

Publication in the Official Journal Yes / ~~No~~

File Number: T 689/90 - 3.4.1

Application No.: 85 302 557.5

Publication No.: 0 160 440

Title of invention: Apparatus for detecting and obtaining information about changes in variables

Classification: G01R 31/08

D E C I S I O N
of 21 January 1992

Applicant: Raychem Corporation

Headword: Event Detector/RAYCHEM

EPC Article 78(1)(b); Article 123(2)

Keyword: Allowability of amendments to claims which introduce features which are only disclosed in a cross-referenced document identified in the description as filed.

Headnote

Headnote follows



Case Number : T 689/90 - 3.4.1

D E C I S I O N
of the Technical Board of Appeal 3.4.1
of 21 January 1992

Appellant : Raychem Corporation
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Menlo Park, CA 94025 (US)

Representative : Jones, David Colin and
Auckland Cooke, Jacqueline
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Decision under appeal : Decision of Examining Division 039 of the
European Patent Office dated 2 April 1990
refusing European patent application
No. 85 302 557.5 pursuant to Article 97(1) EPC.

Composition of the Board :

Chairman : G.D. Paterson
Members : H.J. Reich
U. Himmler

Summary of Facts and Submissions

- I. European patent application No. 85 302 557.5 (publication No. 0 160 440) was refused by a decision of the Examining Division. The application concerns electrical apparatus for monitoring and detecting and locating a change in a variable (an "event") along an elongate path (eg. a leak of fluid, loss of or gain in temperature, etc). Such apparatus includes a locating member, a source member, and a return member.
- II. The reason given for the refusal was that Claims 1 and 9 of the main request each included an amendment which contravened Article 123(2) EPC, that the subject-matter of Claims 1 to 8, 10 and 11 of the first subsidiary request did not involve an inventive step in the sense of Article 56 EPC, and that Claim 9 of the first subsidiary request and Claim 1 of the second subsidiary request each included an amendment which contravened Article 123(2) EPC.
- III. With reference to the above findings that Claim 9 of the main request and Claim 9 of the second subsidiary request each included an amendment which contravened Article 123(2) EPC, in each case the amended claim included the feature that "at least one of the locating member (11) and the return member (12) comprises a metal core and an elongate jacket which electrically surrounds the core and which is composed of a conductive polymer". The description as originally filed included the following sentence in particular which was said by the Applicant to provide a proper basis for the above feature: "For further details of suitable locating, source, and return members, reference should be made to the application corresponding to US Serial No. 509 897" (see page 11, lines 1 to 3 of the description as originally filed).

As reasons for the above findings, the Examining Division held that the claimed feature was not explicitly or implicitly set out in the application as originally filed, because the United States application referred to (hereafter "US 509 897") had not been published at the priority date of the application in suit. Thus the content of US 509 897 was not considered to form part of the description as filed.

The Examining Division also held that even if the claimed feature could be directly derived from US 509 897, the feature had not been unequivocally identified as an essential feature of the apparatus for which protection was sought, in the application as originally filed. In this connection the Examining Division stated that "an application has to be self-contained in respect of the essential features defining the invention, in the interest of clarity and sufficient disclosure of the invention".

The Examining Division distinguished Decision T 6/84, which had been relied upon by the Applicant, from the present case, in particular because in Decision T 6/84 the subject-matter sought to be added to the claim was incorporated in a published patent, and clearly and unequivocally formed an essential part of the invention.

IV. The Appellant lodged an appeal against the above decision and filed new main and subsidiary requests with the grounds of appeal. In connection with the objection under Article 123(2) EPC, the grounds of appeal referred to the Guidelines for Examination in the EPO, especially paragraph C-II, 4.18.

The Board of Appeal issued a communication accompanying a summons to oral proceedings, in which preliminary views

were expressed to the effect that Claim 1 of the main request did not appear to satisfy Article 56 EPC, and that Claim 7 of the main request and Claim 1 of the subsidiary request appeared to include amendments which contravened Article 123(2) EPC, having regard to the circumstances set out in paragraph III above. In particular, the precise identification of US 509 897 and its corresponding application appeared to be unclear, and its retrieval not easy, and furthermore, the reference to US 509 897 did not appear to make it clear that the "further details" referred to, unequivocally formed part of the invention for which protection was sought, as required by Decision T 6/84.

