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D E C I S I O N
of 25 September 2002

Case Number: T 0331/00 - 3.5.2

Application Number: 94912311.1

Publication Number: 0694223

IPC: H01R 43/042

Language of the proceedings: EN

Title of invention:

Tool for the contemporary crimping of a plurality of insulated wires in an electrical connector

Patentee:

Minnesota Mining and Manufacturing Company

Opponent:

The Whitaker Corporation

Headword:

-

Relevant legal provisions:

EPC Art. 56, 84, 123

Keyword:

"Amendments - opposition proceedings - broadening of claim
(after amendment, no)"
"Inventive step - yes"

Decisions cited:

-

Catchword:

-



Case Number: T 0331/00 - 3.5.2

D E C I S I O N
of the Technical Board of Appeal 3.5.2
of 25 September 2002

Appellant: The Whitaker Corporation
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Representative: Warren, Keith Stanley
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Respondent: Minnesota Mining and Manufacturing Company
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Representative: Patentanwälte
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Decision under appeal: Interlocutory decision of the Opposition Division
of the European Patent Office posted
7 February 2000 concerning maintenance of
European patent No. 0 694 223 in amended form.

Composition of the Board:

Chairman: W. J. L. Wheeler
Members: M. Ruggiu
P. Mühlens

Summary of Facts and Submissions

I. The opponent appealed the interlocutory decision of the opposition division concerning maintenance of European patent No. 0 694 223 in amended form.

II. The following documents were cited in the course of the appeal:

D1: which relates to a terminating tool consisting of a wire insertion assembly and a connector holding assembly, and comprises sub-documents

D1a: a manual entitled "AMP Stack Connector Tooling Manual"; and

D1b: a drawing No. 230 852 entitled "Assy. Tool, AMP stack";

D2: which relates to a splicing tool consisting of a connector and wire holding assembly and a connector pressing assembly, and comprises sub-documents

D2a: a signed statement by Mr. Jorge Cesena of AMP Espanola S.A. including a photograph of the AMP's booth at the EXPOTRONICA '92 in Barcelona in October 1992 (exhibit 1; D2a1) and a copy of a photograph displayed in said booth (exhibit 2; D2a2);

D2b: two pages from the EXPOTRONICA '92 catalogue;

D2c: a letter of Mr. Daniel Alvarez dated 3 March 1997;

D2d: instruction sheet IS-10019-SP; and

D2e: a signed statement by Mr. Pedro Duran of AMP Espanola S.A. including two pages of the "AMP Incorporated Annual Report 1992"

(exhibit 3, D2e1) and photographs of a hand press tool (exhibit 4; D2e2);

D3: which relates to a hand crimping unit, and comprises sub-documents

D3a: two pages from a 3M manual entitled "9152-10 Hand Crimping Unit Operating Instructions"; and

D3b: four pages from a 3M catalogue entitled "Scotch Fernmeldeprodukte" bearing a date of August 1991;

D4: an instruction bulletin entitled "3M 4255 Hand Presser" bearing a date of December 1984;

D5: US-A-3 885 287; and

D7: US-A-3 972 101.

III. Oral proceedings took place before the board on 25 September 2002.

The appellant (opponent) requested that the decision under appeal be set aside and the patent be revoked. It dropped a former request that the appeal fee be reimbursed.

The respondent (patentee) requested that the patent be maintained in amended form in the following version: claims 1 to 9 filed in the oral proceedings, description, columns 1 and 2 filed in the oral proceedings, description, columns 3 to 5, drawings of the patent specification.

IV. Claim 1 reads as follows (differences with respect to claim 1 as in the printed patent specification underlined by the board):

"A tool for the termination of a plurality of insulated wires in an electrical connector, comprising a splice head (24, 110) having a retaining body (26, 112), and a pressing member (50,134) accommodated by a housing (12, 102), said tool including attachment means (36, 38, 122, 124) for releasably attaching said housing (12, 102) to said splice head (24, 110), said pressing member (50, 134) cooperating with said connector accommodated by said splice head (24, 110), a pivotally supported, manually operable lever (16, 106) which acts on said pressing member (50, 134) through transmission means to move said pressing member (50, 134) relative to said housing in order to effect a predetermined stroke of said pressing member, characterized in that independent from said transmission means, said pressing member is adapted to be displaced by means (56, 58, 142, 136) affording displacement in predetermined steps relative to said splice head (24, 110) and said housing (12, 102), so that said pressing member (50, 134) can take different initial positions relative to said housing (12, 102) before said predetermined stroke commences."

