Case Number: T 1210/07 - 3.2.05
Application Number: 00969550.3
Publication Number: 1224073
IPC: B29D 11/00
Language of the proceedings: EN
Title of invention: Deblocking contact lenses
Patentees: NOVARTIS AG, et al
Opponent: BAUSCH & LOMB INC.
Headword: -
Relevant legal provisions:
EPC Art. 54, 56, 83
RPBA Art. 13(1)
Relevant legal provisions (EPC 1973): -
Keyword:
"Admissibility of late-filed document (yes)"
"Novelty (main and first auxiliary request, no; second auxiliary request, yes)"
"Inventive step (second auxiliary request, yes)"
"Admissibility of new objection (no)"
Decisions cited: -
Catchword: -
Case Number: T 1210/07 - 3.2.05

DECISION
of the Technical Board of Appeal 3.2.05
of 19 March 2009

Appellants I:
(Patent Proprietors)
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and

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Appellant II:
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Decision under appeal:
Interlocutory decision of the Opposition
Division of the European Patent Office posted
29 May 2007 concerning maintenance of European
patent No. 1224073 in amended form.

Composition of the Board:

Chairman: W. Zellhuber
Members: P. Michel
E. Lachacinski
Summary of Facts and Submissions

I. Appellants I (patent proprietors) and appellant II (opponent), lodged appeals against the interlocutory decision of the Opposition Division maintaining European patent No. 1 224 073 in amended form.

In the decision under appeal, it was held that the subject-matter of claim 1 of a main request of appellants I was not new, but that the subject-matter of claim 1 of auxiliary request II involved an inventive step.

II. Oral Proceedings were held before the Board of Appeal on 19 March 2008.

Appellants I requested that the decision under appeal be set aside and that the patent in suit be maintained as granted or, as an auxiliary measure, that the patent be maintained on the basis of the following documents:
- first auxiliary request: claims 1 to 7, filed as auxiliary request 1 on 28 September 2007 as annex HG-1
- second auxiliary request: claims 1 to 4, filed as auxiliary request 2 on 18 April 2008 as annex HG-3'
- third auxiliary request: claims 1 to 4, filed as auxiliary request 3 on 19 February 2009 as annex HG-4'.

Appellant II requested that the decision under appeal be set aside and that the European patent No. 1 224 073 be revoked in its entirety.
III. Claims 1 and 8 of the main request read as follows:

"1. A method for extracting a polymeric contact lens (16) from a mold bearing it (14) characterized in that it comprises lowering the temperature of the contact lens (16) to a temperature sufficient to reduce adhesion between the lens (16) and the mold (14) to a point where removing the lens will not damage the lens, and thereafter removing the lens (16) from the mold (14)."

"8. An apparatus for deblocking and collecting contact lenses formed of hydrophilic polymers that tend to adhere to mold surfaces, said apparatus comprising: a contact lens mold (14); and characterized in that it further comprises means for cooling said lens mold (14) to a temperature at which a contact lens (16) on said lens mold (14) will release from said mold without damage to the contact lens."

Claim 1 of the first auxiliary request includes the additional feature ", using a cryogenic substance" after the term "lowering the temperature of the contact lens (16)".

Claim 1 of the second auxiliary request reads as follows:

"1. A method for extracting a polymeric contact lens (16) from a mold bearing it (14) characterized in that it comprises lowering the temperature of the contact lens (16) to a temperature sufficient to reduce adhesion between the lens (16) and the mold (14) to a point where removing the lens will not damage the lens,
and thereafter removing the lens (16) from the mold (14), wherein lowering the temperature of the contact lens (16) is done by bringing the contact lens (16) or the mold (14) bearing the contact lens in contact with a cryogenic substance and wherein the cryogenic substance is selected from the group consisting of liquid nitrogen, liquid helium and solid carbon dioxide."

