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(71) Applicant : **Ormazabal Ocerin, Javier**
Barrio Mendieta
E-48330 Lemona (Vizcaya) (ES)

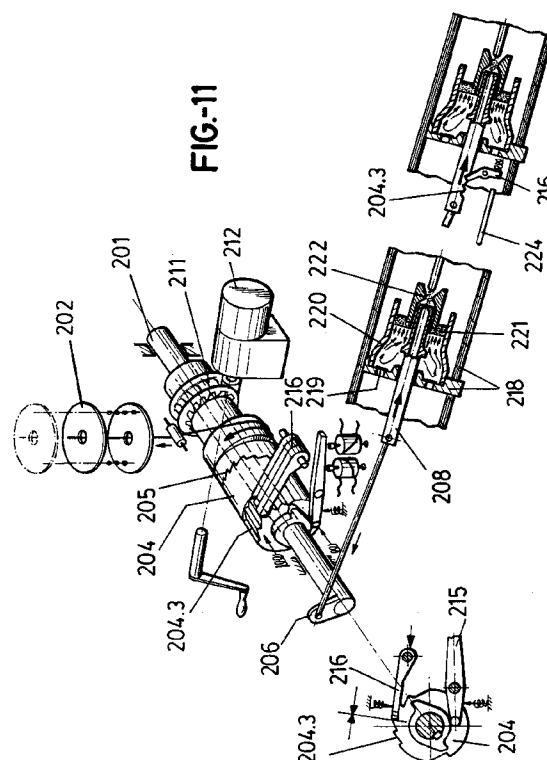
(72) Inventor : **Cancio Morales, Modesto Manuel**
c/o TURBEXA, S.A.
Gabriel Gomez, 9
ES-28044 Madrid (ES)

(74) Representative : **Carpintero Lopez, Francisco**
HERRERO & ASOCIADOS, S.L.
Alcalá, 21
E-28014 Madrid (ES)

(54) **High-voltage circuit breaker.**

(57) The present invention relates to a gas high-voltage circuit-breaker, with interrupters similar to the kind having a compression piston, acting however under a mixed arc interruption principle, either by simple compression or by self blast by thermal expansion, and in limiting cases within the action ranges of both principles, by combining the two. In the range of low-average short-circuit currents the circuit-breaker subject of the invention acts under the principle of simple compression piston. In the range of average-high short-circuit currents it acts under the principle of self blast by thermal expansion, self-locking during the disconnection operation by means of a suitable mechanism the mobile contacts of its interrupters to form a fixed volume, transitory therein until interruption of the arc, suited for the operation of this principle

This mechanism allows a sharp low energy level of the mechanism used for driving the circuit-breaker, a high interruption power and high short-circuit currents.





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EUROPEAN SEARCH REPORT

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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.5)
X	FR-A-2 554 632 (MERLIN GERIN)	1-5, 9-11, 18-20	H01H33/70
Y	* the whole document *	6-8, 12-15,17	
Y	FR-A-2 105 575 (MERLIN GERIN) * claim 1 *	6,7	
Y	DE-A-26 33 093 (SIEMENS) * claim 1 *	8	
Y	CH-A-334 440 (BROWN BOVERI) * the whole document *	12-15,17 16	
X	DE-A-23 50 890 (SPRECHER) * page 11, paragraph 2 - page 12, paragraph 1 *	1	
X	FR-A-814 518 (ALSTHOM) * page 3, line 26 - page 4, line 27; figures 5,10,11 *	1	TECHNICAL FIELDS SEARCHED (Int.Cl.5)
A	US-A-1 797 959 (LARZELERE) * the whole document *	1	H01H
A	US-A-1 441 527 (RANKIN) * the whole document *	1	
A	DE-U-75 18 639 (CALOR-EMAG) * figure 5 *	12	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 29 April 1994	Examiner Desmet, W
<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>			

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claims:
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions, namely:

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- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees has been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



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LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims 1-12 : Circuit breaker with a first "self-locking" mechanism
2. Claims 13-17 : Circuit breaker with a second "self-locking" mechanism
3. Claims 18-20 : Circuit breaker with a third pneumatically driven "self-locking" mechanism.