Claims 2 to 9 are dependent upon claim 1.

V. The arguments of the appellant can be summarised as follows:

As was apparent from the passages at column 2, lines 17 to 21, and column 4, lines 18 to 23, of the description of the printed patent specification, claim 1, in order

to be properly supported by the description, should specify that the initial position of the pressing member is adapted to the actual height of the connector used at any one time. Furthermore, what was accommodated by the housing was not clear from the wording of claim 1.

Claims 7 and 8 offended Article 100(b) EPC as the description did not provide support for anything else than teeth for displacing the splice head. Furthermore, to be clear, claims 7 and 8 had to specify that the displacement means displaced the splice head relative to the housing.

Each of the tools described in D1, D3, D5 and D7 had all the features of the preamble of claim 1. The tool of D3, which was a forerunner of the invention, did not provide compensation for the height of the connector. However, the tool of D4 was concerned with the same problem as the patent in suit. The opposition division considered that the upper jaw of the tool of D4, which was displaceable in predetermined steps relative to the housing of the tool, was a pressing member. Thus, D4 demonstrated that the solution of the problem was to displace the pressing member relative to the housing. There were only three possibilities to adjust the relative positions of the pressing member and the splice head so as allow use of connector modules of different heights: either the pressing member or the splice head or both had to be displaceable in steps relatively to the tool housing. The tools of D1, D5 and D7 adjusted the position of the splice head relative to the housing accommodating the pressing member without changing the stroke of the pressing member. The tool of D4 provided adjustment of the position of the pressing

member relative to the housing, also without changing the stroke of the tool. Therefore, it was obvious, in view of the teaching provided by D4, to adapt the tools of D1, D5 or D7 so as to arrive at the subject-matter of claim 1 of the patent in suit.

VI. The respondent argued substantially as follows:

It was not contested that the prior art disclosed means to change the spacing between a splice head and the pressing member. However, in document D1 and other references, the spacing between the housing accommodating the pressing member and the splice head could be changed, but not the initial position of the pressing member with respect to the housing. The opposed patent aimed at allowing adjustment of the initial position of the pressing member without alteration of the stroke performed by the pressing member. Neither D4 nor D1, D2 or the other documents made any suggestion to develop the known devices in this direction. In document D4, the splice head was not releasably attached to a housing of the tool. Furthermore, in D4, the initial position of one of the jaws of the tool could be adjusted by means of a cam; however this adjustable jaw did not effect a stroke relative to the housing of the tool. Document D7, as document D1, described adjusting the position of a comb base depending on the thickness of the connector. Thus, D7 did not go beyond document D1 or D4 and could not change the conclusion that the subject-matter of claim 1 involved an inventive step.

Reason for the Decision

1. The appeal is admissible.

2. *Amendments*

2.1 Figures 1 to 4 and the description of the application as originally filed, at page 4, line 29 to page 5, line 26 and page 6, line 21 to page 7, line 14, show that both the described embodiments of the invention include a housing accommodating a pressing member and that this housing is releasably attached to a splice head comprising a retaining body.

Furthermore the passages at page 2, line 25 to page 3, line 5; page 5, lines 27 to 37 and page 7, lines 3 to 25, of the description as originally filed indicate that the tool of the invention includes transmission means arranged to effect a predetermined stroke of the pressing member relative to the housing and that the pressing member can take different initial positions before said predetermined stroke commences.

The features added to claim 1 are thus part of the content of the application as filed.

2.2 None of the features included in claim 1 as granted has been deleted, so that present independent claim 1 does not extend the protection conferred.

2.3 Claims 7 and 8 as originally filed already mentioned, in general terms, displacement means on the splice head. The dependent claims have further been amended to improve the clarity of their wording.

2.4 The description has been amended to make it consistent with present claim 1.

2.5 Thus, the amendments made to the patent do not extend beyond the content of the application as filed and do not contravene Article 123(2) EPC.

2.6 Furthermore, present claim 1 comprises all the features that were included in claim 1 as granted, so that the protection conferred has not been extended and Article 123(3) EPC is not contravened.

3. *Clarity and support by the description*

3.1 Claim 1 defines a tool for the termination of insulated wires in an electrical connector and not a combination of the tool and a connector. The feature that the initial positions of the pressing member are adapted to the height of the connector used at any one time is not directed to the tool itself but rather to the relationship between the tool and the connector and would therefore be unclear in a claim defining the tool itself. Thus, the board considers that it is not appropriate to include this feature in claim 1, even if it is supported by description.

