

Veröffentlichung im Amtsblatt	Ja/Nein
Publication in the Official Journal	Yes/No
Publication au Journal Officiel	Oui/Non



13

Aktenzeichen / Case Number / N^o du recours : T 67/86

Anmeldenummer / Filing No / N^o de la demande : 80 106 885.9

Veröffentlichungs-Nr. / Publication No / N^o de la publication : 0 028 825

Bezeichnung der Erfindung: Ultrasonic scanner for examination of a coeliac
Title of invention: cavity
Titre de l'invention :

Klassifikation / Classification / Classement : A61B 10/00

ENTSCHEIDUNG / DECISION

vom / of / du 1 February 1988

Anmelder / Applicant / Demandeur :

Patentinhaber / Proprietor of the patent /
Titulaire du brevet :

Olympus Optical Co., LTD.

Einsprechender / Opponent / Opposant :

Siemens Aktiengesellschaft

Stichwort / Headword / Référence :

EPÜ / EPC / CBE Article 56

Kennwort / Keyword / Mot clé : Inventive step (no)

Leitsatz / Headnote / Sommaire

Europäisches
Patentamt

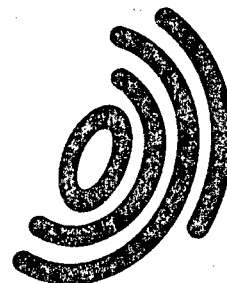
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Chambres de recours



Case Number : T 67/86

D E C I S I O N
of the Technical Board of Appeal 3.2.2
of 1 February 1988

Appellant : Olympus Optical Co., LTD.
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Representative :

Decision under appeal : Decision of the Opposition Division of the European
Patent Office dated 24 October 1985 revoking
European patent No. 28 825 pursuant to
Article 102(2) EPC dispatched on 13 February 1986

Composition of the Board :

Chairman : C. Maus

Members : H. Seidenschwarz

P. Ford

Summary of Facts and Submissions

- I. European patent No. 0 028 825 comprising nine claims was granted to the Appellant on 29 June 1983 in response to European patent application No. 80 106 885.9 filed on 8 November 1980 and claiming the priority of a previous application of 12 November 1979.
- II. Opposition was filed by the Respondent requesting the revocation of the patent. In support of his request, the Respondent referred to five documents as well as the documents cited as references in the patent specification.
- III. After considering the Grounds for Opposition, the Opposition Division revoked the European Patent No. 0 028 825 at the conclusion of the oral proceedings of 24 October 1985. The written statement of reasons for the decision was dispatched on 13 February 1986.
- IV. On 21 February 1986, the Appellant filed an appeal against the decision, paying the appropriate fee simultaneously and requesting that the decision under appeal should be set aside and the European patent should be maintained.

The Statement of Grounds together with new Claims 1 to 7 was received on 20 June 1986.

- V. In response to the Statement of Grounds the Respondent requested dismissal of the appeal. With regard to the new Claim 1 he filed the following document:

H. Lutz, W. Rösch: "Transgastrosopic Ultrasonography", Endoscopy, Vol. 8, No. 4, November 1976, pages 203-205.

As an auxiliary request the Respondent requested oral proceedings.

VI. In his statement and during the oral proceedings which took place on 19 November 1987, the Appellant set out that the subject-matter of the new Claim 1 involved an inventive step vis-à-vis the prior art as disclosed in US-A-4 149 419 and requested that the decision under appeal be set aside and that the patent be maintained on the basis of

Claims 1 to 7 received on 20 June 1986 with the deletion of the last feature in Claim 1;

an adapted description to be filed, and the drawings as granted.

The Respondent contested the arguments of the Appellant and was of the opinion that the subject-matter of Claim 1 did not involve an inventive step having regard to the teaching of US-A-4 149 419. He therefore maintained his request for dismissing the appeal.

VII. Claim 1 reads as follows:

An ultrasonic scanner for coeliac examination, comprising an insertion section (18) to be introduced into a coeliac cavity of a human body, a beam transmitting and receiving section (42) for irradiating ultrasonic beams and receiving reflected echoes thereof, and a beam-scanning section (40) for scanning a predetermined region of a coeliac cavity of a human body by ultrasonic beams and transmitting reflected echoes of the ultrasonic beams to said beam transmitting and receiving section, characterised in that at least two

of said insertion body (18), beam transmitting and receiving section (42) and beam-scanning section (40) are detachably attached to each other by connecting means, which comprise mechanical coupling means for mechanically effecting said mutual detachable attachment of at least two of said insertion body (18), said beam transmitting and receiving section (42) and said beam-scanning section; and electric connecting means for electrically effecting said mutual detachable attachment of said at least two members.

Reasons for the Decision

1. The appeal complies with Articles 106 to 108 and Rules 1(1) and 65 EPC. It is, therefore, admissible.
2. Claim 1 comprises a combination of the Claims 1 and 3 as granted.

