

**OPINION UNDER SECTION 74A**

Patent	<b>GB 2410626</b>
Proprietor(s)	Cooper Technologies Company
Exclusive Licensee	
Requester	Hubert Stuken GmbH & Co, on 12 December 2008
Observer(s)	
Date Opinion issued	11 March 2009

**The request**

1. The comptroller has been requested to issue an opinion as to whether:
  - (a) the claims of granted patent GB2410626 (“the patent”) are novel and inventive in view of the following:
    - (i) GB1474695
    - (ii) Figure 4 of the patent, acknowledged as prior art
    - (iii) Witness statement of Hans-Hermann Stockl, Sales Manager “Electronic Division” of Hubert Stucken GmbH & Co. KG.
  - (b) amendments made during prosecution add matter beyond that as originally filed.
2. The patent was filed on 25 January 2005 with a priority date of 30 January 2004. It was granted on 2 January 2008 and remains in force. GB1474695 lies in the period defined by Section 2(2) of the Act having been published on 25 May 1977. The witness statement is accompanied by drawings of designs of fuse end caps said to be produced and sold by Stucken as early as July 1998 and May 1999, and invoices with dates of 2 July 1998 and 3 May 1999 supporting this.
3. The requester has also submitted supporting arguments that the claims lack novelty and Inventive step and that claims 1 and 11 contain added matter.

**Observations**

4. No observations in response to the request have been received.

### **Matters to be considered**

5. Section 74A provides for the procedure where the comptroller can issue, on request, non-binding opinions on questions of validity relating to novelty or inventive step, and on questions of infringement as follows:

*The proprietor of a patent or any other person may request the comptroller to issue an opinion -*

*(a) as to whether a particular act constitutes, or (if done) would constitute, an infringement of the patent;*

*(b) as to whether, or what extent, the invention in questions is not patentable because the condition in section 1(1)(a) or (b) above is not satisfied.*

6. Since opinions must relate only to questions of infringement, novelty or inventive step, I shall not consider issues relating to added matter.
7. Rule 94 which is also relevant reads:

**94.**—(1) The comptroller shall not issue an opinion if—  
(a) the request appears to him to be frivolous or vexatious; or  
(b) the question upon which the opinion is sought appears to him to have been sufficiently considered in any relevant proceedings.

The term '*relevant proceedings*' is not defined in R. 94, it is defined at the interpretation portion of Part 8 of the rules, the part that relates to Opinions. Rule 92 reads:

### **Interpretation**

**92.** In this Part—

...  
...  
...

"relevant proceedings" means proceedings (whether pending or concluded) before the comptroller, the court<sup>1</sup> or the European Patent Office.

8. GB1474695 was acknowledged as prior art in the patent. It was considered by the examiner pre-grant for novelty and inventive step but not formally cited. Furthermore, no new information or arguments have been raised by the

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<sup>1</sup> [My footnote] In S. 130(1) "court" means (a) as respects England and Wales, the High Court or any patents county court having jurisdiction by virtue of an order under section 287 of the Copyright, Designs and Patents Act 1988; (b) as respects Scotland, the Court of Session; (c) as respects Northern Ireland, the High Court in Northern Ireland; (d) as respects the Isle of Man, Her Majesty's High Court of Justice of the Isle of Man.

requester in relation to this document. I conclude that GB1474695 was sufficiently considered in pre-grant proceedings and consequently I shall not consider it in this opinion.

9. Figure 4 of the patent acknowledged as a prior art fuse end cap was also considered by the examiner pre-grant and brought to the attention of the applicant in an examination report. By the same reasoning, I shall also not consider it in this opinion.
10. The remaining evidence, namely the witness statement and supporting documentation of Hans-Hermann Stockl is new information. I accept, in the absence of any evidence to the contrary, that this statement and supporting documentation is true and accurate. I shall therefore assess the novelty and inventiveness of the claims of the patent in the light of this evidence only.

### **The Patent**

11. The patent relates to the end caps of fuses such as those commonly found in the plugs of household electrical devices. Figure 1 is an example of one type of prior art fuse with end caps 12 and figure 2 shows the end cap in more detail. As can be seen from the figures the end cap has a uniform wall thickness  $T$ . The exterior cavity or dimple 40 formed by the boss 38 may be filled with solder or metallic filler 50 to strengthen or reinforce the boss portion.

