

Title (en)  
Pole for electrical circuit breaker with arc extinguishing chamber provided with dielectric shields

Title (de)  
Pol für elektrischen Lastschalter mit Lichtbogenlöschkammer, versehen mit dielektrischen Schirmen

Title (fr)  
Pôle pour disjoncteur électrique, muni d'une chambre d'extinction d'arc à écrans diélectriques

Publication  
**EP 1115132 A1 20010711 (FR)**

Application  
**EP 00410152 A 20001207**

Priority  
FR 0000199 A 20000107

Abstract (en)  
2232 The commutator switch has a fixed contact, a movable contact and an associated arc extinction chamber. The moulded case encloses an operating mechanism (14) linked to that of the other poles by a transverse rotatable bar (16), coupled (54) in each unit to a moving contact assembly (60/64). When closed, this is forced by springs (52) against a fixed contact (28/30) assembly. Each assembly includes main current-carrying contacts, and an arcing contact, arranged to open slightly later than the latter when the circuit-breaker opens. The arc thus struck is centrally located in front of the arc extinction chamber (24). Contacts are connected to the unit's terminals along the underside of the case (20;49;40). The fixed arcing contact (30) is integral with an arcing plate (34) covering the insulated floor of the extinction chamber. A series of regularly spaced flat metal separators, parallel to this floor, is installed between this arcing plate and a top arcing plate (96), bent down (98) at the front to be close to (99) the moving arcing contact (60) when opening is complete. Separator front edges are alternately notched to left and right of center, the plates extending laterally and rearwards to the chamber sides and back, the latter perforated to relieve gas pressure. Insulating side-wings, e.g. of PTFE, restrict the chamber entry, much more at the top than near the bottom.

Abstract (fr)  
Un pôle de disjoncteur électrique comprend un organe de contact fixe 20, un organe de contact mobile 22, et une chambre d'extinction d'arc 24, comportant deux flasques latéraux 68, des séparateurs 78, une ouverture antérieure 76 située à proximité de la zone de contact de l'organe de contact fixe, une corne d'arc inférieure 34, une corne d'arc supérieure 96 et une paire d'écrans diélectriques latéraux 100 limitant latéralement l'ouverture antérieure de la chambre. Chaque écran diélectrique latéral 100 est disposé de manière à s'interposer latéralement entre les séparateurs 78 et l'organe de contact mobile en position ouverte. La paire d'écrans diélectriques latéraux 100 est disposée de manière que la largeur de l'ouverture de la chambre soit sensiblement plus faible à proximité de la corne d'arc supérieure qu'à proximité de la corne d'arc inférieure. <IMAGE>

IPC 1-7  
**H01H 33/08**; **H01H 33/20**; **H01H 9/34**

IPC 8 full level  
**H01H 9/34** (2006.01); **H01H 9/46** (2006.01); **H01H 73/18** (2006.01)

CPC (source: EP US)  
**H01H 9/34** (2013.01 - EP US); **H01H 9/342** (2013.01 - EP US)

Citation (search report)  
• [A] FR 93908 E 19690606 - KAREL KESL [FR]  
• [A] US 4877929 A 19891031 - RIVAL MARC [FR] & EP 0306382 A1 19890308 - MERLIN GERIN [FR]  
• [DA] US 4650938 A 19870317 - GENBA YASUSHI [JP]

Cited by  
CN106783426A; CN106783423A; US7598832B2; EP1655749A1; EP3151261B1

Designated contracting state (EPC)  
DE ES GB IT

DOCDB simple family (publication)  
**EP 1115132 A1 20010711**; **EP 1115132 B1 20060809**; CN 1187774 C 20050202; CN 1304149 A 20010718; DE 60029919 D1 20060921; DE 60029919 T2 20070405; ES 2267482 T3 20070316; FR 2803686 A1 20010713; FR 2803686 B1 20020222; JP 2001216881 A 20010810; JP 4493859 B2 20100630; US 2001007318 A1 20010712; US 6348666 B2 20020219

DOCDB simple family (application)  
**EP 00410152 A 20001207**; CN 01101371 A 20010103; DE 60029919 T 20001207; ES 00410152 T 20001207; FR 0000199 A 20000107; JP 2001001874 A 20010109; US 75505001 A 20010108