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D E C I S I O N
of 15 February 2005

Case Number: T 0008/03 - 3.5.2

Application Number: 97117694.6

Publication Number: 0871188

IPC: H01H 27/00

Language of the proceedings: EN

Title of invention:
Key-controlled safety switch

Patentee:
Pizzato Elettrica S.r.l.

Opponents:
Comepi S.r.l.
Euchner GmbH & Co.

Headword:

-

Relevant legal provisions:
EPC Art. 54(3), 123(2)

Keyword:
"Amendments - added subject-matter (auxiliary request - no)"
"Novelty - prior European application (main request - no,
auxiliary request - yes)"

Decisions cited:

-

Catchword:

-



Case Number: T 0008/03 - 3.5.2

D E C I S I O N
of the Technical Board of Appeal 3.5.2
of 15 February 2005

Appellant: Pizzato Elettrica S.r.l.
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
28 October 2002 concerning maintenance of
European patent No. 0871188 in amended form.

Composition of the Board:

Chairman: W. J. L. Wheeler
Members: M. Ruggiu
E. Lachacinski

Summary of Facts and Submissions

I. The proprietor of the patent filed an appeal against the interlocutory decision of the opposition division concerning the maintenance of European patent No. 0 871 188 in amended form.

II. Only one document of the state of the art was cited in the appeal proceedings:

D10: WO-A-98/25284.

The content of document D10 is state of the art under Article 54(3) EPC.

III. With a letter dated 14 January 2005, the appellant filed three requests in response to a communication from the board that was annexed to summons to attend oral proceedings.

IV. Oral proceedings before the board took place on 15 February 2005.

The appellant (patentee) requested that the decision under appeal be set aside and that the patent be maintained in amended form on the basis of request 1 filed with the letter of 14 January 2005 or alternatively on the basis of request 2 as amended during the oral proceedings.

The respondent (opponent 02) requested that the appeal be dismissed.

The other respondent (opponent 01) was not present at the oral proceedings and did not file any submission in the appeal proceedings.

V. Claim 1 of the main request (request 1) reads as follows:

"Key-controlled safety switch, comprising a case (2) with a longitudinal axis (L) which internally accommodates fixed electric contacts (4, 5) and moving electric contacts (6, 7) which are suitable to interact in order to change the state of the switch, and an actuation head (3) with a prism-shaped cap (10) which has, on opposite sides of an end edge (14), two slots (12, 13) for the insertion of a key-type actuator (15) along two mutually perpendicular directions (α , β), wherein said head (3) supports a cam (16) for the actuation of the moving contacts (6, 7) which can rotate about a substantially transverse axis (H), and locking devices for said cam (16) which comprise at least one slider (39) which can slide substantially at right angles to the rotation axis of said cam (16), said slider (39) and said cam (16) being actuatable exclusively with said key-type actuator (15), wherein the direction of the sliding of said slider (39) is substantially perpendicular to the rotation axis (H) of said cam and is inclined with respect to both of the insertion directions of the actuator, and wherein said slots (12, 13) for the insertion of said actuator are substantially equidistant from said end edge (14), characterised in that said slider (39) can slide along guiding devices (40, 42, 17) which are rigidly coupled to said cam and has a lateral stop tooth (44) which is directed outward, said guiding devices being formed on

a lateral face of said cam (16) at which said slider (39) is arranged."

Claims 2 to 10 of request 1 are dependent on claim 1.

VI. Claim 1 of the auxiliary request (request 2 as amended in the oral proceedings) reads as follows:

"Key-controlled safety switch, comprising a case (2) with a longitudinal axis (L) which internally accommodates fixed electric contacts (4, 5) and moving electric contacts (6, 7) which are suitable to interact in order to change the state of the switch, and an actuation head (3) with a prism-shaped cap (10) which has, on opposite sides of an end edge (14), two slots (12, 13) for the insertion of a key-type actuator (15) along two mutually perpendicular directions (α , β), wherein said head (3) supports a cam (16) for the actuation of the moving contacts (6, 7) which can rotate about a substantially transverse axis (H), and locking devices for said cam (16) which comprise at least one slider (39) which can slide substantially at right angles to the rotation axis of said cam (16), said slider (39) and said cam (16) being actuatable exclusively with said key-type actuator (15), wherein the direction of the sliding of said slider (39) is substantially perpendicular to the rotation axis (H) of said cam and is inclined with respect to both of the insertion directions of the actuator, and wherein said slots (12, 13) for the insertion of said actuator are substantially equidistant from said end edge (14), wherein said slider (39) can slide along guiding devices (40, 42, 17) which are rigidly coupled to said cam such that the slider rotates together with the cam

