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D E C I S I O N
of 23 February 1994

Case Number: T 0978/92 - 3.2.3

Application Number: 87901139.3

Publication Number: 0294377

IPC: F24D 19/02

Language of the proceedings: EN

Title of invention:
A bracket for mounting a radiator

Patentee:
Industri AB Sigarth

Opponent:
WEMEFA Horst Christopeit GmbH

Headword:

Relevant legal norms:
EPC Art. 56

Keyword:
"Inventive step (yes)"

Decisions cited:
-

Catchword:
-



Case Number: T 0978/92 - 3.2.3

D E C I S I O N
of the Technical Board of Appeal 3.2.3
of 23 February 1994

Appellant:
(Opponent)

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Respondent:
(Proprietor of the patent)

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Decision under appeal:

Decision of the Opposition Division of the
European Patent Office dated 4 September 1992
rejecting the opposition filed against European
patent No. 0 294 377 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: C.T. Wilson
Members: J. Du Pouget De Nadaillac
W. Moser

Summary of Facts and Submissions

I. The present appeal is directed against the decision of the Opposition Division of the EPO dated 4 September 1992, rejecting the opposition filed by the Appellant (Opponent) against European patent No. 0 294 377.

II. Claim 1 of this patent reads as follows:

"Bracket for mounting a radiator (6) on a wall (1) comprising an anchorage rail (11) for fixed anchorage on the wall, said anchorage rail being provided with a first and second engagement member (9, 4, respectively) for cooperation with the radiator or an anchorage (8) mounted thereon, said first engagement member (9) being movably retained in the anchorage rail and spring-biased towards said second engagement member, characterised in that said first engagement member (9) is provided with a locking member (23) which is movable into cooperation with said anchorage rail (11) for locking said first engagement member in a position displaced from said second engagement member (4) against spring action (25), and a trigger portion (26) for releasing the locking member from the anchorage rail, said trigger portion being disposed to be actuated by the radiator (6) when the radiator cooperates with said second engagement member (4) and is moved towards its final mounting position."

III. The patent in suit was opposed on the ground that the subject-matter of at least Claims 1 and 2 of the contested patent does not imply an inventive step. Among others, the following prior art documents were cited:

D2: DE-C-2 502 808

D5: SE-B-396 648 (with its translation).

IV. The Appellant lodged the appeal on 24 October 1992 and paid the appeal fee. The Statement of Grounds of Appeal was filed on 30 December 1992 and the Appellant cited therein a prior art document considered during the examination procedure, namely:

D8: GB-A-2 148 097

V. Oral proceedings were held on 23 February 1994.

VI. The Appellant requested that the decision under appeal be set aside and that the European patent No. 294 377 be revoked. He put forward the following arguments:

In the closest prior art described by document D5, it is already known to retain in its upper position the upper engagement member of a radiator mounting bracket by means of a locking member, so that the radiator can be introduced without hindrance between the upper and lower engagement members. Then, for the mounting of the radiator, the locking member is released, permitting the spring-biased upper engagement member to grip the radiator. The subject-matter of Claim 1 in suit differs from this known bracket by the provision of a trigger for releasing the locking member, said trigger being actuated by the radiator. In other words, Claim 1 indicates only that the release of the engagement member is caused by the radiator and not by hand. According to the description of the patent in suit, the claimed subject-matter solves the problem of the access to the upper engagement member, which is contiguous to the rear face of the radiator during the mounting of the radiator. However, this problem is already tackled in documents D2 and D8 and solved by means of a spring-biased engagement member which is actuated by the radiator, when this is pivoted towards its final mounting position. In the bracket according to document

D8, the upper engagement member must before be locked in an upper position, since otherwise the radiator could not be introduced. Thus, at least this document gives the teaching to actuate a locked engagement member by means of the radiator and the person skilled in the art has only to apply this teaching to the bracket according to document D5 in order to reach the subject-matter of Claim 1. As soon as he knows that the upper engagement member must be actuated by the radiator, he knows that a trigger must be used, namely the solution of Claim 1. Claim 1 gives no other indication, and particularly no structural feature concerning the trigger; it only mentions it and, thus, only formulates an obvious problem or principle.

VII. The Respondent (Patentee) requested that the appeal be dismissed. His arguments can be summarised as follows:

For more than 15 years brackets for mounting radiators were known, which each comprise an upper engagement member retained, before the mounting operation, in its upper position by locking means. Long radiators have also been used for decades, so that the difficulty of mounting them on anchorage rails was widely recognised. Nevertheless, no satisfactory solution to this problem was given, although trigger devices *per se* were extensively used in a number of technical fields. The present invention with its four new steps permits a quick and easy mounting of long radiators. Document D2 cannot suggest the claimed solution, since only rigid brackets, that is to say with no movable parts, are described therein. Document D8 concerns another problem, namely the access to the wall behind the radiator, and further shows no locking member, which keeps the upper engagement member away from the radiator. Moreover, the brackets of this prior art necessitate pushing the radiator against the forces of all the springs biasing

the upper engagement members and, thus, would have diverted the skilled person from taking this document into account.