- V. Prior to the oral proceedings on 15 January 1992, the Appellant filed observations in which it was stated that the Appellant had decided without prejudice not to contest the patentability of Claim 1 of the main request. A new main request was therefore filed in which the subject-matter of the previous Claims 1 and 7 was combined. It was also stated that the Appellant's commercial interest primarily involved the use of its conductive polymer technology and that the new claim of the main request includes the commercially useful technical features.

The Appellant's observations also included information concerning the way in which US 509 897 (and thus the European application corresponding to it) could be identified.

- VI. Claim 1 of the new main request as filed on 15 January 1992 reads as follows:

"1. Apparatus for monitoring for the occurrence of an event and for detecting and obtaining information

about the event when it occurs, which apparatus comprises

- (A) an elongate electrically conductive locating member (11) whose impedance from one end (2) to any point (1) on the locating member (11) defines the spatial relationship between that end (2) and that point (1);
- (B) an elongate electrically conductive return member (16);
- (C) an event-sensitive means which, upon occurrence of an event, permits or effects electrical connection of significant impedance between the locating member (11) and the return member (16), the connection being effective at a first point (1) on the locating member which is defined by at least one characteristic of the event;
- (D) an electrically conductive source member (12);
- (E) a voltage-measuring device (14);
- (F) a power source (15) which is electrically connected to a second point (2) on the locating member (11) and which, when an event takes place, forms part of a reference circuit which comprises
 - (a) at least part of the source member (12),
 - (b) that part of the locating member (11) which lies between the first (1) and second (2) points, and

(c) the power source (15),

and in which reference circuit a current of known size is transmitted between the first (1) and second (2) points on the locating member (11);

characterised in that

- (G) the voltage measuring device (14) is electrically connected to the second point (2) on the locating member (11) and to the return member (16), and, in the absence of an event, is not otherwise connected to the locating member (11), so that, when occurrence of an event causes an electrical connection to be made between the locating (11) and return (16) members, this results in the formation of a test circuit which comprises (a) the connection, (b) that part of the locating member (11) which lies between the first (1) and second (2) points, (c) the voltage-measuring device (14), and (d) part of the return member (16); the voltage-measuring device (14) having an impedance which is very high by comparison with any unknown part of the other components of the test circuit, and the connection having an impedance that is known from measurement of current flowing in the test circuit; and in that
- (H) at least one of the locating member (11) and the return member (16) comprises a metal core and an elongate jacket which electrically surrounds the core and which is composed of a conductive polymer."

Apparatus Claims 2 to 6 of the main request are dependent on Claim 1 and method Claims 7 and 8 of the main request comprise measures which make use of the apparatus as claimed in Claim 1.

Claim 1 of the subsidiary request, filed on 6 August 1990, is in the form of a use claim and also includes the subject-matter set out in paragraph (H) of Claim 1 of the main request.

Use Claims 2 to 4 of the auxiliary request are dependent upon Claim 1.

VII. Oral proceedings were held before the Board on 21 January 1992, at the end of which the Appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the following points:

As main request: Claims 1 to 8 filed on
15 January 1992.

As auxiliary request: Claims 1 to 4 filed on
6 August 1992,

and that a point of law concerning the conditions under which features only disclosed in a reference document may be included in the claims of an application be referred to the Enlarged Board of Appeal.

VIII. As to the central question common to the main and subsidiary requests, namely whether the inclusion of feature (H) in Claim 1 of the main request and the inclusion of an identically worded feature into Claim 1 of the auxiliary request satisfies the requirements of Article 123(2) EPC, the Appellant argued essentially as follows:

- (a) The wording of the description of the present application, page 11, lines 1 to 3, is a clear indication that the skilled reader has to look for "further details" of the locating, return and source members to the reference document, which is cited as US 509 897, but leads the skilled reader easily to the corresponding European patent application, i.e. to document:

D1: EP-A-0 133 748,

A skilled reader is aware of the importance of this document, which is mentioned seven times in the application. Moreover, the present application concerns a mirror picture of the apparatus described in reference document D1 and can therefore be regarded as an additional application in respect of a closely related invention. The words "further details" were chosen as a shortened form of reference in order to avoid a potential objection by the EPO that the entire content of document D1 is comprised in the present application.

