Title: METHOD AND SYSTEM FOR DETECTING THE POSITION OF AN EDGE OF A WEB

Abstract: A method and system for determining the lateral position of an edge of a web are disclosed. The system includes an array of light transmitting elements (20) and a corresponding array of lenses and an array of light receiving elements (30) and a corresponding array of lenses. The light transmitting elements (20) are each paired with a light receiving element (30) and the light transmitting elements (20) each transmit a beam of light energy towards the corresponding receiving element (30). The beams of light can be occluded by a web (60) passing between the transmitting elements (20) and the receiving elements (30), thereby reducing the light received by the receiving elements (30). The receiving elements (30) can generate a signal that is proportional to the amount of light received, and a controller can be used to determine the lateral position of an edge of the web in response to the signals generated by the receivers. A compensation light beam can be employed to enable the controller to compensate for several factors that can affect measurement accuracy.
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

A. CLASSIFICATION OF SUBJECT MATTER

IPCI(7) : G01N 21/86; G01V 8/00
US CI : 250/559.36

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. : 250/559.36, 559.12, 559.13, 559.15; 356/635-638

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

NONE

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

NONE

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>
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<tr>
<td>Y</td>
<td>US 4,110,927 A (ISHERWOOD) 29 August 1978 (29.08.1978), col. 2, lines 20-23</td>
<td>8, 32, 65</td>
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Further documents are listed in the continuation of Box C. See patent family annex.

Date of the actual completion of the international search

02 March 2005 (02.03.2005)

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
Facsimile No. (703) 305-3230

Date of mailing of the international search report

01 JUL 2005

Authorized officer

Dave Porta

Telephone No. 571-272-1550

Form PCT/ISA/210 (second sheet) (January 2004)
Continuation of B. FIELDS SEARCHED Item 3:
USPTO EAST Database
search terms: lens$, web, sheet, paper, stagger$3, alternat$3, edge, compensat$3