

Publication in the Official Journal ~~Yes~~ / No

File Number: T 721/91 - 3.5.2

Application No.: 86 100 366.3

Publication No.: 0 188 258

Title of invention: A switch housing

Classification: H01H 9/02

D E C I S I O N  
of 22 June 1992

Proprietor of the patent: Aktieselskabet Laur. Knudsen  
Nordisk Electricitets Selskab

Opponent: Contactplasma S.R.L.

Headword:

EPC Article 56

Keyword: "Inventive step - yes"

Headnote



## Summary of Facts and Submissions

- I. The Appellant contests the decision of the Opposition Division rejecting the Appellant's opposition against European patent No. 0 188 258.
- II. The patent in suit has ten claims. Claim 1 is worded as follows:

"A switch housing for motor switches, load switches and the like switches, said housing being formed as an oblong substantially right-angled box, and comprising a top and a bottom member, fixed contacts and external connecting means for input and output current, movable contacts for opening and closing current paths through said fixed contacts, a reciprocative contact bridge supporting said movable contacts, and a guiding mechanism for said contact bridge for switching on and off said movable contacts, and wherein the top and bottom members (21) comprise switching sections (25, 27, 29) whereto the fixed contacts are mounted and a separate section (31) for the guiding mechanism, and wherein the switching sections (25, 27, 29) of the top member are identical to the switching sections of the bottom member, characterised in that the separate sections (31) for the guiding mechanism in the top and bottom member also are identical so that the top member and bottom member form completely identical halves (21) of the switch housing, and that all the fixed contacts are mounted on polygonal nut members or nut plates (51, 53) exposed at the outer surface of the housing and permanently secured by screws (57) onto the housing from the inside and furthermore provided with a threaded mounting hole (59) for securing by screws, and for the establishment of a both mechanical and electric connection between the fixed contacts and the replaceable external connecting means on the outside of the housing."

Claims 2 to 10 are dependent on Claim 1.

III. In the proceedings before the Opposition Division, the Appellant argued that Claim 1 was not novel and did not involve an inventive step, having regard to the following prior art documents:

D1: DE-B-12 30 892

D2: DE-B-12 58 945

D3: DE-B-24 58 870

D4: FR-A-2 021 388

D5: US-A-3 601 568

D6: US-A-4 311 891

D7: LKNES catalogue, publication No. 172 Q 1428 E, giving technical data of the switches 125-1600 A type QA, QP and QE.

IV. With the statement of grounds of appeal, the Appellant filed a further prior art document:

D8: Technical data sheet "Switches 400-630 A 660 A AC Type QA and QP" circulated by the Respondent in 1984.

The Appellant argued that the feature of a switch housing in two parts forming identical halves was known from D5 and should be included in the preamble of Claim 1. This feature and the use of polygonal nut plates were well known, as could be seen from the drawings of the switch type QA 400 N in D8. The use of polygonal nut plates secured from the inside was a mere constructional choice within the capability of the average skilled person even without any prior art. Any electrical switch required securing electrical terminals. A polygonal nut plate was a basic element of any mechanical (or electromechanical)

construction and could be found in metal toy construction kits for children known as "mechano".

- V. The Respondent pointed out that D8 did not show the inside of the housing. In D5 the housing was not formed as an oblong substantially right-angled box, there was no reciprocative contact bridge and no separate section for the guiding mechanism. Polygonal nut plates as such were known, but not in combination with the other features in Claim 1. The feature that the polygonal nut member was secured from the inside was advantageous, because it could not be loosened inadvertently by an unskilled person.
- VI. The Appellant requests that the decision of the Opposition Division be set aside and that the patent in suit be revoked in its entirety or at least limited in scope. Oral proceedings were not requested.
- VII. The Respondent requests that the appeal be dismissed.

#### Reasons for the Decision

1. The appeal is admissible.
2. The Appellant has not contested the Opposition Division's finding that the subject-matter of Claim 1 of the patent in suit (see paragraph II above) is novel. The Board sees no reason to take a different view on this point.
3. Concerning inventive step, the Board notes that none of the documents D1 to D8 discloses apparatus according to the preamble of Claim 1 of the patent in suit. Thus, it is noted that D5 does not disclose a separate section for the guiding mechanism comprised in the housing halves (80, Figures 10 and 11) forming the oblong substantially right-angled box. D7 and D8 do not disclose the internal

constructional details of the switches. D1 to D4 and D6 are clearly less relevant in this respect.

4. In the Board's view, none of the documents D1 to D8 represents a better starting point from which to consider the present invention than the prior art switches already acknowledged (albeit without reference to a document) at the start of the description of the patent in suit. This prior art is in accordance with the preamble of Claim 1.
5. Starting, then, from the prior art in accordance with the preamble of Claim 1, which, as explained in the fourth and fifth paragraphs of the description of the patent in suit, necessitated stocking different types of switches for different uses, the problem underlying the present invention is to provide a versatile switch which can be easily adapted to different uses by relatively unskilled persons, as is explained in more detail in column 2, lines 25 to 52, of the patent in suit.
6. In the opinion of the Board, this problem is indeed solved by the characterising features that all the fixed contacts are mounted on polygonal nut members or nut plates exposed at the outer surface of the housing and permanently secured by screws onto the housing from the inside (preventing inadvertent loosening by unskilled persons) and furthermore provided with a threaded mounting hole for securing by screws, and for the establishment of mechanical and electric connections between the fixed contacts and the replaceable external connecting means on the outside of the housing (making it possible to adapt the switch to a particular use without having to dismantle it). The characterising feature that the separate sections for the guiding mechanism in the top and bottom member also are identical so that the top member and bottom

member form completely identical halves of the switch housing represents a further rationalisation measure.


7. The Board has studied the cited documents D1 to D8 and finds that not a single one of them is concerned with a solution to the problem stated in paragraph 5 above. The Appellant has pointed out that some of the features of Claim 1 of the patent in suit are disclosed in D5, D6, D7 and D8, or are included in childrens' construction sets, but has not advanced any real argument as to why it would be obvious to combine these features to form the subject-matter of Claim 1 of the patent in suit. None of the cited documents discloses a fixed contact mounted on a polygonal nut member or nut plate exposed at the outer surface of a switch housing and permanently secured by a screw onto the housing from the inside.
  
8. In the result, the Board is of the opinion that the prior art cited by the Appellant does not prejudice the maintenance of the patent unamended. The appeal must therefore be dismissed.

Order

For these reasons, it is decided that:

The appeal is dismissed.

The Registrar:



Kiehl

The Chairman:



E. Persson

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