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- (72) Inventor; and
- (71) Applicant : COSTER, Leonard [AU/US]; 9021 La Tuna Canyon Rd, Sun Valley, California 91352 (US).
- (74) Agents: WORRALL, Timothy, A. et al.; 1400 Wewatta Street, Suite 400, Denver, Colorado 80202 (US).
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**Declarations under Rule 4.17:**

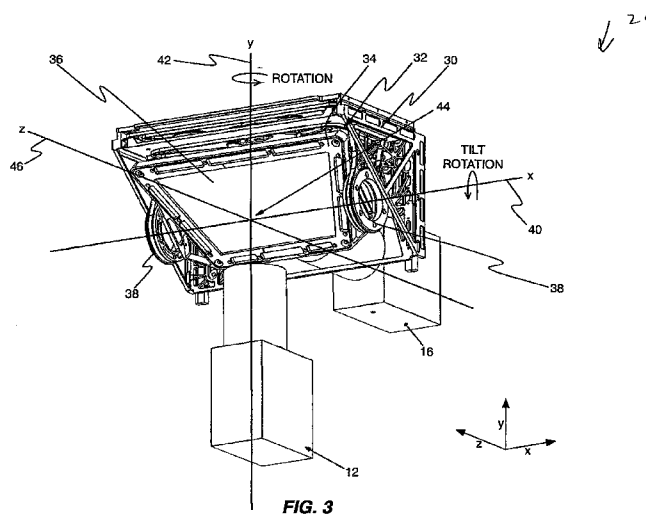
- as to the identity of the inventor (Rule 4.17(i))
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

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(54) Title: METHOD AND APPARATUS FOR MULTIPLE CAMERA ALIGNMENT AND USE



(57) Abstract: A camera rig system is provided for 3D stereo photography. The system includes a first camera mount configured to removably hold a first camera module having a first optical axis being oriented horizontally. The system also includes a second camera mount configured to removably hold a second camera module having a second optical axis being oriented vertically and orthogonal to the first optical axis. The system further includes a mirror assembly configured to receive an incoming light and transmit a first portion of the incoming light to the first camera module and reflect a second portion of the incoming light to the second camera module. The mirror assembly has a first rotational axis, and the mirror assembly independently controls a rotational movement around the rotating axis and a linear movement along at least one of the first optical axis and the second optical axis.



## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 12/32798

A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - G03B 35/00 (2012.01) USPC - 396/325 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) USPC: 396/325		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched 396/325; 348/47; 352/59, 60; 312/223.1; 359/462, 464, 465; IPC: G03B 35/00, 35/08 (Search Term Limited)		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) USPTO, DIALOG, Google Patents, WIPO PatentScope; Thompson Innovation: Keywords: stereoscopic, 3D, camera, mirror, splitter, 45, tilt, rotational, pivot, vertical, parallax, horizontal, align, photo, interocular, IOD, X, Y, Z, linear, longitudinal, 3 degrees freedom.		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X — Y	US 2,153,892 A (JACKMAN et al.) 11 Apr 1939 (11.04.1939). Beam splitter mirror rotated about a vertical axis and moved longitudinally. Pgs. 3, ln. 65 to Pg. 4, ln. 26. Figs. 6, 10-11.	1-7 and 10-22 — 8-9
Y	US 3,990,087 A (Marks et al.) 02 Nov 1976 (02.11.1976). See Fig. 5, and col. 5, ln. 5-25, and col. 5, ln. 50 to col. 6, ln. 40.	8-9
X	US 2,838,975 A (Laube et al.) 17 Jun 1958 (17.06.1958). Mirror slidable mounted parallel to one camera, and pivotally mounted horizontal and vertically. See col. 3, lines 1-30, and Figs. 16, 19, 22.	1, 10, 16
A	US 2,916,962 A (Spottiswoode et al.) 15 Dec 1959 (15.12.1959). See Fig. 1.	1-22
A	US 2,83,8975 A (Laube et al.) 17 Jun 1958 (17.06.1958). See col. 3, lines 1-30, and Figs. 16, 19, 22.	1-22
A	US 2630737 A (Ramsdell et al.) 10 Mar 1953 (10.03.1953). Mirror adjustment, Fig. 3.	1-22
A	US 2007/0140682 A1 (Butler-Smith et al.) 21 Jun 2007 (21.06.2007). Trapezoidal beam splitter mirror.	1-22
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/>		
* Special categories of cited documents:		
"A"	document defining the general state of the art which is not considered to be of particular relevance	"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
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"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)	"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
"O"	document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed	
Date of the actual completion of the international search 29 Jun 2012 (29.06.2012)	Date of mailing of the international search report <b>23 JUL 2012</b>	
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. 571-273-3201	Authorized officer: Lee W. Young  PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774	

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y/P	US 7,948,515 B1 (Hines) 24 May 2011 (24.05.2011), Abstract	1-22
Y/P	US 2011/0249963 A1 (Cramer et al.) 13 Oct 2011 (13.10.2011). See para. [0027-0032].	1-22
Y/P	US 7,970,276 B1 (Routhier) 28 Jun 2011 (28.06.2011). See Fig. 2 and 3A	1-22