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File No.: T 0447/92 - 3.5.2
Application No.: 83 100 667.1
Publication No.: 0 089 463
Classification: H01H 3/30
Title of invention: Air circuit breaker

D E C I S I O N
of 7 July 1993

Applicant: MITSUBISHI DENKI KABUSHIKI KAISHA
Proprietor of the patent:
Opponent: MERLIN GERIN

Headword:

EPC: Art. 54(3)
Art. 56

Keyword: "novelty (yes)" - "inventive step (yes)" - "Features not unambiguously derivable from the drawings of an earlier European patent application."

Headnote
Catchwords



Case Number: T 0447/92 - 3.5.2

D E C I S I O N
of the Technical Board of Appeal 3.5.2
of 7 July 1993

Appellant:
(Opponent)

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Respondent:
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Decision under appeal:

Decision of the Opposition Division of the
European Patent Office dated 27 March 1993
rejecting the opposition filed against European
patent No. 0 089 463 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: W.J.L. Wheeler
Members: M.R.J. Villemin
J-C. Saisset

Summary of Facts and Submissions

I. The Appellant contests the decision of the Opposition Division rejecting the opposition to European Patent No. 0 089 463.

II. In the Statement of Grounds of Appeal the Appellant argued that the subject-matter of the granted Claim 1 was not novel in view of the document

D1= EP-A-0 088 215

which represents prior art according to Article 54(3) EPC.

It was further argued that this subject-matter did not involve an inventive step in view of a combination of the documents

D3= GB-A-756 367 and

D6= FR-A-2 021 496.

III. Claim 1 of the granted patent reads as follows:

"1. Air circuit breaker comprising a handle (11) rotatably pivoted in the housing of the circuit breaker; and energy accumulating spring (30) to accumulate pressure therein by operation of said handle; a link mechanism (47) to transmit pressure force of said energy accumulating spring (30) to the side of a contact opening and closing mechanism (69) in said housing; a direction changing lever (43) interposed between said link mechanism and said contact opening and closing mechanism; and a stopper (48) which is provided to the side of said housing to hinder the rotational

displacement in the returning direction of said direction changing lever (43), at its original position, which has been subjected to a stretching force of a contact-pressing spring (62) in said contact opening and closing mechanism (69) at the time of OFF-operation; a movable piece (49) comprising a notch (49 c) and being pivotally supported on said direction changing lever (43) so as to be in contact with said stopper (48) against the force of a return spring (50) extended between said direction changing lever and said movable piece, when said direction changing lever (43) is hindered in its rotation by said stopper (48); said notch (49c) of said movable piece (49) acting as an engaging and stopping part so as to be engaged with and stopped by the stopper (48) in an engageable and disengageable manner when said direction changing lever (43) collides with said stopper (48) and due to its inertia tends to bounce or spring back therefrom."

IV. Oral proceedings were held before the Board.

V. The Appellant argued that a comparison between Figures 12 and 13 of D1 showed that piece 49 was pivotally mounted on shaft 44. This piece 49 was undoubtedly movable with respect to lever 43 because if it were not, the provision of return spring 50 extending between 49 and 43 would be a nonsense. Since it was stated in D1 that piece 49 prevented lever 43 from spring-back motion, this piece had to cooperate in some way with obstructing shaft 48 in order to perform its duty. It was immediately apparent that the only way of obtaining this result was provided by the notch of piece 49 which engaged and was stopped by obstructing shaft 48 when lever 43 collided with this shaft. D1 disclosed enough to enable a person skilled in the art to make a circuit breaker in accordance with claim 1 of the patent

in suit. It followed that the claimed air circuit breaker was not novel in view of D1.

The anti-rebound device according to Figure 5 of D3 could be fitted with a single obstructing shaft to replace the fixed actuating member 26 and the fixed co-operating locking member 34. The subject-matter of claim 1 thus lacked an inventive step in view of a combination of this device with the air circuit breaker according to D6, which showed well known features, such as an energy accumulating spring, handle, link mechanism etc.

VI. The Respondent (Patentee) explained that the invention required relative rotational movement between movable piece 49 and direction changing lever 43. However, on examining Figures 2, 12 and 13 of D1 the skilled person would notice that in operation piece 49 and lever 43 rotated in common like one integral member. In such case no interaction between the notch of piece 49 and stopper 48, as depicted in Figures 9a to 9c of the opposed Patent could be achieved. A careful study of the Figure 2 of D1, which was the sole figure to show return spring 50, could not allow the skilled person to ascertain the exact shape of the return spring or the manner in which piece 49 and lever 43 might cooperate by means of this spring 50.

As to the alleged lack of inventive step in view of D3 and D6, the Respondent pointed out that the direction changing lever 43 could not be compared with the movable arm 13 of D3. There was a functional distinction in that cooperation between part 32 and pin 34 according to D3 occurred by inertia of piece 32 whereas in the invention notch 49c engaged stopper 48 due to the centrifugal force acting on piece 49.

