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# Datasheet for the decision of 15 January 2014

**Case Number:** T 0322/09 - 3.4.02

**Application Number:** 99914381.1

**Publication Number:** 1034453

**IPC:** G02C7/02, G02C7/06

**Language of the proceedings:** EN

**Title of invention:**
MYOPIA LENS

**Patent Proprietor:**
Carl Zeiss Vision Australia Holdings Ltd.

**Opponent:**

**Headword:**

**Relevant legal provisions:**
EPC 1973 Art. 56

**Keyword:**
Inventive step - (yes)

**Decisions cited:**

**Catchword:**

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**Case Number: T 0322/09 - 3.4.02**

**D E C I S I O N**
**of Technical Board of Appeal 3.4.02**
**of 15 January 2014**

| | |
|---|---|
| **Appellant:** (Patent Proprietor) | Carl Zeiss Vision Australia Holdings Ltd.<br>Sherriffs Road<br>Lonsdale, SA 5160 (AU) |
| **Representative:** | Glawe, Delfs, Moll<br>Partnerschaft mbB von<br>Patent- und Rechtsanwälten<br>Rothenbaumchaussee 58<br>20148 Hamburg (DE) |

**Decision under appeal:** **Decision of the Opposition Division of the European Patent Office posted on 20 November 2008 revoking European patent No. 1034453 pursuant to Article 101(3)(b) EPC.**

**Composition of the Board:**

**Chairman:** A. Klein
**Members:** A. Hornung
B. Müller

## Summary of Facts and Submissions

I. The patentee appealed against the decision of the opposition division revoking European patent No. 1034453 on the basis of Article 56 EPC.

II. The patentee (appellant) requested that the decision of the opposition division be set aside and that the patent be maintained on the basis of claims 1 to 7 of the main request filed in the oral proceedings held on 15 January 2014.

III. With a letter of 13 October 2009, the opponent responded to the patentee's notice of appeal, arguing in favour of the revocation of the patent. However, on 5 March 2013 the opponent withdrew the opposition.

IV. The following documents relied on in the opposition proceedings will be referred to in the present decision:
D1: DE 4012609
D2: WO 95/27229
D3: DE 4342234
D14: "Bifocal Control of Myopia", K. H. Oakley et al., Am. J. Optom. & Physiol. Optics, 1975, vol 52, pages 758 - 764;
D15: "Rates of Childhood Myopia Progression with Bifocals as a Function of Nearpoint Phoria: Consistency of Three Studies", D.A. Goss et al., Optometry and Vision Science, vol. 67, No. 8, pages 637 - 640;
D16: "Design and Statistical Analysis for the Myopia Intervention Trial in Taiwan", C.K. Hsiao et al., Proceedings of the 7th International Conference on Myopia, held in Taipei, Taiwan, December 1998.

V. Independent claims 1 and 5 according to the patentee's main request read as follows:

Claim 1. "A progressive ophthalmic lens element including a lens surface having
an upper viewing zone having a relatively low surface power to achieve a refracting power corresponding to distance vision;
a lower viewing zone having a greater surface power than the upper viewing zone to achieve a refracting power corresponding to near vision;
the lower viewing zone exhibiting an addition power in the range from approximately 1.25 D to 2.00 D;
and an intermediate zone extending across the lens element having a surface power varying from that of the upper viewing zone to that of the lower viewing zone and including a corridor of relatively low surface astigmatism;
the width of the upper viewing zone, measured from the temporal 0.50 D astigmatism contour to the nasal 0.50 D astigmatism contour being not less than approximately 34 mm at the vertical height of 7 mm above the geometric lens centre;
the width of the lower viewing zone measured from the temporal 1.00 D astigmatism contour to the nasal 1.00 D astigmatism contour being not less than 14 mm at the vertical height of -9 mm from the geometric lens centre for lenses having addition powers up to 1.50 D, and not less than 10 mm for lenses having addition powers above 1.50 D;
the lens element exhibiting a base curve in the range of 0.50 to 4.00 D;
characterized in that
the lens element is designed for juvenile use and for reducing progression of myopia by including a corridor length of approximately 15 mm or less, the corridor length extending from the vertical height of the fitting cross to the vertical height of the near zone measurement point."