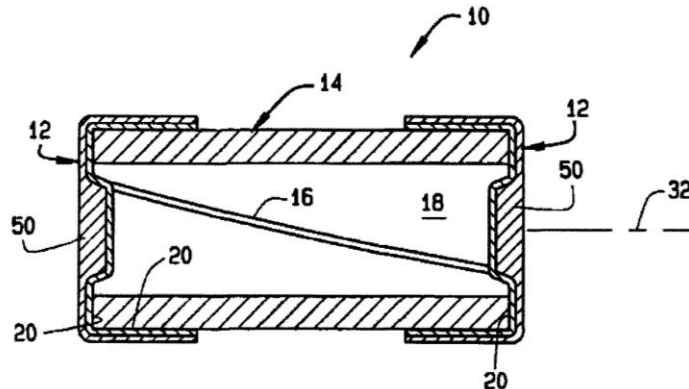


FIG. 1  
PRIOR ART

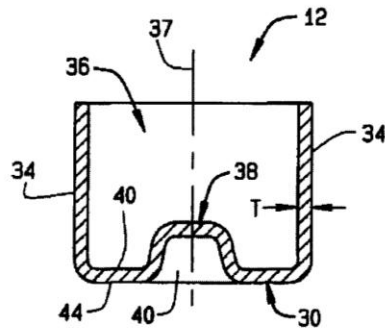


FIG. 2  
PRIOR ART

12. Figures 7, 8 and 9 of the patent show a fuse with end caps 100, an end cap 200 and an end cap 250 all in accordance with the invention and as claimed in the two independent claims 1 and 11. These end caps have a non-uniform wall thickness. The wall thicknesses  $T_2$ ,  $T_4$  and  $T_8$  of the boss portion are greater than in other areas. This reinforces the boss portion without requiring filler while making fabrication easier and more cost effective.

