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File Number: T 248/92 - 3.5.2
Application No.: 85 305 208.2
Publication No.: 0 170 480
Title of invention: Flexible electrical connectors

Classification: H01R 9/07

D E C I S I O N
of 31 March 1993

Applicant: The General Electric Company, plc

Headword:

EPC Articles 56, 113(1)

Keyword: "Inventive step - yes"
" Decision based on arguments brought for the first time by the first instance during oral proceedings. Substantial violation of procedure (no)"



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Boards of Appeal

Chambres de recours

Case Number : T 248/92 - 3.5.2

**D E C I S I O N
of the Technical Board of Appeal 3.5.2
of 31 March 1993**

Appellant : The General Electric Company, plc
1 Stanhope Gate
London W1A 1EH (GB)

Representative : Tolfree, Roger Keith
GEC plc, Central Patent Department
Chelmsford Office, Marconi Research Centre
West Hanningfield Road, Great Baddow
Chelmsford, Essex CM2 8HN (GB)

Decision under appeal : Decision of the Examining Division of the
European Patent Office dated 21 November 1991
refusing European patent application
No. 85 305 208.2 pursuant to Article 97(1) EPC.

Composition of the Board :

Chairman : E. Persson
Members : M.R.J. Villemin
W.J.L. Wheeler

Summary of Facts and Submissions

I. The appeal contests the decision of the Examining Division to refuse the Appellant's European patent application No. 85 305 208.2 on the ground that the subject-matter of Claim 1 filed with the letter dated 14 March 1991 did not involve an inventive step.

II. Claim 1 reads as follows:

"1. A flexible electrical connector comprising a layer (9) of insulating material bearing a flat thin conductor (11), of the type formed by printed circuit and similar techniques, characterised by a flexible reinforcing thread (12, 13) attached to a surface of the layer (9) between one edge thereof and the conductor (11), the thread (12, 13) being of greater strength against tearing than the conductor (11) and being sufficiently flexible not to impair the flexibility of the connector."

Claims 2 to 11 are dependent on Claim 1.

III. In the course of oral proceedings the Examining Division introduced new arguments on the sole basis of which the decision was pronounced.

IV. In the decision under appeal the Examining Division argued essentially, without referring to any prior art documents, that the problem of tearing in thin materials was known from general experience. Although the technical area under consideration was very specific (flexible connectors), the problem to be solved was general, namely tear prevention in thin material. The use of reinforced threads in a plastic sheet in order to prevent tears in said sheet from propagating was so commonly to be seen e.g. in scaffolding

screening and camping ground sheets, that no inventive skill was needed to arrive at the claimed solution.

- V. The Appellant argued that a person skilled in the art of flexible electrical connectors would not turn to such remote subject areas as scaffolding sheeting and the like.

The Appellant pointed out that the decision of the Examining Division did not refer to any prior document to support the allegation that the subject-matter of Claim 1 was obvious in view of the use of reinforcing threads in a plastic sheet, such as in scaffolding screening, or that such threads acted as anti-tear devices. In the absence of any details of the reinforced sheeting the Examining Division considered to have been common general knowledge at the priority date of the claims, the Appellant had not been able to present comments except on the basis of guesswork as to what the sheeting relied upon during the oral proceedings by the Examining Division might consist of. The Appellant submitted that the decision was therefore contrary to Article 113(1) EPC.

The Appellant further referred to document D4: "Electronics Manufacture and Test Magazine" published after the priority date of the application to show that although some 16 years before this priority date flexible connectors were known and that the tearing problem was well recognised, nobody had thought of the claimed solution.

- VI. The Appellant requests that the decision under appeal be set aside. From section 20 of the Statement of Grounds it is apparent that the Appellant also requests that a patent should be granted on the basis of the following documents:

Description: pages 1 to 8, as filed with the letter dated
13 February 1990,

Claims: 1 to 11 filed with the letter dated 14 March
1991,

Drawings: sheets 1/2 and 2/2 as originally filed.