- (b) Following the text in the present application, page 11, lines 1 to 3, the skilled reader would find that in reference document D1, page 23, lines 9 to 19, pages 25 to 27, material and structure of the locating, return and source members are described as self-contained technical entities. No difficult choice or selection is necessary in order to derive from document D1 the teaching that the locating member and the return member comprise a metal core and an elongate jacket which electrically surrounds the core and which is composed of a conductive polymer.

- (c) According to Decision T 6/84 it is allowable to transfer subject-matter from a reference document mentioned in an application into an independent claim of this application in order to give this claim a technical content which implies an inventive step, rendering thus the transferred subject-matter part of the invention. Though Decision T 6/84 states that all the essential structural features, which are disclosed and which belong together must be incorporated into the claim, it must be allowed to transfer all, to take one into the claim and to cancel the others.
- (d) The invention according to the present application is defined in originally filed Claim 1, the subject-matter of which comprises inter alia a locating member and a return member. Therefore, it is evident that the "further details" of these members represent parts of the invention in the sense of Decision T 6/84. An additional technical link which shows that a conductive polymer coated metallic core of the locating and return member is part of the invention, is given in the description, page 7, paragraph 2, indicating that the impedance of the connection is of importance and must be known, and in the fact that with such a conductive-polymer-surrounded metal core a large variety of events may be sensed.
- (e) Furthermore, Decision T 784/89 (dated 6 November 1990, to be published) is concerned with a case where an apparatus, which was disclosed for use in a particular method in a prior art document referred to in the original application, was regarded as implicitly disclosed in the application as filed.

By analogy with this Decision, the technical content of document D1 has to be regarded as implicitly disclosed in the present application. Moreover, in Decision T 784/89 an independent apparatus claim was allowed, though apparatus features were exclusively disclosed in the cited prior art document. Hence, following this Decision, structure and material of the locating and return members - though only disclosed in reference document D1 - may be introduced into independent Claim 1 of the present application.

- IX. At the conclusion of the oral proceedings the decision was announced that the request to refer a point of law to the Enlarged Board of Appeal was refused and that the appeal was dismissed.

Reasons for the Decision

1. Article 123(2) EPC - Claims 1 of the Main and Auxiliary Requests

- 1.1 As discussed in paragraph V above, the invention which is the subject of Claim 1 of both the main and subsidiary requests includes the feature which is set out in paragraph (H) of Claim 1 of the main request, this feature having been introduced into the claims by way of proposed amendment after the application was filed. As was accepted by the Appellant, if the proposed amendments to introduce this feature into the claims contravene Article 123(2) EPC, both the main and the subsidiary requests must be refused, and, there being no other requests before the Board, the appeal must be dismissed and the application consequently refused. The objection under Article 123(2) EPC is therefore central to the appeal.

1.2 The appeal raises a general question as to the circumstances in which it is permissible for a European patent application to include a cross-reference to another document, and as to the effect of such a cross-reference, in particular when some of the contents of the cross-referenced documents are sought to be included in the main claim of the application by way of amendment.

A basic requirement for a European patent application is set out in Article 78(1)(b) EPC, namely that such an application "shall contain a description of the invention". Prima facie, therefore, all the essential features of the invention for which protection is, or may be, sought should be included in the description as such and as originally filed. This view is reflected in the Guidelines, paragraph C-II, 4.18, where it is stated that "the patent specification should, regarding the essential features of the invention, be self-contained, i.e. capable of being understood without reference to any other document". This statement is specifically in the context of satisfying the requirements of Article 83 EPC, i.e. disclosure of the invention, however.

The above-identified paragraph of the Guidelines goes on to state the circumstances in which a cross-referenced document may be taken into account, in a situation where the document in question was not available to the public before the filing date of the application: namely, provided that a copy of the document was filed at the EPO on or before the filing date, and provided that the document was made available to the public no later than the date of publication of the application.