3.2 Claim 1 specifies clearly that the moveable pressing member is accommodated by a housing that can be releasably attached to the splice head. Which further elements are possibly accommodated by the housing is not an essential feature of the invention and therefore, in the view of the board, this does not need to be specified in claim 1.

3.3 Claim 1 specifies that the splice head is releasably attached to the housing accommodating the pressing member. In the view of the board, it is therefore

implicit that the displacement means of claims 7 and 8 concern the attachment of the splice head to the housing and thus the relative positions of splice head and housing. It is furthermore apparent to the skilled person that displacement of the splice head relative to the housing can be achieved by different means.

3.4 Thus, the board considers that the claims meet the requirements of Article 84 EPC.

4. *State of the art and novelty*

The respondent accepts that the content of documents D1a, D1b, D2a2, D2d, D2e1, D2e2, D3a, D3b and D4 be regarded as comprised in the state of the art. Documents D5 and D7 are patent documents published before the priority date of the patent in suit and their whole content is also comprised in the state of the art.

Novelty of the subject-matter defined by present claim 1 is not in dispute.

5. *Inventive step*

5.1 Document D7 discloses a tool having all the features specified in the pre-characterising portion of claim 1. The splice head of document D7 comprises a mechanism permitting adjustment, in predetermined steps, of the position at which the housing accommodating the moveable pressing member is attached to the splice head. Thereby, the spacing between the retaining body of the splice head and the pressing member can be adjusted depending on the height of the connector accommodated on said retaining body. Thus, the pressing

member can take different initial positions with respect to the splice head before the stroke commences. However, the position of the pressing member relative to the housing accommodating it remains unchanged. The predetermined stroke effected by the pressing member upon actuation of a manually operable lever also remains unaffected, whatever the position at which the housing accommodating the pressing member is attached to the splice head, which means that the adjustment of the initial position of the pressing member is independent of the transmission means which moves the pressing member upon actuation of the manually operable lever.

- 5.2 Thus, the subject-matter of claim 1 differs from the prior art described in D7 in that the pressing member is adapted to be displaced by means affording displacement in predetermined steps relative to the housing that can be releasably attached to the splice head and accommodates said pressing member, so that said pressing member can take different initial positions relative to said housing before the predetermined stroke commences.

This new feature of the invention allows one to dispense with the adjustment mechanism described in D7, which is provided in the splice head, and thus permits a simplification of the splice head.

- 5.3 Documents D1, D2 and D5 do not disclose different initial positions of a pressing member with respect to a housing that can be releasably attached to a splice head and accommodates the pressing member. Thus, documents D1, D2 and D5 do not go beyond document D7.

- 5.4 Document D4 shows a presser tool having a first, upper jaw and a second, lower jaw, for crimping a connector disposed between the jaws. The position of the first jaw relative to a housing of the tool can be adjusted by means of a cam. Actuation of a manually operable lever of the tool displaces the second jaw in the direction of the first jaw to perform crimping. Thus, the second jaw, which is moved by the manually operable lever and therefore corresponds to the pressing member of claim 1 of the patent in suit, does not take different initial positions with respect to the housing of the tool.
- 5.5 Document D3 shows a tool having a housing that can be releasably attached to a splice head and that accommodates a pressing member. However, D3 does not disclose displacing the pressing member in predetermined steps relative to the housing of the tool.
- 5.6 The documents of the state of the art do not disclose adjusting the initial position of the pressing member relative to the housing accommodating it. The board comes therefore to the conclusion that, even if the appellant is correct in asserting there are only three different possible approaches for adjusting the initial position of the pressing member, having regard to the state of the art, the particular way specified in claim 1 for providing said initial positions is not obvious to the skilled person.

Thus, the invention defined in claim 1 of the patent in suit can be considered as involving an inventive step in the sense of Article 56 EPC.

- 5.7 Claims 2 to 9 depend on claim 1 and, therefore, the subject-matter defined by these claims can also be considered as involving an inventive step.
6. The board therefore considers that the amended patent and the invention to which it relates meet the requirements of the EPC.

Order

For these reasons it is decided:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to maintain the patent as amended in the following version:
claims 1 to 9 filed in the oral proceedings,
description, columns 1 and 2 filed in the oral proceedings,
description, columns 3 to 5, drawings of the patent specification.

The Registrar:

The Chairman:

D. Sauter

W. J. L. Wheeler