Claim 1 of the third auxiliary request reads as follows:

"1. A method for extracting a polymeric contact lens (16) from a mold bearing it (14) characterized in that it comprises lowering the temperature of the contact lens (16) to a temperature sufficient to reduce adhesion between the lens (16) and the mold (14) to a point where removing the lens will not damage the lens, and thereafter removing the lens (16) from the mold (14), wherein lowering the temperature of the contact lens (16) is done by bringing the mold (14) bearing the contact lens in contact with a cryogenic substance, and wherein the cryogenic substance is selected from the group consisting of liquid nitrogen, liquid helium and solid carbon dioxide."

IV. The following documents are referred to in the present decision:

D1: WO-A-98/07554
D7A: Translation of document D7
The arguments of appellants I in the written and oral proceedings can be summarised as follows:

Document D15 was only filed two weeks before the oral proceedings and should not be admitted into the proceedings. The document is not prima facie relevant, since it is not concerned with the manufacture of contact lenses. The disclosure at column 15, lines 55 to 65, would not be read during a prima facie study.

Document D1 discloses a two stage process using a solvent and liquid carbon dioxide. Deblocking is achieved by the use of the solvent and not by lowering the temperature of the contact lens. There is no disclosure that the carbon dioxide acts as a cooling agent. The subject-matter of claim 1 of the main request is thus new.

Cryogenic substances are substances at extremely low temperatures. There is no suggestion in document D1 that the liquid carbon dioxide should be used at such temperatures. The subject-matter of claim 1 of the first auxiliary request is thus new.

The chilling step disclosed in document D4 does not serve to reduce adhesion of the lens to the mould. This is achieved by the steps which occur after separation of the mould halves, that is, drying and cross-linking. There is thus no suggestion of using a cryogenic substance selected from the group consisting of liquid nitrogen, liquid helium and solid carbon dioxide in order to reduce adhesion between the lens and the mould.
The subject-matter of claim 1 of the second auxiliary request is thus new.

Document D15 relates to the production of multifocal lenses for spectacles having a protruding optical segment. It is thus not relevant to the subject-matter of the patent in suit and cannot be regarded as being the closest prior art. Document D1 should be regarded as being the closest prior art.

The remaining cited prior art documents do not suggest modifying the method of document D1 by the use of a cryogenic substance selected from the group consisting of liquid nitrogen, liquid helium and solid carbon dioxide for reducing the temperature of the lens and thereby reducing adhesion between the lens and the mould. The subject-matter of claim 1 according to the second auxiliary request thus involves an inventive step.

The argument under Article 83 EPC raised by appellant II at the oral proceedings should not be admitted into the proceedings at such a late stage.

VI. The arguments of appellant II in the written and oral proceedings can be summarised as follows:

Claim 1 of the main request does not require the application of a cooling medium, but encompasses merely allowing the temperature to lower. The claim further does not exclude additional measures to enable removal of the lens, such as the use of a solvent. Claim 1 of the main request thus lacks novelty in view of the disclosure of document D1.
Paragraph [0025] of the description of the patent in suit indicates that liquid carbon dioxide should be considered to be a cryogenic substance within the meaning of claim 1. Claim 1 of the first auxiliary request thus also lacks novelty in view of the disclosure of document D1.

Document D4 (claim 1, paragraph d) discloses a method involving chilling the mould to allow separation of the mould halves. In order to permit separation of the mould halves, it is not only necessary to give dimensional stability to the lens, but also to reduce adhesion of the lens to the mould. As stated at column 3, line 64, liquid nitrogen may be employed for chilling. Claim 1 of the second auxiliary request thus lacks novelty in view of the disclosure of document D4.

Document D15 was filed in response to the preliminary opinion of the Board and it is immediately clear that the passage at column 15, lines 55 to 65, is highly relevant, particularly in view of the communication of the Board. The document should accordingly be admitted into the procedure.

Document D15 represents the closest prior art for the subject-matter of claim 1 of the second auxiliary request. Document D13 indicates that the temperature difference between the lens and the mould should be as large as possible. It thus does not involve an inventive step to use liquid nitrogen in place of the Freon proposed in document D15. Documents D4 and D7 also suggest such a substitution. Insofar as claim 1 of
the second auxiliary request is regarded as being novel, it does not involve an inventive step.