Although in those circumstances the Guidelines indicate that a cross-referenced document may be "taken into account", implicitly for the purpose of satisfying the requirements of Article 83 EPC, the Guidelines are silent as to the effect of such a cross-referenced document in the context of Article 123(2) EPC.

1.3 The information which was supplied by the Appellant in his observations dated 15 January 1992 has satisfied the Board that on the basis of originally disclosed bibliographic data document D1 could have been unambiguously identified on or after the publication date of the application, and that the requirements for taking this document into account which are set out in the above-identified paragraph of the Guidelines were fulfilled. This was made clear to the Appellant at the beginning of the oral proceedings.

1.4 The question remains, however, as to whether features which were only disclosed in the cross-referenced document D1 can be incorporated into the main claim of the application after filing.

In this connection, the question to be considered under Article 123(2) EPC is whether the amended application "contains subject-matter which extends beyond the content of the application as filed". In considering this question, it is relevant that under Article 93 EPC "the description, the claims and any drawings as filed" of every European patent application are published at an early date after filing of the application. Thus, after such publication, the skilled reader should be able to know, by reading the published application, the extent of the subject-matter which is within "the content of the application as filed", and thus the extent of the subject-matter for which protection is or may be sought.

In the Board's view, in normal circumstances a reader of a published European patent application is entitled to expect that the "description of the invention" which it must contain pursuant to Article 78(1)(b) EPC will itself identify all the features of the described invention for which protection is or may be sought. It is only under particular conditions that features which have not been included in the description of the invention as originally filed but which are only described in another document which is identified in the description as originally filed can subsequently be introduced by way of amendment into the claims of the application as essential features of the invention for which protection is sought. Prima facie, such features are not within "the content of the application as filed", which for the purpose of Article 123(2) EPC is constituted by the description of the invention, the claims, and any drawings, in accordance with Article 78(1) EPC.

If this were not the case, the content of an application containing in its description numerous references to other documents, whether other patent specifications or handbooks for example, would become almost limitless; especially if such documents themselves contain references to other documents, and so on.

- 2.1 The only previous decision of a Board of Appeal of which the Board is aware in which features which had not been included in the description of the invention in the application as originally filed, but which were included in another document which was referred to in the description, were subsequently allowed to be introduced into the main claim of the application, is Decision T 6/84, which was relied upon by the Appellant in the present case (see paragraph III above).

In that case, the originally filed Claim 1 had the following wording:

"1. A process for catalytic dewaxing a waxy hydrocarbon oil which comprises contacting said oil with a catalyst at dewaxing conditions, characterised in that the catalyst is synthetic offretite."

The text in the original description (EP-A-0 160 530, page 8, paragraphs 3 and 4) which identified the features disclosed by reference was worded:

"Synthetic offretite is a well-defined zeolite, with a known X-ray diffraction pattern and a proposed crystal structure ...

The synthetic offretite useful in the present invention and its method of preparation are disclosed in Canadian patent 934130 ...".

It is thus clear that the catalyst "synthetic offretite" referred to in the characterising portion of the main claim as originally filed was an identified material, and that further characterising parameters of such material, as well as its method of preparation, were stated in the description of the invention as originally filed to be set out in the cross-referenced Canadian patent.

The further characterising parameters of such synthetic offretite which were incorporated from the Canadian patent into the main claim were the mole ratio of the oxides contained in synthetic offretite and the X-ray powder diffraction pattern with defined Bragg angles and intensities. Such parameters were already implicitly present in the main claim, and simply defined in greater

detail the synthetic offretite which was already an essential feature of the invention as described and claimed in the application as originally filed.

Having regard to the above facts of the case with which Decision T 6/84 was concerned, it is clear that the further characterising parameters of synthetic offretite (namely the mole ratio of oxides and the X-ray powder diffraction pattern) which were included in the main claim by way of amendment were indeed features which unequivocally formed part of the invention for which protection was already sought; because the use of synthetic offretite as a catalyst was already the only characterising feature in the claim as originally filed, and the features which were added to that claim simply defined such synthetic offretite better.

