

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
20 January 2005 (20.01.2005)

PCT

(10) International Publication Number
WO 2005/006034 A3

(51) International Patent Classification⁷: **G02B 5/30**,
G02F 1/1337, G02C 7/10

(21) International Application Number:
PCT/US2004/016504

(22) International Filing Date: 26 May 2004 (26.05.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/484,100 1 July 2003 (01.07.2003) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

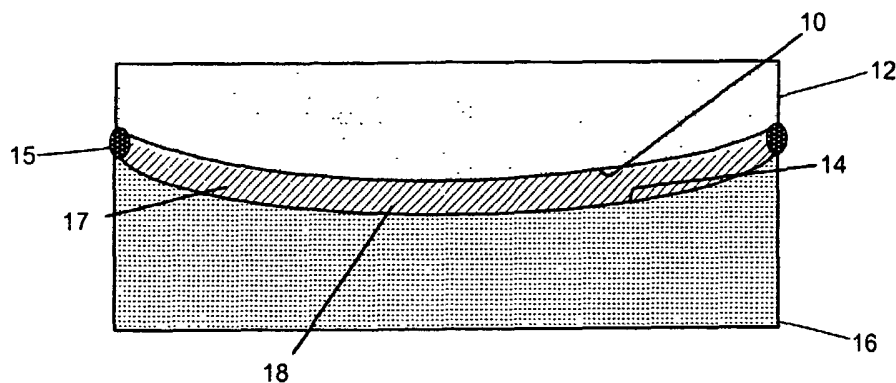
Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
6 May 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ALIGNMENT FACILITIES FOR OPTICAL DYES



(57) Abstract: Various non-limiting embodiments disclosed herein provide methods of making alignment facilities for optical dyes connected to an optical substrate. For example, one non-limiting embodiment provides a method of making an alignment facility for an optical dye connected to at least a portion of an optical substrate, such as an ophthalmic substrate, by forming at least one at least partial coating comprising an at least partially ordered liquid crystal material on at least a portion of the substrate. Other non-limiting embodiments related to optical elements, such as but not limited to ophthalmic elements, comprising an alignment facility for an optical dye. Still other non-limiting embodiments provide alignment facilities for optical dyes comprising coatings or sheets of an at least partially ordered liquid crystal material.

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US2004/016504

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G02B5/30 G02F1/1337 G02C7/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G02B G02F G02C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 772 069 A (ROLIC AG) 7 May 1997 (1997-05-07)	1,23,24
Y	page 3, line 3 - page 4, line 5; figure 2 & US 5 903 330 A (SCHADT MARTIN ET AL) 11 May 1999 (1999-05-11)	2-22
X	EP 0 488 164 A (HITACHI LTD) 3 June 1992 (1992-06-03)	1,23,24
Y	page 8, line 7 - line 46; figures 1,3-6	2-22
Y	US 4 190 330 A (BERREMAN DWIGHT W) 26 February 1980 (1980-02-26) column 2, line 39 - column 3, line 20; figures 1,2	1-24
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Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

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Date of the actual completion of the international search

1 December 2004

Date of mailing of the international search report

18. 03. 2005

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INTERNATIONAL SEARCH REPORT

International Application No PCT/US2004/016504

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 03/032066 A (VISION LLC E) 17 April 2003 (2003-04-17) page 4, line 1 - page 5, line 31; figures 1-3	1-24
Y	----- US 5 943 104 A (DOROSKI DAVID ET AL) 24 August 1999 (1999-08-24) column 7, line 17 - line 65 -----	1-22

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2004/016504

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-24

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1- 24

alignment facility formed by at least 2 separate coatings each coating comprising a liquid crystal material, the liquid crystal materials having parallel orientation.

2. claims: 25-32, 56-79, 80-87

alignment facility comprising a single coating comprising a liquid crystal material, the coating having a particular orientation and thickness

3. claims: 33-49, 88-101

alignment facility comprising one single coating formed by two separate phases comprising liquid crystal materials one phase being distributed within the other phase.

4. claims: 50-55, 102-106

Alignment facility with one single coating comprising an interpenetrating polymer network incorporating a polymerizable composition and a liquid crystal material.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2004/016504

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