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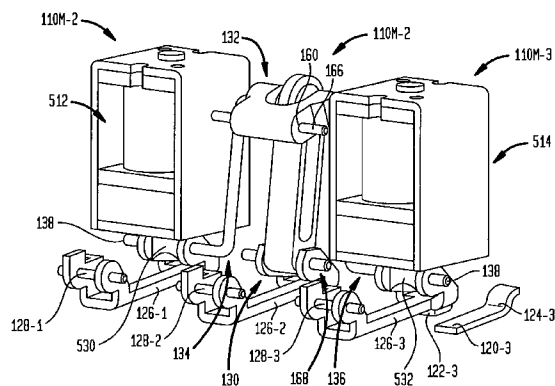
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(54) Title: TIE BAR FOR THREE POLE SWITCHING DEVICE



(57) Abstract: A multipole switching device selectively switches electrical power from an electrical power source to a load circuit. A first control device (110M-1) comprises a housing mountable in a panel, an electromechanical actuator in the housing including a movable plunger, and an electrical switch in the housing operated by the plunger. A second control device (110M-2) comprises a housing mountable in a panel, adjacent the first control device, a mechanical actuator in the housing including a movable link, and an electrical switch in the housing operated by the movable link. A third control device (110M-3) comprises a housing mountable in a panel, adjacent the second control device, an electromechanical actuator in the housing including a movable plunger, and an electrical switch in the housing operated by the plunger. A tie linkage (130, 132, 134, 136) mechanically ties the first control device plunger and the third control device plunger to the movable link.



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**INTERNATIONAL SEARCH REPORT**

International application No  
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**A. CLASSIFICATION OF SUBJECT MATTER**  
INV. H01H9/26

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)  
**H01H**

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)

**EPO-Internal**

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3 145 281 A (INGWERSEN RICHARD C) 18 August 1964 (1964-08-18) column 2, lines 12-17 -----	1-18
A	US 4 110 719 A (KIRKUP JOSEPH F) 29 August 1978 (1978-08-29) column 1, lines 15-24 -----	1-18

Further documents are listed in the continuation of Box C.

See patent family annex.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 3145281	A	18-08-1964	DE	1214769 B	21-04-1966
			GB	984301 A	24-02-1965
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US 4110719	A	29-08-1978	DE	2804647 A1	19-10-1978
			FR	2387505 A1	10-11-1978
			GB	1557510 A	12-12-1979
			JP	53127685 A	08-11-1978
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