and said slider has a lateral stop tooth (44) which is directed outward, said guiding devices being formed on a lateral face of said cam (16) at which said slider (39) is arranged."

Claims 2 to 10 of request 2 are dependent on claim 1.

VII. The appellant essentially argued as follows:

Document D10 disclosed sliders 21 that were guided by devices arranged on the housing 1 of the safety switch. In particular, it could be seen from the figures of D10 that the sliders 21 remained stationary with respect to the housing 1 when the cam 9 rotated. Thus, contrary to claim 1 of request 1, the guiding devices of D10 were not rigidly coupled to the cam 9 and were not formed on a lateral face of the cam at which the slider was arranged. Recesses 17, 19 on the cam 9, which received a stop tooth 25 provided on a slider 21 of D10, did not have a guiding function but rather a locking function. Therefore, the recesses 17, 19 could not be considered as guiding devices. Recess 17 was a radial recess. Thus, the stop tooth 25, which engaged recess 17, was also directed radially, i.e. towards the rotation axis of the cam, and not laterally as in the opposed patent. Furthermore, D10 did not disclose that the stop tooth 25 was directed outward. The subject-matter of claim 1 of request 1 was therefore new with respect to the content of D10.

Claims 7 and 8 of the patent in suit mentioned rotation of the slider rigidly with the cam. The wording of claim 7 in particular indicated that a stop tooth 44 and groove 45 defined in that claim were provided in

order to guide the stop tooth during rotation of the slider rigidly with the cam. If interpreted correctly in view of the disclosure of the entire patent in suit, the term "rigidly" would be understood to refer only to the rotation relationship between the slider and the cam and not also to the sliding relationship between these two elements. The description of the patent in suit indicated that the stop tooth 44 was inserted in, and guided by, the groove 45 during the rotation of each slider 39 together with the cam 16. It could also be seen from Figures 5, 6 and 7 of the patent in suit, which showed the cam and the slider in different rotational positions, that the slider rotated together with the cam. This rotation of the slider together with the cam was determined by the guiding devices formed on the lateral face of the cam and not by the stop tooth 44 and groove 45. On the contrary, the stop tooth 44 and groove 45 constituted a locking device hindering the rotation of the cam and the slider. Therefore, it was apparent to the skilled person that the rotation of the slider together with the cam was independent of the stop tooth 44 and groove 45 and could be separated therefrom. Claim 1 of request 2, which mentioned rotation of the slider together with the cam in isolation from the stop tooth and groove thus did not contravene Article 123(2) EPC. Furthermore, it was clear that, in the switch of D10, the slider 21 did not rotate together with the cam 9, so that the subject-matter of claim 1 of request 2 was new with respect to D10.

VIII. The arguments of the respondent can be summarised as follows:

D10 disclosed a switch having in combination all the features of the pre-characterising portion of claim 1 of request 1. Furthermore, recesses 17, 19 were formed in material parts 15 integral with the cam 9 of the switch described in D10. Each slider 21 had a raised ("erhabenen") stop tooth 25 that engaged a recess 17 tightly ("formschlüssig"). Because of this tight engagement, the recess 17, which was formed on a lateral face of the cam 9 at which the slider 21 was arranged, operated to guide the slider and thus could be regarded as constituting guiding devices. As in the patent in suit, other guiding devices than the recess 17 were provided in D10. Indeed, in the switch described in D10, the movement of the slider 21 was guided both by guides formed in the housing 1 and by the recess 17, whereby this recess had both a locking and a guiding function. The fact that the stop tooth 25 was raised meant that it was directed laterally outward from the slider. The stop tooth 25 also extended radially, but this was not incompatible with the stop tooth being directed laterally and, in any case, the patent in suit did not exclude that the stop tooth could extend radially. The subject-matter of claim 1 of request 1 therefore lacked novelty with respect to the state of the art disclosed in document D10.