Thus the facts of the case with which Decision T 6/84 was concerned are very different from the facts of the present case. Furthermore, in the Board's view, the principles which are set out in the headnote to that decision cannot properly be applied to the facts of the present case, either so as to help the present Appellant, or at all.

2.2 Nevertheless, having regard partly to what is set out in the headnote to Decision T 6/84, in the Board's view, when determining whether features which are not mentioned in the description of the invention but only in a cross-referenced document may be incorporated into a claim of a European patent application, it is necessary to consider whether the description of the invention as filed leaves no doubt to a skilled reader:

- (a) that protection is or may be sought for features which are only disclosed in the reference document;

- (b) that the features which are only disclosed in the reference document contribute to achieving the technical aim of the invention and are thus comprised in the solution of the technical problem underlying the invention which is the subject of the application;
- (c) that the features which are only disclosed in the reference document implicitly clearly belong to the description of the invention contained in the application (Article 78(1)(b) EPC) and thus to the content of the application as filed (Article 123(2) EPC); and
- (d) that such features are precisely defined and identifiable within the total technical information within the reference document.

If the above particular conditions are satisfied, in the Board's view it is permissible for the features which are only disclosed in the reference document to be introduced into the claims of the application without contravening Article 123(2) EPC because such features are then properly to be considered as within "the content of the application as filed".

3.1 The above conditions will therefore be considered in corresponding sub-paragraphs (a) to (d) with reference to the facts of the present case.

In this connection, document D1 discloses a system which is rather similar to that disclosed in the present application, and which includes a locating member, a source member and a return member, these members being primarily described by reference to their electrical characteristics (see pages 7 to 10). Later, at pages 20 to

27, preferred features of these members are set out, including the passage at page 23 primarily relied upon by the Appellant as including a description of features corresponding to the proposed amendments to the claims of the present application. A specific description with reference to drawings of these members is set out at pages 42 to 47.

- 3.2 (a) In original Claim 1 of the present application the properties of the claimed "locating member" and "return member" have been exclusively defined by the wording of features (A) and (B) respectively which wording is identical with the one in present Claims 1 of the main and auxiliary request; see paragraph VI. above. Thus, a skilled reader derives from the present application as originally filed that - in the sense of the invention for which protection is sought - the locating member and the return member represent "elongate electrically conductive" means which have a particular impedance. The embodiments of these claimed elongate electrically conductive means in the original description specify the length, resistivity and the temperature coefficient of the resistance and limit the structural disclosure to the fact that the locating, source and return members are physically combined as a single flexible cable. However, the originally disclosed embodiments are completely silent about the material used to manufacture the locating and the return member. Also the drawings of the present application disclose locating and return members which each have exclusively the character of a circuit element with its resistance as the essential inherent circuit property, and give no specific information concerning either the three-dimensional shape of the members or the material of which they are made. Hence, in the Board's view, when

interpreting the original disclosure in the present application as a whole, a skilled reader clearly understands that the locating member and the return member of the present invention are circuit elements which are only defined by their electrical conductivity.

- 3.3 (b) The present application aims at monitoring an event and at determining the location at which the event takes place; see the original description, page 1, line 28, to page 2, line 15. This aim is achieved by measuring the voltage drop along the locating member between the place of the event and a reference point. It is evident to a skilled reader that due to this basic principle the exact knowledge of the impedance of the event-created electrical connection between locating and return member determines the accuracy of the measured location; see also the original description, page 7, paragraph 2. However, contrary to the Appellant's argument in paragraph VIII(d) above, the impedance of the event-created connection is not determined by the conductive-polymer-surrounded metal cores of the members but either by the resistivity of the ionic connection between the members (see D1, reference numerals 20, 21 in Figures 33 and 34 with the corresponding description at pages 42 and 43) or by measurement of the current flowing in the connection (see the description of the present application, page 7, lines 13 and 14).

The fact that a metal core (surrounded by conductive polymer) of a locating and a return member allows a large variety of events to be sensed, is not derivable from the original application documents and is thus not relevant in connection with the Appellant's argument in paragraph VIII(d).

