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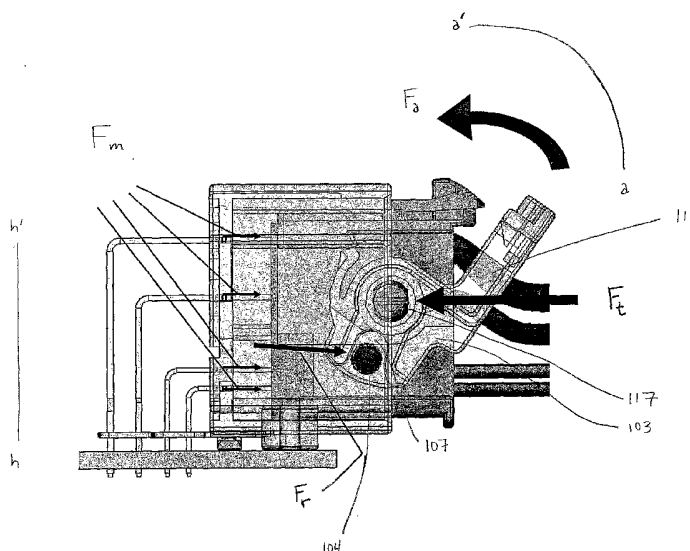
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(54) Title: LEVER ACTION MECHANICAL ASSIST CONNECTOR



(57) Abstract: A lever-type electrical connector assembly employs a pivoting lever arm to assist in securely mating and un-mating connector halves with reduced connection mating forces between the halves. The assembly employs a housing with a boss pin and a connector with a corresponding cam groove. The connector includes a lever arm with which to direct the necessary mating forces. The lever arm engages the boss pin in the cam groove based upon a stroke, and the boss pin travels through the center point of rotation of the cam groove. The present invention also provides a lever-lock mechanism to securely prepare the lever arm connector in a pre-lock position. The lever lock mechanism is then automatically deflected by the base housing to enable free rotation. Once the lever arm is fully rotated and the connector halves are fully mated, a connector lock mechanism secures the connection.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
 IPC: **H01R 13/62(2006.01)**

USPC: 439/157
 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. : 439/157

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

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,174,785 A (ENDO et al) 29 December 1992 (29.12.1992), Figures 12b-12d.	1-3, 8, 9, 14
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Y		13
X	US 6,655,971 B2 (MAEGAWA) 02 December 2003 (02.12.2003), Figures 2-3.	1, 4-7, 10-12
Y	US 5,344,194 A (HATAGISHI et al) 06 September 1994 (06.09.1994), see entire document.	13

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

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