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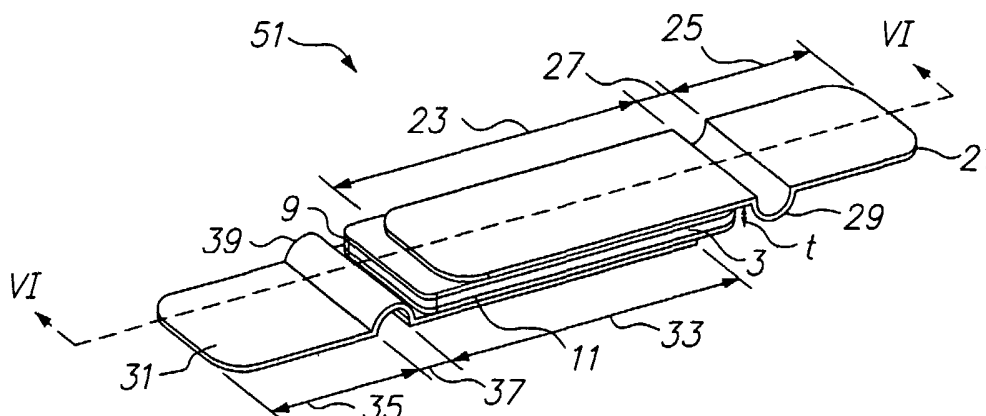
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(54) Title: CIRCUIT PROTECTION DEVICE



(57) Abstract: A circuit protection device (51) suitable for welding to a battery terminal (45) or other substrate without adverse effects caused by weld splatter. The device contains a laminar PTC resistive element (3), e.g. made from a conductive polymer composition sandwiched between first and second electrodes (9, 11). A first electrical lead (21) has a first attachment portion (23) having an attachment surface (24) which is attached to the first electrode, a first connection portion (25) which can be connected to an electrical circuit and is spaced away from the PTC element, and a first barrier portion (27). The first barrier portion is positioned on the first attachment and first connection portions and extends toward the second electrode. During resistance welding, the barrier portion prevents weld splatter from contacting the PTC resistive element.



WO 03/015108 A3

INTERNATIONAL SEARCH REPORT

Internati application No
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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01C1/14 H01C7/02

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)
IPC 7 H01C H01M H02H

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, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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A	column 10, line 50 - line 64; figures 7-9	12
X	US 5 777 541 A (VEKEMAN GUY O A) 7 July 1998 (1998-07-07)	1-9, 11
A	figures 2-4	10, 12
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X	US 6 114 942 A (FUKUYAMA SHOZO ET AL) 5 September 2000 (2000-09-05) cited in the application figure 1	1, 3, 5, 7-9, 12
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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
E earlier document but published on or after the international filing date	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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	*Z* 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 6 February 2003	Date of mailing of the international search report 14/02/2003
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Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Kirkwood, J
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