The original application on which the patent in suit was based always associated the rotation of the slider together with the cam to specific constructional features of the switch, in particular to two lateral supports with grooves accommodating and guiding the lateral stop tooth of each slider. Thus, it was not possible to isolate the fact that the slider rotated together with the cam from these specific

constructional features. In particular, claim 7 of the original application indicated that the specific constructional features defined therein were provided in order to guide the stop tooth during rotation of the slider rigidly with the cam. The use of the term "in order to" in original claim 7 indicated that rotation of the slider rigidly with the cam was not envisaged independently of the constructional features specified in the claim. Furthermore, the original application did not disclose the rotation of the slider together with the cam as being an essential feature of the invention. Thus, claim 1 of request 2 contravened Article 123(2) EPC because it specified the rotation of the slider together with the cam in isolation from the specific constructional features associated therewith in the original application, so that claim 1 of request 2 covered embodiments which had not been disclosed in the original application and thus extended the scope of protection provided by the patent in suit.

Reasons for the Decision

1. The appeal is admissible.
2. *Main request (request 1) of the appellant*

It is not contested that the content of document D10 is state of the art under Article 54(3) EPC. D10 discloses a key-controlled safety switch having the features specified in the pre-characterising portion of claim 1 of request 1, in particular comprising a cam 9 and locking devices for said cam 9. An oval material part 15 is formed on each of the two sides of the cam 9, in

the area of the rotation axis 11 of the cam. It is thus apparent that the oval material part 15 is rigidly coupled to the cam. Each of the two identically configured material parts 15 has a groove-like recess 17 arranged opposite and radially facing a groove 13 in relation to the rotation axis 11. A locking member 21 is provided on each side of the cam 9, each locking member 21 having an oblong-shaped opening 23 surrounding the rotation axis 11. Each locking member can slide in a single possible direction perpendicular to rotation axis 11, which direction is determined by means of guides in the switch housing. To lock the cam 9, a raised stop tooth 25 is provided on the side of the locking member 21 which faces the cam. The stop tooth 25 engages the recess 17 tightly. The recess 17, because of its tight engagement with the tooth 25, will necessarily exert some guiding action on the tooth, and thereby on the locking member 21, when the locking member 21 slides in a direction perpendicular to the rotation axis 11 of the cam 9 to retract stop tooth 25 from recess 17 and thereby unlock the cam. It appears therefore that the recess 17, which is formed on a lateral face of the cam 9 at which the locking member 21 is arranged, not only acts to lock the cam but also to guide the sliding locking member 21. The stop tooth 25 is raised with respect to a lateral face of the locking member 21 and can therefore be regarded as a lateral tooth, even if it has a substantial extension in the radial direction. The raised stop tooth 25 can also be regarded as being directed outward, at least in relation to the locking member 21. Thus, D10 discloses in combination all the features of claim 1 of request 1, so that the subject-matter of that claim cannot be considered to be new in the sense of Article 54(3) EPC.

The main request (request 1) of the appellant has therefore to be rejected.

3. *Auxiliary request (request 2) of the appellant*

- 3.1 Claim 1 of request 2 of the appellant comprises the features of claims 1, 4 and 5 of the application as originally filed on which the patent in suit is based. The claim further specifies that the guiding devices are such that the slider rotates together with the cam and that the lateral face of the cam on which the guiding devices are formed is the one at which the slider is arranged.

According to the description of the application as originally filed (see column 5, lines 18 to 20 and 35 to 39 of EP-A1-0 871 188), "the locking devices are constituted by at least one, preferably two sliders or blocks 39 which are arranged to the sides of the cam 16 ..." and "the guiding devices are constituted by two lateral ridges 40 and 41 which guide the longitudinal sides of each slider 39 and by the central hub 17 itself of the cam 16, which guides a central longitudinal opening 42 provided in most of the length of each slider 39". It is therefore apparent that the safety switch can comprise a single slider and that, in that case, the guiding devices for that slider are formed on the lateral face of the cam at which the slider is arranged.

