insulating material with a connection side and a contact
side, and provided with a number of contact elements (6) of
electrically conducting material accommodated in channels (5) and, each
with a contact end (7) situated at the contact side (8) of the housing
(2), for contacting a further connector, and a connection end provided
10 with an L-shaped connection pin (9), having a fixed leg (10) fixed to
the connection end of the contact element (6) extending from the
connection pin output side (11) of the housing (2) lying opposite the
contact side (8), a bend and a free leg (12) for mounting on a printed
circuit board substantially perpendicular to the fixed leg (10) and
15 extending to beyond the connection side (13) of the housing (2) running
at right angles to the connection pin output side (8), and comprising a
bending anvil having a curved bending face (18) for bending the
connection pins (9) to an L-shape, characterized in that the bending
anvil is separated from the connector housing (2) and is provided with
20 a positioning element (14) of electrically insulating material between
the connection pin output side (11) and the bending anvil, said
positioning element (14) has bores (16) extending perpendicular to the
plane of the connection pin output side (13) of the connector housing
(2) for accommodating and supporting the fixed legs (10) of the
25 connection pins (9) in all of its transverse directions during the
bending operation; that the bores (16) merge into the respective curved
bending faces (18) of the anvil such that the bore openings are
immediately adjacent to the beginning of the corresponding curved
bending faces (18); that the opposite bore openings are tapered and
30 that the positioning element (14) is provided with aligning and
positioning means (20, 23) for aligning it to the connector housing
(2).

2. Connector according to claim 1, wherein the curved bending
face (18) of the bending anvil is the bottom face of grooves (17)
35 having walls parallel to the axes of the bores (16) in the positioning
element (14), each said groove (19) accommodating a free leg of a
connection pin.

3. Connector according to claim 1, wherein the connector
housing (2) is provided with a number of rows of connector elements

(6), and the connection pins (9) thereof are arranged in rows and in positions staggered from row to row, wherein the bores have the corresponding staggered positions wherein the curved bending face (18) of the bending anvil is provided with grooves (17) which extend at right angles to the lengthwise direction of the bending anvil and each accommodate a free leg (12) of a connection pin (9), and wherein the distance of the grooves (17) intended for the connection pins of one row differs from that of the grooves (17) for the connection pins of the adjacent row from the connection pin output side (11) of the connector housing (12).

4. Connector according to claim 2 or 3, wherein the bottom of each groove (17) passes gradually by way of a curved part into the appropriate bore (16) in the positioning element (14) and that each groove (17) extends further to the plane of the connection side (13) of the housing (2).

5. Connector according to claim 4, wherein the bottom of the part of the groove beyond the curved bending face (18) has a shorter distance from the connection pin output side (13) of the housing (2) than the point of the face of the curved bending face (18) having the longest distance to said output side (13).

6. Connector according to one of claims 1-5, wherein the positioning element (14) and the bending anvil form one unit.

7. Connector according to one of the preceding claims, wherein the grooves are provided with means for press fitting the connection pins (9) at least locally.

8. Connector according to claim 7, wherein at least one wall of the grooves (17) near the exit point of the free legs (12) of the connection pins (9) has a thickened part running at right angles to the bottom of the grooves (17).

9. Connector according to one of claims 1-6, wherein in the bent position the free leg of the connection pins grips behind at least one wall thickened part of the corresponding groove.

10. Connector according to one of the preceding claims, wherein the bore (16) of the positioning element (14) for accommodating the respective connection pin (9) tappers at the insert side.

11. Connector according to one of the preceding claims, wherein the face of the bore (16) opposite of the bending face (18) of the anvil is constituted by a chamfer (28).

12. Connector according to one of the preceding claims,

wherein the face of the positioning element (14) facing the connection pin output side (13) is provided with flanges (20) which extend at right angles to said element face and grip over the corresponding side faces of the connector housing (2).

5 13. Bending mandrel (29) for interacting with the bending anvil to bend the connection pins of the connector according to one of the preceding claims, wherein the curved bending face (18) of the bending anvil and the bending face (35) of the mandrel interacting therewith complement each other in shape.

10 14. Bending mandrel according to claim 13, wherein the bending face of the mandrel is provided with ribs (30, 31) standing up perpendicular to the bending face (35), the thickness of which ribs corresponds to the width of the grooves (17) of the bending anvil, and wherein the rib consists of a first part (32, 33) with an edge running
15 parallel to the bending face (34) of the mandrel and a second part (35, 36) connecting thereto having a curved edge in which the radius of curvature corresponds to that of the curved bending face of the bending anvil.

 15. Bending mandrel according to claim 14, wherein the curved
20 part of the rib ends in a peak-shaped part (37, 38), and at the side of the bending anvil lying opposite the curved groove part, the bore (16) in the positioning element (14) and bending anvil for passing through the connection pins widens out at an angle corresponding to the angle of the outside of the peak (37, 38).

25 16. Positioning element and anvil intended for assembling a connector according to one of the preceding claims and bending the connection pins.