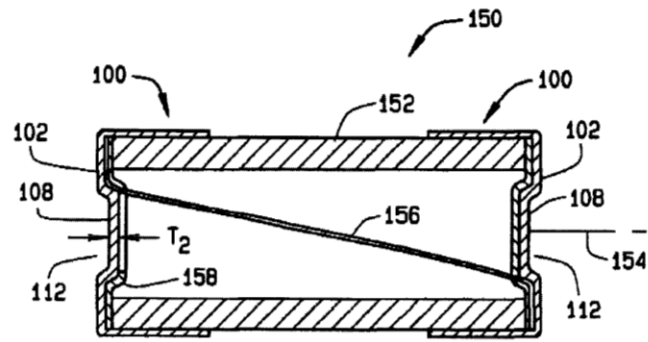


FIG. 7

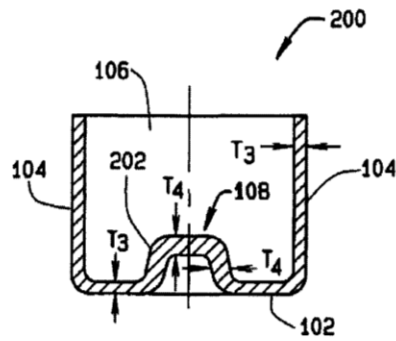


FIG. 8

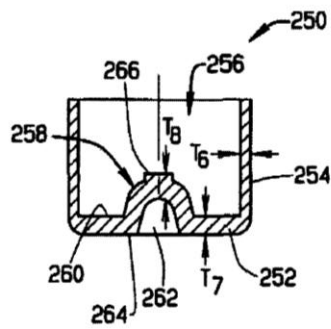


FIG. 9

13. Claim 1 reads:

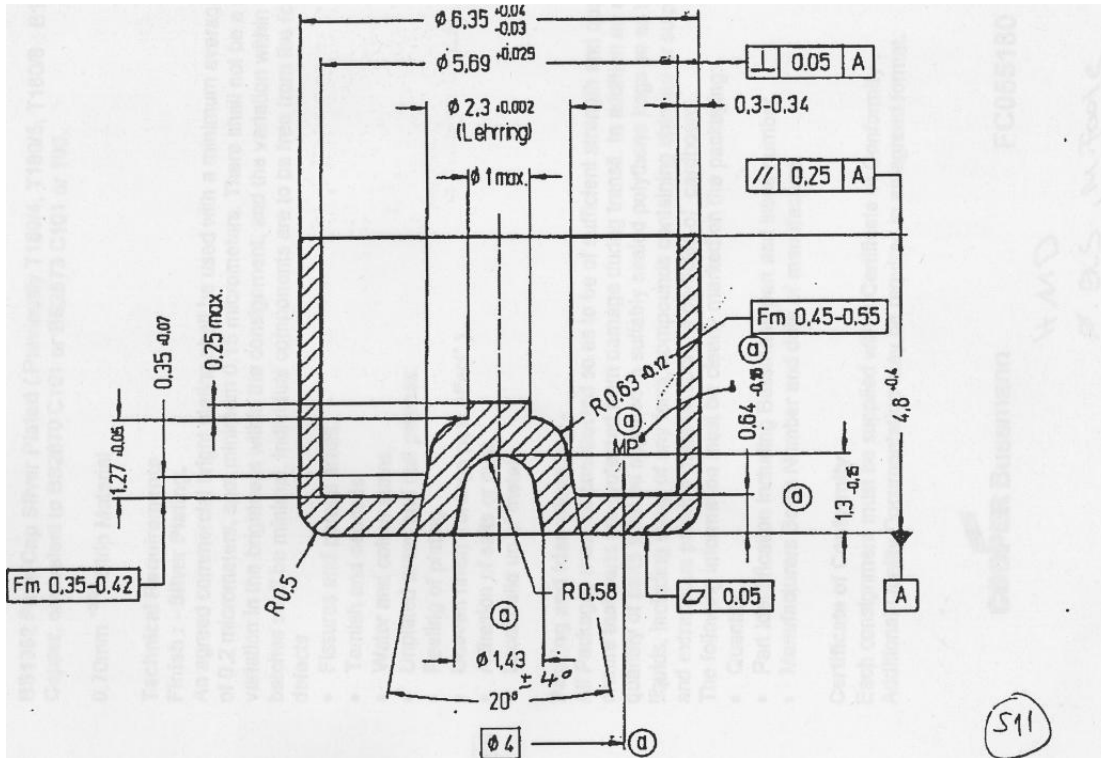
*A fuse end cap comprising: an end wall comprising a bottom surface and a boss extending away from said end wall and defining an exterior cavity in said bottom surface, at least a portion of said boss having a greater thickness than a remainder of said end wall, said exterior cavity located substantially in the centre of said end wall; and a side wall extending from the said end wall, wherein the interior side of said side wall is substantially smooth.*

14. Claim 11 reads:

*A fuse comprising: an insulative body; a fuse element extending within said body; and first and second end caps coupled to said body and electrically connected to said fuse element, at least one of said first and second end caps comprising an end wall comprising a bottom surface and a boss extending away from said end wall and defining an exterior cavity in said bottom surface, at least a portion of said boss having a greater thickness than a remainder of said end wall, said exterior cavity located substantially in the centre of said end wall; and a side wall extending from the said end wall, wherein the interior side of said side wall is substantially smooth.*

## **Novelty**

15. In order to assess novelty I must first construe the claims, following the well known authority of Hoffman LJ in *Kirin Amgen and others vs Hoescht Marion Roussel Limited and others* [2005] RPC 9. Following that authority I must put a purposive construction on the claims, interpret them in the light of the description and drawings as instructed by section 125(1) and take into account the Protocol to Article 69 of the EPC. In simple terms I must decide what a person skilled in the art would have understood the patentee to have used the language of the claims to mean.
16. In this particular case I do not think there is any difficulty in construing the claims and the requester has not raised any issues in this regard. Claims 1 and 11 are straightforward. The only possible issue lies in the feature of the side wall being substantially smooth. I shall address this point in due course.
17. As mentioned above, the witness statement comprises drawings of designs of fuse end caps which the requester argues destroy the novelty of claims 1 and 11. An example drawing is shown below:



There are two other drawings which do not differ substantially. This drawing appears nearly identical to figure 9 of the patent. It shows an end cap with an end wall comprising a bottom surface and boss extending away from the end wall and defining an exterior cavity in the bottom surface. At least a portion of the boss has a greater thickness (referenced  $T_8$  in figure 9) than a remainder of the end wall (referenced  $T_7$  in figure 9). An end projection of this drawing shows that the boss is centrally located in the end wall. Thus the exterior cavity is located substantially in the centre of the end wall. There is also a side wall extending from the end wall. Claim 1 requires the interior side of the side wall to be “substantially smooth”. There is no reference to this feature in the patent other than in the claims to help me construe this. However, in as much as the figures in the patent show a side wall with a smooth interior side, the same can be said of the drawings in the witness statement. All the features of claim 1 are present and I conclude therefore that the disclosure in the witness statement anticipates claim 1.

