

Title (en)

High-tension circuit breaker using a dielectric gas for blasting.

Title (de)

Hochspannungsschalter mit gasförmigem Dielektrikum zum Beblasen.

Title (fr)

Disjoncteur à haute tension à gaz diélectrique utilisé pour le soufflage.

Publication

EP 0359224 A1 19900321 (FR)

Application

EP 89116944 A 19890913

Priority

FR 8812115 A 19880916

Abstract (en)

[origin: JPH02121219A] PURPOSE: To perform an operation with little energy regardless of interrupting current value by providing an interrupting chamber having a blowing cylinder and a set of secondary contacts together with an interrupting chamber for placing a fixed assembly having a fixed essential contact and a fixed arc contact and a movable assembly having a movable essential contact and a movable arc contact. CONSTITUTION: When a circuit breaker is opened, a movable part is driven by a tube 6, and when the contact is broken, an arc 50 sparks between arc contacts 4B and 5A. The increase in internal pressure of a chamber 20 keeps a piston 14 laid under the action of a spring 17 making contact with a part 16 as it is. The internal pressure of the chamber 20 is contact and low, and any excessive pressure is eliminated by opening a valve 14A. A pressure reduction caused within a capacitive part 35 opens a valve 44 to keep the internal pressure of the capacitive parts 35. Thus, no air energy is lost by suction. The arc 60 sparking between contacts 30 and 31 stops the piston 15 simultaneously with the arc 50 so that it is not moved to a part 16A. Thus, a circuit breaker which required a small operating energy even in the interruption of a weak current can be provided.

Abstract (fr)

Elle a pour objet un disjoncteur caractérisé en ce que le cylindre de soufflage est délimité par un premier cylindre (5) constituant le contact d'arc mobile, un second cylindre (7) constituant le contact principal fixe et un premier piston (14) coulissant entre ledit premier et ledit second cylindre, ledit premier piston étant rappelé par un ressort (17) en butée contre une pièce (16A) solidaire de l'ensemble fixe, le cylindre (5) constituant le contact d'arc mobile et un tube (15) lié à l'ensemble fixe et coaxial au cylindre précité délimitant, de l'autre côté du piston (14) fermant le cylindre de soufflage, un volume (35, 35B) variable fermé d'un côté par ledit premier piston (14) et de l'autre par un piston annulaire d'extrémité (42) lié au dit premier cylindre (5) et glissant le long dudit tube (16), ledit volume enfermant lesdits contacts secondaires, un premier contact secondaire (30) étant solidaire dudit tube (16), le second contact secondaire (31) étant entraîné par ledit premier cylindre (5).

IPC 1-7

H01H 33/70; **H01H 33/91**

IPC 8 full level

H01H 33/70 (2006.01); **H01H 33/91** (2006.01); **H01H 33/915** (2006.01)

CPC (source: EP US)

H01H 33/7007 (2013.01 - EP US); **H01H 33/91** (2013.01 - EP US)

Citation (search report)

- [AD] FR 2610763 A1 19880812 - ALSTHOM [FR]
- [A] DE 3141324 A1 19830505 - BBC BROWN BOVERI & CIE [CH]
- [A] DE 2349263 A1 19750403 - BBC BROWN BOVERI & CIE

Cited by

EP1973133A3; FR2715499A1; EP0667633A1; US5567923A; WO9211652A1

Designated contracting state (EPC)

AT BE CH DE ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)

EP 0359224 A1 19900321; **EP 0359224 B1 19931215**; AT E98811 T1 19940115; BR 8904656 A 19900424; CA 1317619 C 19930511; CN 1018683 B 19921014; CN 1041239 A 19900411; DE 68911440 D1 19940127; DE 68911440 T2 19940407; ES 2047078 T3 19940216; FR 2639147 A1 19900518; FR 2639147 B1 19901214; JP 2837188 B2 19981214; JP H02121219 A 19900509; US 4945197 A 19900731

DOCDB simple family (application)

EP 89116944 A 19890913; AT 89116944 T 19890913; BR 8904656 A 19890915; CA 611256 A 19890913; CN 89107100 A 19890915; DE 68911440 T 19890913; ES 89116944 T 19890913; FR 8812115 A 19880916; JP 23973489 A 19890914; US 40515589 A 19890911