The application as originally filed indicates further (see column 5, lines 45 to 49 of EP-A1-0 871 188) that each slider 39 has a stop tooth 44 which "is inserted in, and guided by, a corresponding groove 45 formed on

the internal faces of the lateral supports 21 and 22 of the connecting plate 23 during the rotation of each slider 39 together with the cam 16". This passage of the application describes the interaction of a stop tooth 44 and a groove 45 during the rotation of a slider 39 together with the cam 16. It is apparent to the skilled person that the rotation of each slider together with the cam is not determined by this interaction, but rather by the guiding devices "arranged to the sides of the cam" (as specified in column 5, lines 18 to 20 of EP-A1-0 871 188). Claims 7 and 8 of the application as originally filed define features provided "in order to guide said stop tooth (44) during the rotation of the slider (39) rigidly with the cam (16)", respectively "in order to lock the rotation of said slider (39) rigidly with said cam". Claims 7 and 8 thus relate to features for guiding the stop tooth during the rotation and locking the rotation of the slider and the cam; they do not imply that rotation of the slider together with the cam requires the presence of the features specified there. In the view of the board, the application as filed therefore discloses the rotation of each slider together with the cam in connection with the guiding devices arranged to the sides of the cam, but independently of the interaction of the stop tooth 44 and the groove 45. The importance given to this feature in the application as filed is irrelevant, as long as the application discloses it as part of the invention. Thus, as claim 1 of request 2 specifies that "said slider (39) can slide along guiding devices (40, 42,17) which are rigidly coupled to said cam such that the slider rotates together with the cam" and also that "said guiding devices being formed on a lateral face of said cam (16)

at which said slider (39) is arranged", its subject-matter does not extend beyond the content of the application as filed on which the patent in suit is based.

Claim 1 of request 2 comprises all the features of claim 1 as granted, thereby excluding that embodiments outside the scope of claim 1 as granted could fall within the scope of claim 1 of request 2. Thus, the patent in suit has not been amended in such a way as to extend the protection conferred.

Dependent claims 2 to 10 of request 2 correspond to dependent claims 2, 3 and 6 to 12 of the application as filed. The description of the patent in suit has been amended to acknowledge the state of the art and make the description consistent with the claims of request 2.

Therefore, the amendments made to the patent in suit in accordance with request 2 of the appellant do not contravene Article 123(2) and (3) EPC.

- 3.2 Document D10 indicates that the locking member 21 can slide in a single possible direction which is determined by guiding devices provided in the housing 1 of the switch and which is perpendicular to the rotation axis 11 of the cam 9. Furthermore, Figures 1A, 1B and 1C of D10 show that the orientation of the locking member 21 remains the same during the rotation of the cam 9. Thus, D10 does not disclose a slider which rotates together with the cam. The subject-matter of claim 1 of request 2 is therefore considered to be new in the sense of Article 54(1) EPC.

- 3.3 The board sees no reason why the subject-matter of claim 1 of request 2 would not involve an inventive step. In particular, pursuant to Article 56 EPC, D10 cannot be considered in deciding whether there has been an inventive step as it is a document within the meaning of Article 54(3) EPC. Moreover, no objection based on Article 56 EPC has been raised in the appeal. The subject-matter of claim 1 of request 2 is therefore considered as involving an inventive step in the sense of Article 56 EPC.
- 3.4 The subject-matter of claims 2 to 10 of request 2, which depend on claim 1, is thereby also to be considered as being new and involving an inventive step.
- 3.5 The patent in suit in the version of request 2 of the appellant, and the invention to which it relates, therefore meets the requirements of the EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to maintain the patent as amended in the following version:

Description

Columns 1 and 2 received during oral proceedings.
Columns 3 and 4 filed with letter of 14 January 2005.
Columns 5 and 6 of the patent specification.

Claims

Claims 1 to 3 received during oral proceedings.
Claims 4 to 10 of request 2 filed with letter of
14 January 2005.

Drawings

Figures 1 to 7 of the patent specification.

The Registrar:

The Chairman:

D. Sauter

W. J. L. Wheeler