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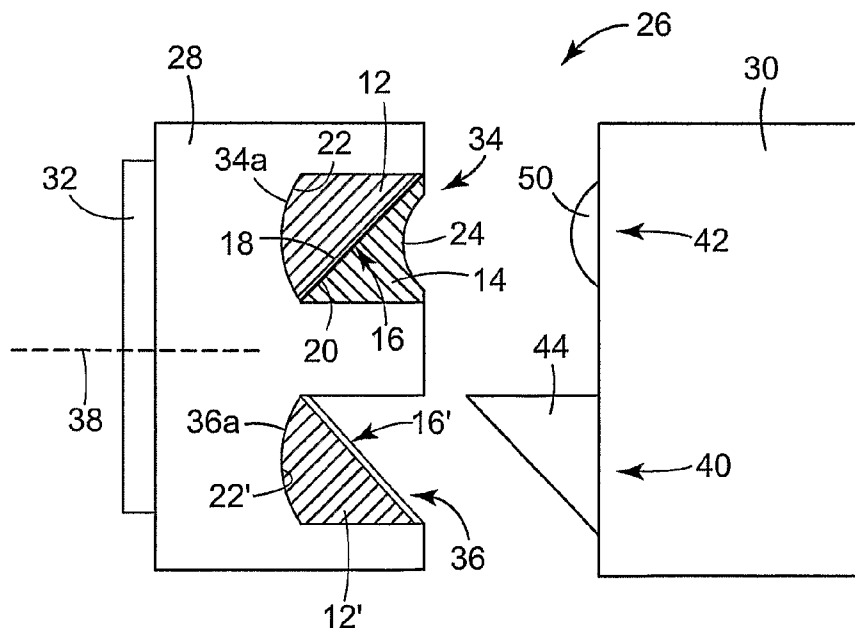
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KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT,
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GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: METHOD FOR MAKING POLARIZING BEAM SPLITTERS



(57) Abstract: The present disclosure is directed to methods of making polarizing beam splitters. An exemplary method includes supporting a polarizing film within a mold, where the polarizing film has a first surface and a second surface, injecting a polymeric material into the mold adjacent the first surface of the polarizing film, solidifying the first polymeric material to form a first prism, and securing a second prism to the second surface of the polarizing film. Another exemplary method includes injection molding a component of the polarizing beam splitter including a first polymeric material and heat treating the first component up to a temperature that does not exceed about 20°C below a glass transition temperature of the first polymeric material.

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Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

- *with international search report*

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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.

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2006/028584

A. CLASSIFICATION OF SUBJECT MATTER

INV. B29D11/00

ADD. B29C45/14 G02B27/28 B29C71/02

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)

B29D B29C G02B

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)

EP0-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 609 795 B2 (WEBER MICHAEL F [US] ET AL) 26 August 2003 (2003-08-26) cited in the application paragraphs [0092], [0093]	1,2,7,8
A	-----	16
X	US 6 719 426 B2 (MAGARILL SIMON [US] ET AL) 13 April 2004 (2004-04-13) cited in the application figure 2	1,2,7,8
A	-----	16
A	US 5 579 138 A (SANNOHE SHINYA [JP] ET AL) 26 November 1996 (1996-11-26) column 8, line 30 - line 66	1
A	-----	16
A	US 6 396 631 B1 (OUDERKIRK ANDREW J [US]) 28 May 2002 (2002-05-28)	16



Further documents are listed in the continuation of Box C.



See patent family 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

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

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.

& document member of the same patent family

Date of the actual completion of the international search

6 February 2007

Date of mailing of the international search report

14/02/2007

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2006/028584

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.:

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: 1-15

A method of making a polarizing beam splitter by injecting a polymeric material on a polarizing film and solidifying the material to form a first prism.

2. claims: 16-21

A method of making a polarizing beam splitter by heat treating a first component up to a temperature that does not exceed about 20°C below a glass transition temperature of a first polymeric material.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2006/028584

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US 6609795	B2	26-08-2003	AT 338285 T 15-09-2006
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