Reasons for the Decision

1. The appeal is admissible.
2. Basis of the decision pursuant to Article 113(1) EPC

It appears from the file that the Appellant was informed for the first time by the Examining Division during oral proceedings that the problem to be solved in the present case was the very general one of reinforcement of plastic films against tearing and that such reinforced films were commonly encountered, for example camping groundsheets and construction-site sheeting (see the minutes of the oral proceedings).

Although one of the purposes of oral proceedings is to settle as far as possible all outstanding questions relevant to a decision, oral proceedings have no constraining effect as to the necessity of rendering an immediate decision at the end of these proceedings. The Appellant could have requested an adjournment of the oral proceedings or that the procedure be continued in writing in order to be able to carefully study the above-mentioned arguments, which were obviously crucial to the decision, if the Appellant had felt a need for further reflection.

However, it appears from the minutes of the oral proceedings that the Appellant did not seize the opportunity to present any comments, objections or requests to the new arguments brought by the Examining Division. The Examining Division therefore was entitled to conclude that the matter had been thoroughly discussed and that a decision could be taken. In these circumstances, the Board is of the opinion that the decision of the Examining Division has not been taken contrary to Article 113(1) EPC.

3.

3.1 The decision of the Examining Division is not supported by any prior art documents but is based solely on the allegation that it belongs to common knowledge to use reinforced threads in a plastic sheet, such as in scaffolding screening, and such threads act as anti-tear devices. For the following reasons, however, the Board cannot admit that such alleged common knowledge might render obvious the subject-matter of Claim 1:

- The Board strongly doubts that the skilled person faced with the problem of tearing in flexible electrical connectors would look in the remote technical fields of scaffolding sheetings or tent design as envisaged in the decision of the Examining Division,
- In the absence of any citations it is not straightforward, without some foreknowledge of the claimed solution, to contend that the threads referred to by the Examining Division were intended to prevent tears occurring or prevent tears propagating through the material, or that these threads did not impair the flexibility of the sheeting.

The ground of objection based on common knowledge as relied upon by the Examining Division in the decision under appeal is thus not substantiated, nor has the Board such knowledge of its own. Therefore, in the absence of proper substantiation this ground must be set aside.

- 3.2 It can be deduced from the decision under appeal that the Examining Division accepted that the subject-matter of Claim 1 involves an inventive step having regard to the prior art documents

D1: FR-A-2 524 759, and

D2: EP-A-0 066 910,

both cited in the description of the present application. In this respect, the Board agrees with the Examining Division.

In the Board's opinion, the prior art portion of Claim 1 appears to be based on document D1 because D2 describes a flat electric cable neither comprising a flat thin conductor nor of the type formed by printed circuit and similar techniques. Neither D1 or D2 nor the other documents cited in the European search report deal with or even hint at the problem or tearing. For the sake of completeness, the Board observes, as emphasised by the Appellant, that document D4 brings evidence that since the beginning of flexible printed circuits some 16 years prior to the priority date of the present application no one suggested the use of reinforcing threads for preventing tearing as defined in Claim 1. D4 proposes various solutions different from that as claimed. This demonstrates that the concept leading to the claimed connector is neither obvious nor the mere result of a one-way chain of reasoning leading to a single compulsory solution.

4. Summarising, the Board concludes that the subject-matter of Claim 1 involves an inventive step within the meaning of Article 56 EPC. Consequently, the decision under appeal must be set aside.

5. The Board has not examined the other claims (apart from checking that they are dependent on Claim 1) or the description and drawings (apart from looking at them to obtain an understanding of the invention) to see whether they meet the requirements of the EPC, but makes use of its power under Article 111(1) EPC to remit the case to the Examining Division for further prosecution.

6. For avoidance of doubt, it is pointed out that according to Article 111(2) EPC the Examining Division is bound by the present decision only to the extent that it has been decided that the subject-matter of Claim 1 involves an inventive step over the prior art considered in the present decision. In particular, the Board notes that in paragraph 20 of the Statement of Grounds of Appeal, the Appellant indicated that it would be necessary to make minor amendments to the wording of the claims to put them in a more satisfactory form. It is left to the Examining Division to decide whether any such amendments are necessary.

Order

For these reasons, it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the Examining Division for further prosecution.

The Registrar:

The Chairman:

M. Kiehl

E. Persson