PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

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PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/IB2016/000344	04.03.2016	

International Patent Classification (IPC) or both national classification and IPC
INV. G02C7/02

Applicant
ESSILOR INTERNATIONAL (COMPAGNIE GENERALE...

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notifed the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA:	Date of completion of this opinion	Authorized Officer
European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Fax: +49 89 2399 - 4465	see form PCT/ISA/210	Vazquez Martinez, D Telephone No. +49 89 2399-0

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/IB2016/000344

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:

   a. ☐ forming part of the international application as filed:

      ☐ in the form of an Annex C/ST.25 text file.

      ☐ on paper or in the form of an image file.

   b. ☐ furnished together with the international application under PCT Rule 13*ter*.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.

   c. ☐ furnished subsequent to the international filing date for the purposes of international search only:

      ☐ in the form of an Annex C/ST.25 text file (Rule 13*ter*.1(a)).

      ☐ on paper or in the form of an image file (Rule 13*ter*.1(b) and Administrative Instructions, Section 713).

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-18
	No:	Claims	
Inventive step (IS)	Yes:	Claims	17
	No:	Claims	1-16, 18
Industrial applicability (IA)	Yes:	Claims	1-18
	No:	Claims	

2. Citations and explanations

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Reference is made to the following documents:

D1 WO 2013/128439 A1 (SHAMIR OPTICAL INDUSTRY LTD [IL]) 6 September 2013 (2013-09-06)

D2 WO 2010/119183 A1 (ESSILOR INT [FR]; CHAUVEAU JEAN-PIERRE [FR]; DUBOIS FREDERIC [FR]; GUI) 21 October 2010 (2010-10-21)

D3 WO 2014/006341 A1 (ESSILOR INT [FR]) 9 January 2014 (2014-01-09)

D4 DE 10 2008 035247 A1 (RODENSTOCK GMBH [DE]) 4 February 2010 (2010-02-04)

D5 US 2010/114540 A1 (SHINOHARA TOSHIHIDE [JP] ET AL) 6 May 2010 (2010-05-06)

1 **Re Item VIII**
Certain observations on the international application

1.1 It is clear from the description on page 1, lines 15 to 22, and on page 7, line 26, to page 8, line 32, as well as from the diagram flow of fig. 2, that the feature recited in claim 3 is essential to the definition of the invention.

If the relative position of the lens when worn before the individual's eye were not taken into account in the method of claim 1, it would not make sense to determine the refractive power of the lens itself as described in the method of claim 1. If no information is provided on any discrepancy between the relative position of the lens as-worn and the relative position of the refraction apparatus, the skilled person would assume that both positions are the same and, thus, the refractive power of the lens would correspond indeed to the refraction value obtained from the first data.

Since **independent claims 1 and 18** do not contain this feature they do not meet the requirement following from Article 6 PCT taken in combination with Rule 6.3(b) PCT that any independent claim must contain all the technical features essential to the definition of the invention.

1.2 According to **claim 15**, the step of determining the refractive power value comprises a "sub-step of determining a modified refraction value based on said first data and said relative position". It is not clear which is the difference between the refractive power value determined in the method of claim 1 and the "modified refraction value" determined in claim 15, if there is any. The intended limitations are therefore not clear from this claim, contrary to the requirements of Article 6 PCT.

1.3 The unclear current wording of **claim 16** does not enable the skilled person to determine which lens power is to be determined and its functional relationship with the parameters recited in the claim.

For the purpose of search and preliminary examination, in addition to the introduction of the features discussed in section 1.1 above, it was assumed that the lens power to be measured corresponds to the power measured on the lensmeter for a lens adapted to provide the desired correction to the wearer's eye when placed at the expected position with respect to the wearer's eye (see page 12, line 16 to page 13, line 1).

2 **Re Item V**

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

2.1 Document D1 discloses a method of determining a refractive power value characterising an ophthalmic lens for correction of an individual's eye ametropia, comprising the following steps (the references in parentheses applying to document D1):

- obtaining first data representative of a refraction value and second data representative of a position of the individual's head with respect to a refraction apparatus when said refraction value was determined (see diagram flow of fig. 2A; page 5, lines 7 to 26; page 7, lines 4 to 6);
- determining said refractive power value as a function of said first data and of a relative position, derived from said second data, of the refraction apparatus with respect to the front of said eye when said refraction value was determined, so that the refractive power provided by the lens to the individual when said lens is worn before the individual's eye corresponds to a refractive

power provided by the refraction apparatus to the individual when said refraction value was determined (see diagram flows of figs. 2A and 2C; page 3, lines 7 to 24).

