



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 0 949 716 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
17.05.2000 Bulletin 2000/20

(51) Int Cl.7: **H01R 13/60**

(43) Date of publication A2:
13.10.1999 Bulletin 1999/41

(21) Application number: **99301592.4**

(22) Date of filing: **03.03.1999**

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE**
Designated Extension States:
AL LT LV MK RO SI

(71) Applicant: **Smiths Industries Public Limited
Company**
London, NW11 8DS (GB)

(72) Inventor: **Bagnall, Mark**
Yate, Bristol BS17 5LW (GB)

(74) Representative: **Flint, Jonathan McNeill et al**
765 Finchley Road
London NW11 8DS (GB)

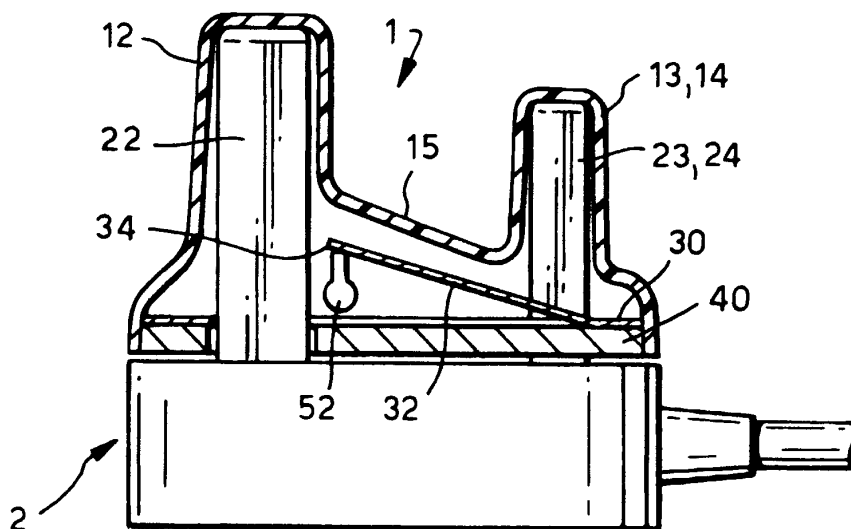
(30) Priority: **08.04.1998 GB 9807447**

(54) **Plug protectors**

(57) A protector 1 for a mains electrical plug 2 has a plastics housing 10 pushed over the pins 22 to 24 of the plug. A spring metal plate 30 extends transversely across the housing having a tongue 32 inclined forwardly at an angle of about 10 degrees. The tongue 32 engages the earth pin 22 of the plug 2 and grips the pin to

prevent it being pulled out rearwardly. The tongue 32 is released by a key 52 inserted in the protector 1 on the rear surface of the tongue and rotated to push the tongue forwardly out of engagement with the pin 22, thereby enabling the protector to be removed from the plug 2.

Fig.5.



EP 0 949 716 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 99 30 1592

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	US 4 030 795 A (NIEMANN JOHN A) 21 June 1977 (1977-06-21) * column 2, line 61 - column 4, line 21; figures 11-13 *	1-9	H01R13/60
A	US 4 060 297 A (MARSHALL BRUCE H ET AL) 29 November 1977 (1977-11-29) * abstract; figures 1,6 *	1-9	
A	DE 91 11 643 U (HANSEN , HOFFMAN) 7 November 1991 (1991-11-07) * page 4, line 11-20; figures 10-14 *	1-9	
A	US 5 176 527 A (HERBERT GILLES J) 5 January 1993 (1993-01-05) * column 3, line 67 - column 5, line 13; figure 7 *	1-9	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			H01R
Place of search	Date of completion of the search	Examiner	
THE HAGUE	23 March 2000	Waern, G	
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03.82 (P04001)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 99 30 1592

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

23-03-2000

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4030795	A	21-06-1977	NONE	
US 4060297	A	29-11-1977	US 4085991 A	25-04-1978
DE 9111643	U	07-11-1991	NONE	
US 5176527	A	05-01-1993	NONE	

EPO FORM P0469

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82