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Shawn, J. [US/US]; 1223 E. Platte Avenue, Colorado Springs, CO 80909 (US).

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(74) Agent: WILSON, Jeffrey, L.; Jenkins & Wilson, P.A., Suite 1400 University Tower, 3100 Tower Boulevard, Durham, NC 27707 (US).

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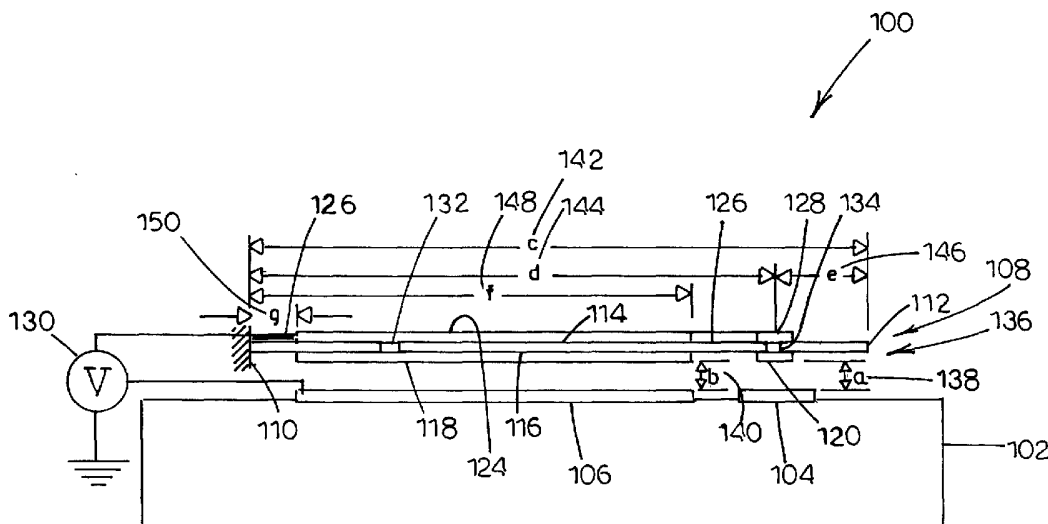
(71) Applicant (for all designated States except US): CONVENTOR, INCORPORATED [US/US]; 4001 Weston Parkway, Suite 200, Cary, NC 27513 (US).

(72) Inventor; and
(75) Inventor/Applicant (for US only): CUNNINGHAM,

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[Continued on next page]

(54) Title: ELECTROTHERMAL SELF-LATCHING MEMS SWITCH AND METHOD



(57) Abstract: Electrothermal Self-Latching MEMS Switch and Method. According to one embodiment, a microscale switch (100) having a movable microcomponent (108) is provided and includes a substrate (102) having a stationary contact (104). The switch (100) can also include a structural layer (112) having a movable contact (108) positioned for contacting the stationary contact (104) when the structural layer (112) moves toward the substrate (102). Electrothermal latch (126) attached to the structural layer (112) and having electrical communication (114, 116) with the movable contact (108) to provide current flow between the electrothermal latch (126) and the stationary contact (104) when the movable contact (108) contacts the stationary contact (104) for maintaining the movable contact (108) in contact with the stationary contact (104).



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<p>B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) U.S. : 348/22, 23, 24, 30, 106, 108; 257/415, 418, 419</p>																	
<p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched NONE</p>																	
<p>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) USPTO APS EAST search terms: micro electromechanical, electrothermal, stationary contact layer, movable contact layer</p>																	
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <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>Y,P</td> <td>US 6,316,278 B1 (JACOBSEN et al) 13 November 2001 (13.11.2001), see entire document.</td> <td>1-28</td> </tr> <tr> <td>Y</td> <td>US 5,824,186 A (SMITH et al) 20 October 1998 (20.10.1998), see entire document.</td> <td>1-28</td> </tr> <tr> <td>A</td> <td>US 5,796,152 A (CARR et al) 18 August 1998 (18.08.1998), see entire document.</td> <td>1-28</td> </tr> <tr> <td>A,P</td> <td>US 6,324,748 B1 (DHULER et al) 04 December 2001 (04.12.2001), figures 5A-5C.</td> <td>1-28</td> </tr> </tbody> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	Y,P	US 6,316,278 B1 (JACOBSEN et al) 13 November 2001 (13.11.2001), see entire document.	1-28	Y	US 5,824,186 A (SMITH et al) 20 October 1998 (20.10.1998), see entire document.	1-28	A	US 5,796,152 A (CARR et al) 18 August 1998 (18.08.1998), see entire document.	1-28	A,P	US 6,324,748 B1 (DHULER et al) 04 December 2001 (04.12.2001), figures 5A-5C.	1-28
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<p>Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230</p>		<p>Authorized officer PHUC T. DANG Telephone No. (703) 305-1080</p> <p><i>Phuc T. Dang</i></p>															