The subject-matter of **claim 1** therefore differs from the method of D1 in that the relative position of the refraction apparatus considered in the determination of the refractive power of the lens is defined with respect to the centre of rotation of the eye and not with respect to the front of the eye.

This difference refers to one of the common alternatives used by the skilled person in the field of ophthalmic optics when defining the relative position of a corrective device with regard to the eye (see, for instance, page 2, line 24, to page 3, line 24, and even acknowledgement in this regard in page 25, lines 7 to 14, and fig. 3 of D1).

Therefore, the subject-matter of claim 1 does not involve an inventive step within the meaning of Article 33(3) PCT.

2.2 The same reasoning used in the case of claim 1 applies, *mutatis mutandis*, to the subject-matter of **claim 18** (see also disclosure of page 8, lines 26 to 32, in D1).

2.3 The additional feature of **claim 2** refers to a common procedure in the field that does not involve an inventive step (see, for instance, page 4, lines 13 to 25, page 5, lines 6 to 11, and page 8, lines 6 to 11, of D2).

2.4 The same reasoning of point 2.1 above applies to the subject-matter of **claim 3**, which is thus not inventive either within the meaning of Article 33(3) PCT.

2.5 The additional features of **claim 4 to 7** are disclosed in document D1 (page 7, lines 14 to 16; diagram flow of fig. 2C)

2.6 The additional features of **claim 8** are disclosed in document D1 (page 14, lines 15 to 21 and 28 to 32).

2.7 The additional features of **claims 9 to 11** refer to obvious modifications of method of D1 (see observation angles and instrument tilts referred to page 16, line 16, to page 17, line 32. See also related disclosure in D3 - page 1, lines 6 to 25; page 7, lines 5 to 9; page 8, line 24, to page 9, line 3; page 14, line 32, to page 15, line 15 - and D2 - page 14, lines 8 to 25).

2.8 The additional feature of **claim 12** is implicitly disclosed in D1 (page 2, lines 17 to 20).

2.9 The additional feature of **claim 13** is disclosed in D1 (page 2, lines 17 to 20).

2.10 The additional feature of **claim 14** refers to an obvious alternative for the person skilled in the art.

2.11 The additional features of **claim 15** are disclosed in D1 (see page 7, lines 17 to 19, and diagram flows of figs. 2A and 2C)

2.12 The additional features of **claim 16** are disclosed in D1 (page 7, lines 17 to 19).

2.13 At the present, it seems that the subject-matter of **claim 17**, amended such as to overcome the clarity objections raised in sections 1.1 and 1.3 above, could be considered to be novel and inventive within the meaning of Articles 33(2) and 33(3) PCT.

The subject-matter of a hypothetical claim 17 amended according to the discussion of section 1.3 above would differ from D1 in that a lens power is specified that corresponds to the power measured on the lensmeter for a lens adapted to provide the desired correction to the wearer's eye when placed at the expected position with respect to the wearer's eye.

The problem to be solved is that of how to prevent confusions between optician and manufacturer with regard to the actual power of the ordered ophthalmic lens.

The most usual solution to tackle this problem is to deliver the manufactured

lens to the optician along with an information sheet or label that contains the expected power to be measured on a lensmeter. Other alternative known from the prior art is the use of special lensmeters that enable the optician to measure the power of the manufactured ophthalmic lens in a spatial arrangement corresponding to the relative position of the lens with respect to the eye (see pars. [0001] to [0005] and figures 2 to 7 of D4). However, no document of the prior art discloses or suggests a step previous to the ordering of the lens to the manufacturer, wherein the optician can calculate in advance the lens power that would correspond to the power measured on the lensmeter for a lens adapted to provide the desired correction to the wearer's eye when placed at the expected position with respect to the wearer's eye.

3 Remark

Strictly interpreted, **claim 1** relates to a mental act since it can be, at least in principle, carried out manually without any technical support and since its result is a numerical value (a refractive power) rather than a concrete technical object. Its subject-matter can therefore be considered to fall under the exclusions listed in Rule 39.1(iii) PCT.

An allowable claim should be directed to a computer-implemented method of determining a refractive power value characterising an ophthalmic lens (see, for instance, pages 4 and 8 of the description).