

⑫

EUROPEAN PATENT APPLICATION

⑰ Application number: **86101748.1**

⑤① Int. Cl.⁴: **H 01 H 33/91**

⑳ Date of filing: **12.02.86**

③① Priority: **15.02.85 JP 26286/85**

④③ Date of publication of application: **20.08.86**
Bulletin 86/34

⑧④ Designated Contracting States: **CH DE FR GB IT LI NL SE**

⑧⑧ Date of deferred publication of search
report: **22.02.89 Bulletin 89/8**

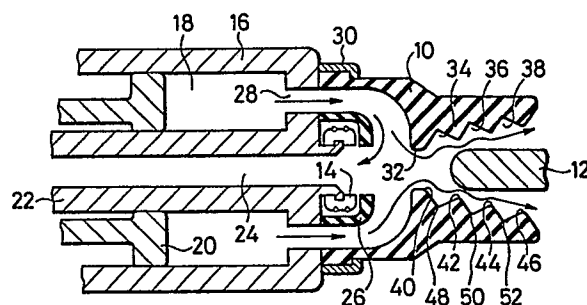
⑦① Applicant: **HITACHI, LTD., 6, Kanda Surugadai 4-chome**
Chiyoda-ku, Tokyo (JP)

⑦② Inventor: **Satou, Minoru, 31-7,**
Higashi-oonuma-cho 1-chome, Hitachi-shi
Ibaraki 316 (JP)
Inventor: **Kashimura, Katsuichi, 1-71, Ariake-cho,**
Takahagi-shi Ibaraki 318 (JP)
Inventor: **Koyanagi, Osamu, 1-5,**
Ishinazaka-cho 1-chome, Hitachi-shi Ibaraki 319-12 (JP)
Inventor: **Hirasawa, Kunio, 13-22, Mizuki-cho 2-chome,**
Hitachi-shi Ibaraki 316 (JP)

⑦④ Representative: **Patentanwälte Beetz sen. - Beetz jun.**
Timpe - Siegfried - Schmitt-Fumlan,
Steinsdorfstrasse 10, D-8000 München 22 (DE)

⑤④ **A puffer type gas blast circuit breaker.**

⑤⑦ An insulation nozzle (10) for the puffer type gas blast circuit breaker moves together with a movable arcing contact (14). A downstream divergent section of the insulation nozzle (10) includes a first annular triangular groove (34) and a second annular triangular groove (36). The first triangular groove (34) is disposed downstream to a intermediate throat section (32) of the insulation nozzle (10). The second annular triangular groove (36) is disposed downstream to the first annular triangular groove (34) and so dimensioned that an angle (P_2) of a line between the downstream edge (40) of the intermediate throat section (32) and downstream ridge (44) of the second annular triangular groove (36) is smaller than an angle (P_1) of a line between the downstream edge (40) of the intermediate throat section (32) and the downstream ridge (42) of the first annular triangular groove (34) to the axis of the insulation nozzle (10), whereby part of compressed blast gas is directed to the vicinity of the front end portion of a stationary arcing contact (12) to apply a dynamic pressure thereat until the insulation nozzle (10) leaves the stationary arcing contact (12) to thereby prevent sudden pressure drops of the compressed blast gas thereat which causes an electrical breakdown between the arcing contacts (12, 14).





European Patent
Office

EUROPEAN SEARCH REPORT

0191465

Application Number

EP 86 10 1748

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. 4)
D,A	FR-A-2 148 031 (MAGRINI) * Figure 1 * ----	1	H 01 H 33/91
A	FR-A-2 312 852 (LICENTIA) * Figure 1 * ----	1	
A	FR-A-2 417 173 (LICENTIA) * Page 1, paragraphs 4-5 * ----	1	
D,P A	EP-A-0 135 158 (HITACHI) * Whole document * -----	1	
			TECHNICAL FIELDS SEARCHED (Int. Cl. 4)
			H 01 H 33/00
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 01-12-1988	Examiner JANSSENS DE VROOM P.J.
CATEGORY OF CITED DOCUMENTS 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 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			