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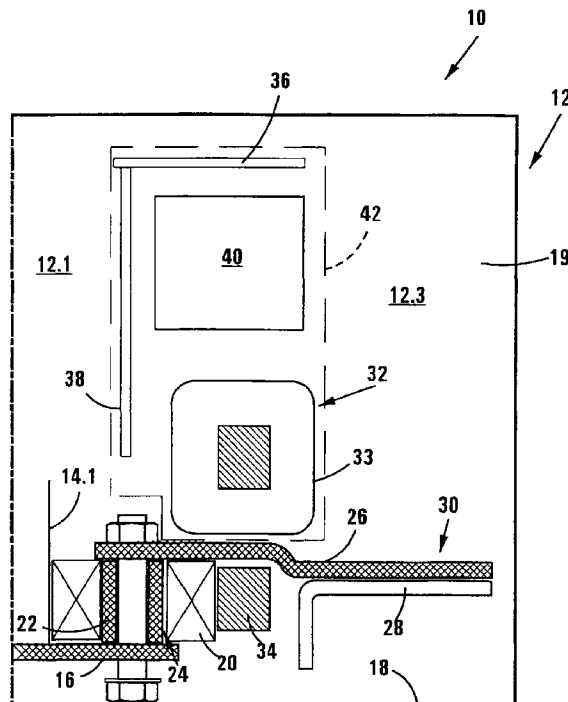
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(54) **A circuit breaker**

(57) A circuit breaker 10 includes a primary housing 12 containing an operating mechanism 14, the operating mechanism 14 including a plurality of output conductors 16. An earth leakage sensing device comprising an oval-shaped core 20 is mounted in the primary housing

12. Electrically conductive elements 22 are mounted on the output conductors 16 and project through an oval-shaped opening defined by the core 20. Current sensing circuitry and earth leakage sensing circuitry are incorporated in a secondary housing 42, the secondary housing 42 being received within the primary housing 12.



**FIG 1**



European Patent  
Office

EUROPEAN SEARCH REPORT

Application Number  
EP 98 30 7415

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	FR 2 681 725 A (TOKYO SHIBAURA ELECTRIC CO) 26 March 1993 (1993-03-26) * page 6, line 24 - page 7, line 32 * ---	1-3, 11	H01H83/14
A	WO 96 03760 A (DELTA CIRCUITS PROTECTION ;CROSIER MARK DAVID (GB)) 8 February 1996 (1996-02-08) * page 3, last paragraph - page 4, paragraph 1 * -----	6-10	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			H01H
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 23 September 1999	Examiner Libberecht, L
CATEGORY OF CITED DOCUMENTS		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	
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ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.

EP 98 30 7415

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  
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23-09-1999

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR 2681725 A	26-03-1993	JP 2809900 B	15-10-1998
		JP 5082009 A	02-04-1993
		JP 5082010 A	02-04-1993
		JP 2809904 B	15-10-1998
		JP 5089767 A	09-04-1993
		KR 9707776 B	16-05-1997
		US 5276416 A	04-01-1994
WO 9603760 A	08-02-1996	AU 2934295 A	22-02-1996
		ZA 9506113 A	06-03-1996