Claim 5. "A series of progressive ophthalmic lens including, each lens element having a single base curve,

each lens within the set differing in prescribed addition power and including a progressive design;
the width of an upper viewing zone measured from the temporal 0.50 D astigmatism contour to the nasal 0.50 D astigmatism contour being not less than approximately 34 mm at the vertical height of 7 mm above the geometric lens centre;
the periphery of the upper viewing zone exhibiting slightly increased surface astigmatism at higher addition powers;
a lower viewing zone exhibiting an addition power in the range from approximately 1.25 D to 2.00 D;
the width of the lower viewing zone, measured from the temporal 1.00 D astigmatism contour to the nasal 1.00 D astigmatism contour being not less than 14 mm at the vertical height of -9 mm from the geometric lens centre for addition powers of up to 1.50 D,
the width of the lower viewing zone narrowing slightly at addition powers above 1.50 D and not less than 10 mm for lenses having addition powers above 1.50 D;
characterized in that
each lens element is designed for juvenile use and for reducing progression of myopia by including a corridor length in the intermediate zone of approximately 15 mm or less, the corridor length extending from the vertical height of the fitting cross to the vertical height of the near zone measurement point."

The remaining claims depend on the above independent claims.

## Reasons for the Decision

1. Present claim 1 is identical to claim 1 of the main request on the basis of which the opposition division decided to revoke the patent.

2. The board agrees with the finding of the opposition division that the subject-matter of claim 1 is compliant with the requirements of Articles 123(2), 84, 83 and 54 EPC.

3. Inventive step

*3.1 The appealed decision*

According to the appealed decision, the subject-matter of claim 1 lacked an inventive step in view of D2 in combination with common general knowledge. A major aspect of the underlying reasoning was that the opposition division considered that "the lens of figure 1b of D2 is also usable for juvenile use" and that "the feature 1H [i.e. a corridor length of 15 mm or less] has not been taken into consideration because this feature does not define any structural limiting features" (see point 2.3.6.3.1 of the appealed decision).

The reason for ignoring feature 1H in the appealed decision was apparently that "since the vertical height of at least one of these points [fitting cross, near zone measurement point] appears to be ambiguous, also the corridor length is not properly defined". Therefore, the opposition division concluded that "the corridor length is undetermined" and that "the feature defining the corridor length is regarded as non-limiting when novelty and inventive step are analysed" (see point 2.3.6.1 of the appealed decision).

However, in spite of the position of the claimed reference points not being unambiguously defined in the patent, the board cannot follow the opposition division's argumentation. Feature 1H is present in claim 1 and, since lack of clarity, such as ambiguous definition of parameters, cannot be examined in the present opposition proceedings, feature 1H has to be interpreted to the best knowledge of the skilled

person, instead of completely ignoring its limitation effect on the claimed lens. In particular, the patentee explained convincingly that the claimed reference points have a generally understood technical meaning and that, incidentally, they are standardized language according to DIN EN ISO 13666.

*3.2 Technical field and closest prior art*

During oral proceedings, the patentee presented convincing arguments that the functional feature of claim 1 "the lens element is designed for juvenile use and for reducing progression of myopia", defining the use of the invention, represents an effective technical feature limiting the scope of the claim. In particular, the patentee submitted during oral proceedings on an electronic media two post-published articles about studies confirming that the use of progressive lenses as claimed effectively slow myopia progression ("The effectiveness of progressive addition lenses on the progression of myopia in Chinese children", Zhikuan Yang et al., Ophthal. Physiol. Opt. 2009 29:41-48; "Effect of Progressive Addition Lenses on Myopia Progression in Japanese Children: A Prospective, Randomized, Double-Masked, Crossover Trial", Satoshi Hasebe et al., Investigative Ophthalmology & Visual Science, July 2008, Vol. 49, No. 7, pages 2781-2789). He also submitted part of the data sheet of the lens used in these studies (see annex to the minutes). In combination with the other claimed features about the corridor length, the addition power and the widths of the upper and lower viewing zones, the claimed functional feature effectively contributes to the solution of the above-mentioned technical problem of slowing juvenile myopia progression.