18. Claim 11 relates to a fuse comprising an insulative body, fuse element extending within the body and first and second end caps coupled to the body at least one of which is an end cap as defined in claim 1. The witness statement does not explicitly disclose a fuse. I shall therefore discuss claim 11 under inventive step.

### Inventive Step

19. It would be clear to the person skilled in the art that the drawings in the witness statement relate to fuse end caps designed to be used in a conventional fuse having an insulative body and a fuse element extending within that body (the type shown in figures 1 and 7 of the patent). I conclude therefore that claim 11

lacks an inventive step.

### **Dependent claims**

20. I shall now consider the novelty and inventiveness of the dependent claims. The claims dependent on claim 1 read:

*2. A fuse end cap in accordance with claim 1, wherein said side wall extending from said end wall defines an interior receptacle.*

*3. A fuse end cap in accordance with claim 1, wherein said side wall is cylindrical.*

*4. A fuse end cap in accordance with claim 1 wherein said boss is monolithically formed with said end wall.*

*5. A fuse end cap in accordance with claim 1 wherein said boss comprises a top segment and a transition segment extending from said wall, said top segment having a greater thickness than said transition segment.*

*6. A fuse end cap in accordance with claim 1 wherein said boss comprises a top segment and a transition segment, said top segment and said transition segment having a substantially equal thickness.*

*7. A fuse end cap in accordance with claim 1 wherein said end cap comprises a side wall having a first thickness, said end wall having a second thickness greater than said first thickness.*

*8. A fuse end cap in accordance with claim 1 wherein the wall thickness of said end wall is non-uniform.*

*9. A fuse end cap in accordance with claim 1, wherein said side wall is monolithically formed with said end wall.*

*10. A fuse end cap in accordance with claim 2, wherein said boss projects into said interior receptacle.*

21. The claims dependent on claim 11 read:

*12. A fuse in accordance with claim 11 wherein said boss is frusto-conical.*

*13. A fuse in accordance with claim 11 further comprising at least one conductive washer electrically connecting the fuse element to said first and second end caps.*

*14. A fuse in accordance with claim 11, wherein the wall thickness of said end wall is non-uniform.*

*15. A fuse in accordance with claim 11, wherein said side wall extending from said end wall defines an interior receptacle, said boss projecting into said*

*interior receptacle.*

*16. A fuse in accordance with claim 11, wherein said boss is monolithically formed with said end wall.*

*17. A fuse in accordance with claim 11, wherein said side wall is cylindrical.*

22. The features of claims 2, 3, 5, 7, 8 and 10 are disclosed in the witness statement drawings and therefore lack novelty.
23. The features of claims 12, 14, 15 and 17 are also disclosed in the witness statement drawings and therefore lack an inventive step.
24. Claims 4, 9 and 16 specify monolithically forming. There is no disclosure in the witness statement of how the end caps are formed but I consider that monolithically forming the boss and end wall or side wall and end wall to be a conventional means of fabrication which would be obvious to the person skilled in the art.
25. Claim 6 requires top and transition segments of the boss of equal thickness  $T_4$  shown in figure 8. This is not shown in the witness statement drawings and is therefore novel. The question therefore is “does this contribute an inventive step?” The requester has not specifically argued that it doesn’t. However it is difficult to see what extra contribution or advantage this feature has over the prior art witness statement drawings. It has the same effect and in my opinion is just a design variation which would be obvious to the skilled person. I consider that it does not contribute an inventive step.
26. Claim 13 relates to features which are acknowledged in the patent as well known in prior art fuses. Claim 13 is therefore not inventive.

## **Opinion**

27. I conclude that claims 1, 2, 3, 5, 7, 8 and 10 of GB2410626 lack novelty and remaining claims 6, 9 and 11 to 17 lack an inventive step in view of the witness statement and supporting documentation of Hans-Hermann Stockl, Sales Manager “Electronic Division” of Hubert Stucken GmbH & Co. KG

## **Application for review**

28. Under section 74B and rule 98, the proprietor may, within three months of the date of issue of this opinion, apply to the comptroller for a review of the opinion.

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## **NOTE**

*This opinion is not based on the outcome of fully litigated proceedings. Rather, it is based on whatever material the persons requesting the opinion and filing observations have chosen to put before the Office.*

Gareth Griffiths  
Examiner

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