The claim, therefore, complies with Article 123(3) EPC.

3. The subject-matter as defined by Claim 1 is novel (Article 54 EPC) having regard to the documents cited in the search report and by the Respondent during the proceedings. Since this has not been disputed by the Respondent, there is no need for further detailed substantiation of this matter.
4. The question to be considered is, however, whether the subject-matter of Claim 1 involves an inventive step. For the assessment of the matter, the following points emerge:

- 4.1 The invention concerns an ultrasonic scanner for coeliac examination which is inserted into the coeliac cavity of an examinee to inspect the physiological condition of the organs of the coeliac cavity.

According to the introductory part of the description an endoscope comprising an integrally formed ultrasonic scanner for coeliac examination whose control section is inseparably coupled to a narrow insertion section to be introduced into the coeliac cavity forms part of the state of the art. The distal end part of the insertion section comprises a section for transmitting and receiving ultrasonic beams and a beam-scanning section actuated in response to an output signal from the beam transmitting and receiving section.

At the ultrasonic scanner as described above, the transmitting and receiving section and the beam scanning section are integrally formed with the insertion section and cannot be removed therefrom. Therefore the prior art ultrasonic scanner has the drawback that where the coeliac cavity is diagnosed from various angles of observation by applying ultrasonic beams having different properties, then it is necessary to provide several kinds of beam scanner in accordance with not only the different angles of observation but also other different characteristics of ultrasonic beams (e.g. frequency, focal length, etc.): cf. EP-B-0 028 825, column 1, lines 6 to 42.

- 4.2 The problem to be solved by the invention is, therefore, to provide an ultrasonic scanner for coeliac examination which allows for the free exchange of a desired component forming part of the insertion section.

4.3 The general idea underlying the claimed solution to this problem involves the use of parts which can be freely replaced by parts having different functions or different characteristics is known in many technical fields as the Respondent has set out during the oral proceedings. Moreover, the same general idea and its solution, is also known in the specific technical field which field the subject-matter of Claim 1 forms part of. Thus, US-A-4 149 419 discloses an ultrasonic scanner comprising a scanning head and a handle, which permits placement of the scanning head on a body to be examined (cf. column 8, lines 32 to 34). The scanning head is detachably secured to the handle by connecting means, which comprise mechanical coupling means (cf. column 3, lines 22 to 26, 39 to 42) and electric connecting means (cf. column 3, lines 32 to 36) for mechanically and electrically effecting the mutual detachable attachment of the scanning head and the handle. By these coupling means scanning heads having desired characteristics can be interchanged with the drive (cf. column 8, lines 28 to 32).

The person skilled in the art would immediately realise that the same general idea is suitable for solving his particular problem and thus is also applicable for exchanging parts of a known ultrasonic scanner for coeliac examination as specified in the prior art portion of Claim 1. Therefore, the application of mechanical coupling means and electric connecting means for connecting the insertion body to the beam-scanning-section and/or the beam-scanning section to the beam transmitting and receiving section, in order to make use of the known functions and advantageous effects of such connecting means must be regarded as obvious for the person skilled in the art.

4.4 The further arguments submitted by the Appellant in support of inventive step are not persuasive to reverse the above conclusion of obviousness:

- (a) The Board cannot agree to the argument that the scanner head of the ultrasonic scanner according to US-A-4 149 419 could be separated in two parts as the distal end part of the ultrasonic scanner according to the prior art as a transducer housing is always filled with an ultrasound transmitting fluid. US-A-4 149 419 clearly discloses (cf. column 3, lines 50-68 and column 4, lines 11 to 14; Figures 2 and 5) that also the scanning head consists of two parts which are detachably attached to each other by connecting means. An outer conical shaped shell 44 of the transducer housing 41 sealed by a plug 48 is detachably secured to a drive assembly 42 by threads 43 and a set screw 63.

In view of the teaching of the above cited document described in the previous paragraph it would come within the scope of the customary practice followed by the person skilled in the art to provide the means connecting the transducer housing to the drive assembly also with additional electric connecting means if necessary.

- (b) The objection that, because of its size in comparison with the ultrasonic scanner according to Claim 1, the known ultrasonic scanner cannot be introduced into a body being scanned, fails to take account of the fact that the person skilled in the art is to be expected

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to be ready to apply the general idea underlying the subject-matter of Claim 1 with corresponding effect to devices of different kinds, independent of the size and design of said devices.

5. For the foregoing reasons, the subject-matter of Claim 1 lacks an inventive step as required by Article 56 EPC. Therefore, that claim cannot be maintained having regard to Article 52(1) EPC.
6. Claims 2 to 7 cannot be maintained either, inasmuch as their validity depends on the validity of Claim 1, which validity has been denied.

Order

For these reasons, it is decided that:

The appeal against the decision of the Opposition Division is dismissed.

The Registrar:

The Chairman:

S. Fabiani

C. Maus