Hence, in the present application as filed there is no original disclosure of any technical link which enables a skilled reader to recognise that any feature which is disclosed in the reference document may be essential or advantageous in order to achieve the technical aim and to solve the technical problem as disclosed in the application as filed.

- 3.4 (c) The description of the invention as originally filed does not in any way suggest that the "further details" of suitable locating and return members to be found in document D1 (and now set out in feature H of Claim 1 of the main request and also in Claim 1 of the subsidiary request) are intended to identify features of the invention for which protection may be sought or that such features implicitly clearly belong to the description of the invention.
- 3.5 (d) The disclosure in the present application, page 11, lines 1 to 3, that "further details" of "suitable" members are described in the reference document, in the Board's view, is not a precise and unequivocal definition of the particular technical information in the reference document, which should clearly be implicitly regarded as belonging to the content of the application as filed. The reference document D1 in fact refers to numerous possible embodiments of the locating, source and return members, and mentions other patents and applications, and other documents in this connection, so if the disclosure of D1 concerning such "further details" was to be included in the contents of the present application, such contents would be almost limitless. In this connection, document D1 does not even identify the features now sought to be included in the claims of the present application as essential features of the locating and return members which it describes,

but merely as optional features "in many applications of the invention, especially those in which the event is in the presence of an electrolyte, (whereby) an excellent combination of desired properties can be obtained" (see page 23, lines 9 to 19).

In the Board's view, moreover, there is no basis in the disclosure of document D1 for separating out the conductive polymer coated metal core 111, 112 of the locating member from the features which belong together and form the embodiments represented in Figure 33 and Figure 34 of document D1. Moreover, contrary to the Appellant's proposed amendments to the claims, document D1 does not disclose a conductive polymer coating of a return member. The return members 16 of the embodiments in document D1 have either an insulating jacket 161 or an insulating polymeric sheet 22 which surrounds the metallic core; see document D1, Figures 33 to 37 with the corresponding description at pages 42 to 45. Therefore, the Board does not accept the Appellant's arguments according to paragraph VIII(a), (b) and (c) above.

4. For the reasons set out above, in the Board's judgment features incorporated from document D1 into Claims 1 of the present main and auxiliary request contravene Article 123(2) EPC, and such claims are accordingly not allowable.
5. The Appellant based his arguments additionally on Decision T 784/89; see paragraph VIII(e) above. This Decision allowed the introduction into the application after filing of apparatus claims (Claims 14 to 26 in EP-B1-0 144 026) in which the words "means for" were added before each measure claimed in method Claims 1 to 13, the only disclosed original claims (see in particular measures (a) to (h) of Claim 1) and in which already claimed functional

and structural features were maintained correspondingly. In the case of Decision T 784/89 no technical information contained in the cited prior art document (US-A-4 297 637) was incorporated into the added new apparatus claims. Due to the fact that measures and the means for carrying out these particular measures are technically unseparable, such apparatus means are inherently part of a method invention. Moreover, the original application documents explicitly disclose that "it is a further object of the invention to provide means ..."; see EP-A-0 144 026, page 5, line 14. This statement clearly supports the fact that already in the application as filed it was intended to seek protection for an apparatus as well.

As shown above, the circumstances underlying Decision T 784/89 are quite different from those of the present case, and such Decision does not support the allowability of the amendments in the present case.

6. Request to Refer a Point of Law to the Enlarged Board of Appeal

According to Article 112(1) EPC, following a request from a party to the appeal, a Board of Appeal should refer a question to the Enlarged Board of Appeal if it considers that a decision is required in order to ensure uniform application of the law, or if an important point of law arises. In the present case, the Board's decision does not result in any lack of uniformity in the application of the law, and results from direct application of the relevant requirements of the EPC to the facts of the case.

For these reasons, the Board does not find it appropriate to refer a point of law to the Enlarged Board of Appeal, and the Appellant's corresponding auxiliary request is refused.

Order

For these reasons, it is decided that:

1. The request to refer a point of law to the Enlarged Board of Appeal is refused.
2. The appeal is dismissed.

The Registrar:



M. Beer

The Chairman:



G.D. Paterson

