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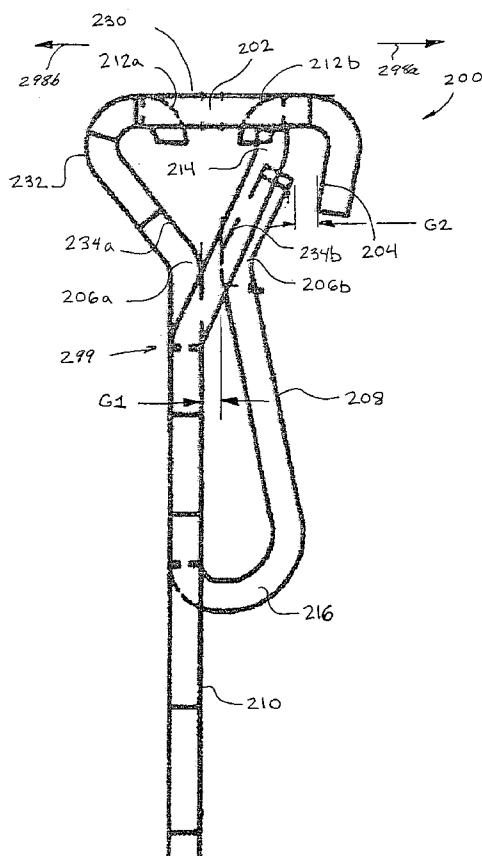
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[Continued on next page]

(54) Title: ELECTRONIC COMPONENT SOCKET AND METHODS FOR MAKING AND USING THE SAME



(57) Abstract: A socket or clip adapted to provide an interconnect between an electronic component, such as an automotive blade fuse, and a printed circuit board or other device. The clip comprises a substantially unitary structure for attaching the electronic component to the printed circuit board substrate. In one embodiment, the clip also comprises a closed-entry structure receiving element to receive the electronic component; a terminating element for interfacing the clip to the printed circuit board; a spring clip element for receiving terminations from said electronic component; and an overstress feature for preventing the spring clip element from becoming overstressed.



ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL,
NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG,
CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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27 November 2008

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 08/02571

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - H01R 13/64 (2008.04)

USPC - 439/250

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 - 439/250

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

USPC - 439/166,250, \$

Search Terms Below

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PubWEST (USPT, PGPB, EPAB, JPAB); google.com

Search Terms Used: spring, interconnect, clip, circuit, board, terminating, overstress, overstressed, fuse, automobile, blade, opening, openings, hole, holes, support, contact

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,752,244 A (Kuhl et al.) 21 June 1998 (21.06.1998) entire document, especially Abstract; col. 3, ln. 24-26; col. 3, ln. 45-50; col. 4, ln. 28-42	1-15
Y	US 6,434,012 B2 (Alden et al.) 13 August 2002 (13.08.2002) entire document, especially Abstract; col. 2, ln. 24-34; col. 2, ln. 59-64; col. 3, ln. 29-50	1-15
A	US 4,547,039 A (Caron et al.) 15 October 1985 (15.10.1985) entire document, especially Abstract	1-15
A	US 5,148,596 A (Zahn) 22 September 1992 (22.09.1992) entire document, especially Abstract	1-15

☐ Further documents are listed in the continuation of Box C.


* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"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)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"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

"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

"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

"&" document member of the same patent family

Date of the actual completion of the international search

05 August 2008 (05.08.2008)

Date of mailing of the international search report

18 AUG 2008

Name and mailing address of the ISA/US

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 08/02571

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Group I: Claims 1-15;
Group II: Claims 16-37.

---see extra sheet---

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-15

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☒ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No. .

PCT/US 08/02571

Box No. III: Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. *In order for all inventions to be examined, the appropriate additional examination fees must be paid.*

Group I: Claims 1-15: drawn to a clip apparatus with a closed entry receiving element, a terminating element, a spring clip, a feature to prevent over-stress on the clip.

Group II: Claims 16-37: drawn to a socket and a method of making and using the socket with a unitary metallic structure for receiving a fuse and a metallic plate forming a resilient arm and an over-stress prevention feature for the socket to prevent damage to a resilient arm.

The inventions listed as Groups I to II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Group II does not include the inventive concept of a clip apparatus with a closed entry receiving element, a terminating element, a spring clip, a feature to prevent over-stress on the clip, as required by Group I.

Group I does not include the inventive concept of a socket and a method of making and using the socket for receiving a fuse and a metallic plate forming a resilient arm and an over-stress prevention feature for the socket, as required by Group II.

Groups I to II therefore lack unity under PCT Rule 13 because they do not share a same or corresponding special technical feature.