Since the description of the patent in suit at column 5, lines 51 to 55, mentions that some mould materials may be incompatible with the method of the invention, the disclosure is insufficient to enable the invention to be put into practice. An objection of insufficiency under Article 83 EPC was raised in the notice of opposition (see pages 18 and 19).

Reasons for the Decision

1. Admissibility of Document D15

Document D15 was filed by appellant II on 9 March 2009, that is, only 10 days before the date set for oral proceedings. The document was thus late filed and the question of whether or not the document should be admitted into the procedure falls within the discretion of the Board. In particular, the document should only be admitted into the proceedings if it is prima facie highly relevant.

It was pointed out on behalf of appellants I that the relevant passage of document D15 occurs at column 15 and that the relevance of the document is not apparent from the title page, the drawings or the discussion of the background of the invention.

The Board is, however, of the opinion that, in order to decide whether or not a document is prima facie relevant, it is not the correct approach to consider
whether or not the document would appear to be relevant when superficially reading portions of the document in question without considering the document as a whole, as might be done during the course of a rapid search. Rather, the consideration should be based on the likelihood of the disclosure of the document prejudicing the outcome of the proceedings.

It is further noted that the relevant passage of document D15 is only a single paragraph of eleven lines which can be rapidly understood and thus does not require any procedural delay.

Document D15 is prima facie more relevant than the prior art which was cited within the opposition period, since it discloses at column 15, lines 55 to 65, that separation of a lens from a mould is facilitated by putting the assembled apparatus, that is, the lens together with the mould, on ice or in a cold source such as a compressed cooling gas such as Freon. The disclosure of this document thus addresses the point raised in the communication of the Board under point 5.2 and is considered to be prima facie highly relevant to the question of inventive step of the subject-matter of claim 1 of the main and auxiliary requests.

Document D15 is accordingly admitted into the procedure.

2. **Main Request**

2.1 **Novelty**
2.1.1 Document D1

Document D1 discloses a method for extracting a polymeric contact lens (see paragraph bridging pages 5 and 6) from a mould bearing it ("deblocking"). The process involves contacting the lens with an extracting solvent and liquid carbon dioxide. The liquid carbon dioxide contacting step may take place at a temperature between about 0°C and about 31°C, preferably at ambient temperature (page 4, lines 10 to 23). It is thus inevitable that the deblocking step is carried out at a lower temperature than the step of forming the lens by polymerisation in the mould, so that a lowering of the temperature of the contact lens occurs.

The wording of claim 1 does not require any form of "active" cooling involving the use of a cooling medium, or that cooling takes place after opening of the mould. Claim 1 is construed as including within its scope the lowering of the temperature of the contact lens after polymerization merely by leaving the lens and mould in an environment at ambient temperature, either before or after opening of the mould.

It is further regarded as being implicit that adhesion between the lens and the mould is reduced to a point where removing the lens will not damage the lens. This is independent of the question of whether or not a solvent is present which may also assist in removal of the lens.

2.1.2 The subject-matter of claim 1 is thus not new in view of the disclosure of document D1, so that the main request is not allowable.
3. **First Auxiliary Request**

3.1 As stated in paragraph [0025] of the description of the patent in suit according to the first auxiliary request, the term "cryogenic substance" is to be understood as referring to "anything which, when placed in contact with either the mold or the lens, will reduce the temperature to the desired degree" and may be liquid carbon dioxide. The claim does not specify that the process takes place at cryogenic temperatures. The amendment to claim 1 thus does not exclude the use of liquid carbon dioxide at the temperatures disclosed in document D1, and does not assist in distinguishing the subject-matter of claim 1 from the disclosure of document D1.

3.2 The subject-matter of claim 1 is thus not new, so that the first auxiliary request is not allowable.

4. **Second Auxiliary Request**

4.1 Novelty

4.1.1 Document D1 does not suggest cooling to any temperature below 0°C, and, in particular, does not suggest the use of a cryogenic substance which is selected from the group consisting of liquid nitrogen, liquid helium and solid carbon dioxide.

