Title: APPARATUS FORMING LATERALLY LIGHT EMITTING CABLE

Abstract: An apparatus (30) is provided for forming a fiber optic cable (C) having a plurality of micro-bends (B) in a relatively uniform pattern in each of a plurality of plastic fiber optic strands (S) thereof to thereby increase the amount of light laterally and uniformly transmitted from the fiber optic cable (C). The apparatus preferably includes a supply having a plurality of plastic fiber optic strands (S), a micro-bend former (50) positioned downstream from the supply and positioned to individually receive each of the plurality of plastic fiber optic strands (S) in a spaced apart relation for forming a plurality of micro-bends (B) in a relatively uniform pattern in each of the plurality of strands (S), and a strand guide positioned downstream from the micro-bend former (50) and positioned to receive each of the plurality of micro-bend strands for guiding the plurality of spaced-apart, micro-bend strands into an abuttingly contacting relation.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) G02B 6/44, 6/44
US CL 362/554; 385/100, 115, 901
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)

U.S. : 362/554; 385/100, 115, 901; 385/100, 115; 901; 242/920; 57/314, 1R

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 practicable, search terms used)

EAST. Searched terms: micro bend, plastic fiber, optical fibers, and strands.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category*</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>US 5,416,875 A (KEPLINGER ET AL) 16 MAY 1995 (16/05/1995), see entire document.</td>
<td>11, 21-33 and 43-46</td>
</tr>
<tr>
<td>A</td>
<td>US 5,333,228 A (KINGSTONE) 26 JULY 19994 (26/07/1994), see entire document.</td>
<td>1-46</td>
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<tr>
<td>A</td>
<td>US 5,617,497 A (KINGSTONE) 01 APRIL 1997 (01/04/1997), see entire document.</td>
<td>1-46</td>
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<td>A</td>
<td>US 5,617,496 A (KINGSTONE) 01 APRIL 1997 (01/04/1997), see entire document.</td>
<td>1-46</td>
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</tbody>
</table>

Further documents are listed in the continuation of Box C. See patent family annex.

Date of the actual completion of the international search 13 SEPTEMBER 2001

Date of mailing of the international search report 10 OCT 2001

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