VII. The Appellant requested that the decision under appeal be set aside and that the patent No. 0 089 463 be revoked. The Respondent requested that the appeal be dismissed and that the patent be maintained as granted.

Reasons for the decision

1. The appeal is admissible.

2. D1 designates the same Contracting States as the opposed Patent. The whole contents of this earlier document within the meaning of Article 54 (3) and (4) must therefore be considered as forming part of the state of the art as far as novelty is concerned.

3. As regards the alleged lack of novelty, it is necessary to investigate whether all the features of the air circuit breaker according to Claim 1 are unambiguously disclosed in D1.
 - 3.1 The parties' arguments have concentrated on the direction changing level 43, obstructing shaft 48, movable piece 49 and spring 50. Regarding these components, the following information is directly derivable from the description and the Figures 2, 12 and 13 of D1:
 - 43 denotes a direction changing lever, pivotally held on shaft 42 (page 11, lines 21, 22),

 - 44 denotes a pin rotatably linking parts 43 and 39 (page 11, lines 22-25),

 - 48 denotes an obstructing shaft against counterclockwise rotation of lever 43 (page 12, lines 3, 4),

- 49 denotes a preventive member having a notch, this member preventing lever 43 from spring-back motion (page 12, lines 4-6),

- 50 denotes a return spring for the preventive member 49 (page 12, lines 6, 7).

3.2 In addition to this, the Board agrees with the Appellant that the presence of the return spring 50 as shown in Figure 2 implies some relative rotational movement between preventive member 49 and direction changing lever 43, otherwise this spring would serve no purpose. However, no relative movement is described or shown in the drawings and it is a matter of conjecture as to the manner in which these parts cooperate.

3.3 It therefore can be concluded that D1 discloses an air circuit breaker comprising a handle (11) rotatably pivoted in the housing of the circuit breaker; and energy accumulating spring (30) to accumulate pressure therein by operation of said handle; a link mechanism (47) to transmit pressure force of said energy accumulating spring (30) to the side of a contact opening and closing mechanism (69) in said housing; a direction changing lever (43) interposed between said link mechanism and said contact opening and closing mechanism; and a stopper (48) to hinder the rotational displacement in the returning direction of said direction changing lever (43), at its original position, which has been subjected to a stretching force of a contact-pressing spring (62) in said contact opening and closing mechanism (69) at the time of OFF-operation; a movable piece (49) comprising a notch and being pivotally supported on said direction changing lever (43), a return spring (50) extending between said direction changing lever and said movable piece; said movable piece (49) preventing direction changing lever

- (43) from springing back when said direction changing lever (43) collides with said stopper (48) and due to its inertia tends to bounce therefrom.
- 3.4 D1 does not disclose when, or how far, the movable piece 49 moves or the way in which it works to prevent spring-back of lever 43. It may be that, given that in Figures 2 and 13 of D1 a notch in piece 49 is shown facing obstructing shaft 48, it would be obvious to a skilled person that the notch might cooperate with the shaft 48 in the manner defined in Claim 1 of the patent in suit, and it may be that D1 would enable him to make a circuit breaker according to that claim, but this only means that the disclosure in D1 takes him close enough to do the rest himself. It does not mean D1 takes the skilled man all the way to the present invention.
- 3.5 The Boards of Appeal have consistently applied a very restrictive interpretation of disclosure, in order to reduce the risk of self-collision. To do otherwise would undesirably undermine the exclusion of documents within the meaning of Article 54 (3) EPC being considered in deciding whether there has been an inventive step (Article 56, second sentence, EPC).
- 3.6 Summarising, the Board shares the opinion of the Opposition Division that D1 does not provide a full and unmistakable disclosure of all features of Claim 1. Therefore the air circuit breaker according to Claim 1 is novel over D1.
4. Turning now to the alleged lack of an inventive step having regard to D3 and D6, the latching device known from D3 (Figure 5) has some parts in common with that of the claimed circuit breaker, however, as pointed out by the Respondent, the member 13 on which the latch 32 is

pivotally mounted is one of the contact arms of the circuit breaker and not a direction changing lever according to the claimed circuit breaker. D6 discloses a circuit breaker having many of the features specified in Claim 1 of the patent in suit, but there is no obvious reasons for the skilled person to mount the latching device known from D3 on the direction changing lever 33 of the circuit breaker according to D6.

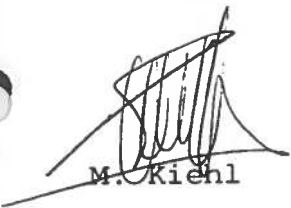
In the opinion of the Board the subject-matter of Claim 1 involves an inventive step over the prior art known from D3 and D6.

Order

For these reasons, it is decided that:

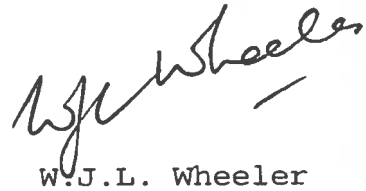
The appeal is dismissed.

The Registrar:



M. Kiehl

The Chairman:



W.J.L. Wheeler