These explanations establish that the technical field of the invention relates to juvenile myopia and, in particular, to the problem of reducing progression of myopia during juvenile

growth. The only documents on file addressing this topic are documents D14 to D16.

The board follows the patentee's view to consider D14 as being the closest prior art because it belongs to the same technical field and addresses the same technical problem as the present invention.

*3.3 Solution of the technical problem*

For solving the technical problem of slowing juvenile myopia progression, D14 teaches the use of plus reading glasses or bifocal glasses. A bifocal lens does not comprise near, intermediate and distant viewing zones as a progressive lens does. Therefore, no hint can be found in D14 relating to the claimed lens parameters. D15 and D16 which also deal with the problem of reducing juvenile myopia progression do not contain more relevant information than D14 in that respect.

According to the patent under appeal, the problem of slowing juvenile myopia progression is solved by providing a progressive lens with near, intermediate and distant viewing zones specifically adapted for juvenile use. The retained ranges for the addition power, the widths of the upper and lower viewing zones, the corridor length and, hence, the resulting lens astigmatism represent an optimized compromise, specifically adapted to young wearers, which are characterized by wearing relatively small lens frames and by their ability of accommodating over a wide range of object distances.

More precisely, the invention has realized that, despite increased lens astigmatism, for myopic children it is more important to bring the distant and near vision zones closer together, so as to encourage viewing through the near vision zone when performing near vision tasks, instead of viewing

through the distant vision zone and accommodating on the close objects.

*3.4 Further prior art*

D2, on which the appealed decision relied for its argumentation of lack of inventive step does not qualify as a plausible starting point to arrive at the claimed subject-matter since it does not even mention juvenile myopia.

Would the skilled person nevertheless consider D2, he would have no incentive to modify the lens of D2 in the way as specified in present claim 1. Indeed, the lens of D2, corresponding to figures 1b and 4, differs from the claimed lens in that it is designed inter alia for correcting presbyopia and it has a corridor length of 18 mm, as convincingly shown by the patentee in the notice of appeal on pages 15 to 19. Reducing the corridor length increases lens astigmatism. Obviously, this restrains the skilled person from redesigning the lens of D2 without compelling reasons from a corridor length of 18 mm to 15 mm or less.

In the case of the present invention, the compelling reason leading to the claimed compromise of lens parameters including a short corridor length and increased astigmatism, is precisely the invention's concept of reducing juvenile myopia by forcing the child to look through the near vision zone.

No such compelling reason can be found in D2 or in any other available prior art document. Indeed, D1 to D3 relate to presbyopia and not to the reduction of juvenile myopia. Furthermore, the general hint in D1, column 3, lines 57-60, about a short progression zone does not imply that the corridor length in D2 should be shorter than the actual 18

mm, regardless of increased astigmatism reducing the visual comfort of the wearer.

Documents D1 and D3 which were mentioned by the former opponent for arguing against patentability of the claimed lens do not represent a more promising springboard to the invention than D2 since they neither address the reduction of progression of juvenile myopia nor disclose a corridor length extending from the fitting cross to the near zone measurement point of 15 mm or less.

3.5 In view of the above findings, the board comes to the conclusion that the subject-matter of claim 1 according to the main request on file fulfils the requirements of Article 56 EPC 1973.

3.6 The same conclusion applies to the subject-matter of the independent claim 5 for corresponding reasons and also to the dependent claims 2-4 and 6-7 which include the limitations of the claims from which they depend.

## 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 claims 1 to 7 of the main request filed in the oral proceedings.

The Registrar: The Chairman:

M. Kiehl A. Klein

Decision electronically authenticated