4.1.2 Document D4 discloses a method of casting an ophthalmic shield which involves placing a viscous collagen and/or gelatine gel in a mould and closing the mould. The mould is then chilled to "a temperature sufficiently
low to effect dimensional stability and to allow separation of the mold halves without deforming the shield", opening the mould, and finally drying and cross-linking the shield (see claim 1). The step of chilling the mould is thus not associated with the step of ensuring that the shield can be removed from the mould half without damage. Rather, this is achieved by drying and cross-linking which take place after separation of the mould portions.

4.1.3 The subject-matter of claim 1 is thus new.

4.2 Inventive step

4.2.1 It cannot be accepted that document D15 should be regarded as representing the closest prior art. This document is concerned with the manufacture of a multifocal ophthalmic lens for use in spectacles rather than a contact lens. In particular, the presence of an optical sector (12) on the lens, as shown in the drawings, would prevent the use of the form of lens disclosed in document D15 as a contact lens. Claim 1 of the patent in suit, however, relates to a method of extracting a polymeric contact lens from a mould.

The closest prior art is considered to be represented by document D1. The subject-matter of claim 1 is distinguished over the disclosure of this document by the use of a cryogenic substance selected from the group consisting of liquid nitrogen, liquid helium and solid carbon dioxide for lowering the temperature of the lens to a temperature sufficient to reduce adhesion between the lens and the mould.
The use of one of the specified cryogenic substances for the purpose of lowering the temperature of the contact lens to a temperature sufficient to reduce adhesion between the lens and the mould is not suggested by the cited prior art.

Document D15, at column 15, lines 55 to 65, suggests that separation of a polymeric optical lens from a mould is facilitated by putting the assembled apparatus, that is, the lens together with the mould, on ice or in a cold source such as a compressed cooling gas such as Freon. There is, however, no suggestion of the use of liquid nitrogen, liquid helium or solid carbon dioxide.

Document D13 indicates that a greater temperature gradient between the lens and the mould half will reduce the adhesion force (column 2, lines 28 to 35). However, the application of a greater temperature gradient than that proposed in document D15 will not necessarily lead to the choice of a cryogenic substance and could even be achieved by warming the mould while cooling the lens.

Document D4 proposes the use of liquid nitrogen for increasing the dimensional stability of a viscous collagen and/or gelatine gel (see claim 1). It does not suggest that adhesion between the lens and mould could be reduced so as to facilitate removal of the lens from the mould (see paragraph 3.1.2 above).

Document D7 relates to release of a Fresnel lens from a mould. As stated at page 4, lines 21 to 23 of document 7A (the translation of document D7), contraction of the lens under cooling causes a bending moment in the
Fresnel lens. However, Fresnel lenses are large optical elements having surface irregularities. There is no incentive to apply the teaching of this document for releasing contact lenses from a mould.

4.2.2 The subject-matter of claim 1 thus involves an inventive step. Claims 2 to 4 relate to preferred aspects of the method of claim 1 and similarly involve an inventive step.

5. Admissibility of the objection under Article 83

At the end of the oral proceedings before the Board, Appellant II raised an objection of insufficiency of disclosure, alleging that, since the description of the patent in suit at column 5, lines 51 to 55, mentions that some mould materials may be incompatible with the method of the invention, the disclosure was insufficient as regards the selection of a suitable mould material.

The ground of opposition under Article 100(b) EPC was mentioned in the grounds of opposition in connection with an argument that cooling alone may not be sufficient to enable deblocking of the lens without damage. This objection was not, however, referred to subsequently in the opposition proceedings, or in the appeal proceedings.

Accordingly, the objection of insufficiency of disclosure is regarded as being introduced into the proceedings too late to enable the other party to respond appropriately. The Board consequently exercises its discretion under Article 13(1) of the Rules of
Procedure of the Boards of Appeal not to admit this objection.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the department of first instance with the order to maintain the patent on the basis of the following documents:

   - claims 1 to 4 filed as auxiliary request 2 on 18 April 2008
   - description, pages 2 to 6 filed as auxiliary request 2 on 18 April 2008
   - drawings, Figures 1 to 5 as granted.

The Registrar:    The Chairman:

D. Meyfarth     W. Zellhuber