Reasons for the Decision

1. The appeal is admissible.
2. Novelty of the subject-matter of granted Claim 1 was never disputed so that no further argument is necessary in this respect.
3. The nearest prior art is a bracket for mounting radiators according to document D5. This bracket comprises all the features of the precharacterising part of granted Claim 1 of the contested patent and, furthermore, the first feature of the characterising part, namely that the first engagement member is provided with a locking member which is movable into cooperation with the anchorage rail for locking the first (upper) engagement member in a position displaced from the second (lower) engagement member and against the action of a spring. This position will be referenced hereinafter as "upper" or "open position", since in this upper position of the engagement member the radiator can be introduced without hindrance between the two engagement members. The spring biases the first engagement member towards the second engagement member and the first engagement member is pivotably fixed on an inclined upper end of the anchorage rail. The locking member is a pin, which can be manually introduced into a hole of the first engagement member, after the latter has been brought, also by hand, into its upper position. In this position, once introduced, the pin lies upon the

upper surface of the inclined part of the anchorage rail and, thereby, locks the engagement member in the open position.

4. Once a radiator according to this closest prior art is brought into its final mounting position between both engagement members of the anchorage rail, it is necessary to manually release the upper engagement member from its locked position, so that it engages the radiator. It is clear that this manual operation renders the mounting of very large radiators tedious and time-consuming, since the assembly worker has to pull out the pins of every engagement member of the several brackets positioned widely from each other all along the radiator.

The problem underlying the present invention is therefore to be seen in simplifying the task of installing large wall mounted radiators, so that it can be performed in a short time and without difficulty.

5. The Board cannot follow the argument of the Appellant according to which, starting from said above closest prior art, the problem to be solved is to avoid the need for access to the upper engagement member. According to the constant jurisprudence of the Boards of Appeal, the problem to be solved "has to be determined on the basis of objectively established facts, in particular as appearing in the prior art revealed in the course of proceedings", as is here the case with document D5 (T 13/84, EPO 1986, 253). The fact that the problem put forward by the Appellant was mentioned in the description of the patent in suit does not mean that the problem was objectively determined. It often happens that the writer of the patent specification, knowing the solution of the invention that he describes, inadvertently includes in the formulation of the

technical problem to be solved a pointer to the solution. Such a situation is to be avoided (see T 229/85, EPO 87, 237).

In the present case, the bracket according to document D5 requires a manual operation both to draw the upper engagement member into its upper position and to lock it by means of the pin. Therefore, this closest prior art does not suggest at all to avoid the need for access to the upper engagement member, on the contrary it needs it. Even by considering, then, the inconveniences of this prior art, as set out above, it cannot be deduced directly from them that a solution must be found which does not require such an access. This idea already represents a contribution to the inventive step.

6. The present invention, as defined in Claim 1, solves the existing problem set out in Point 4 by providing trigger means, which is disposed so as to be actuated by the radiator when the latter is moved towards its final position and which releases the locking member, so that the upper engagement member under the action of its spring is brought into engagement with the radiator. Since Claim 1 mentions trigger means, it is clear that an automatic release of the locking position is realised, excluding a manual releasing of the locking means. Claim 1, moreover, does not only indicate trigger means as the solution, but the combination of trigger means with the locking means, mentioned just prior to the trigger means in Claim 1 with its particular function, namely to keep the upper engagement member in its upper position.
7. Faced with the above-mentioned radiator assembly problem, the person skilled in the art will undoubtedly consider document D2, since it deals with such a problem. However, the bracket described in this document

with respect to its whole arrangement differs fundamentally from the bracket according to document D5, since it does not comprise an anchorage rail, but only independent upper and lower engagement members, which are each fixed to a wall and have no movable parts and, consequently, no locking member. The upper engagement member has a protruding horizontal plate, which is provided with an L-shaped slot, and one arm of said L-shape is open towards the radiator to be mounted. This opening comprises an inclined ramp entry surface. A spring biased bar is vertically and, at its lower end, pivotally mounted on the rear surface of the radiator, whereas its upper end is in the form of a handle projecting beyond the top of the radiator. Once the radiator has been lifted up onto the lower engagement member, it is pivoted about its lower end towards the upper engagement member and pushed against it, so that the vertical bar slides against the force of its spring on the ramp surface of the slot opening and then, urged by the spring, is displaced in the opposite direction within the slot, such that engagement is established between the radiator and the upper engagement member. By manoeuvring the bar handle, the radiator can be dismounted.

8. From the disclosure of this document, the skilled person is taught to use the radiator instead of the hands, for mounting the radiator, but he is not shown how to apply this idea to the bracket according to document D5. The brackets according to documents D2 and D5 are structurally so different that features of one bracket cannot be applied to the other bracket and the man skilled in the art is, further, dissuaded from considering the solution of Document D2, because the spring loaded bar described in this prior art forms hindrance means for the introduction of the radiator between the two engagement members, destroying the

advantage brought by the locking member known from Document D5, namely a space between both engagement members free of any impediment. Moreover, no part of the bracket according to document D2 comprises trigger means, so that the skilled person receives no hint to provide a trigger portion in the bracket according to document D5, and much less to provide it so that it releases a locking member, no locking member or similar means being disclosed in this prior art.

9. Contrary to the opinion of the Respondent, the Board is of the opinion that document D8 is relevant, so that, despite the late introduction of this document in the procedure, its teaching is to be examined.

Like document D2, this document discloses no anchorage rail, but only two upper and lower engagement members, which are fixed to the wall, the lower engagement member being adapted to receive the bottom edge of the radiator. In this prior art, however, the upper engagement member comprises a movable element: a hook is pivotally mounted on the upper engagement member and is urged by the help of a spring towards the lower engagement member, such that in its lower position it cooperates with an anchorage stirrup of the radiator. The front surface of this hook, namely the one facing the radiator, is inclined, so as to form a ramp surface, and the normal position of this hook under the tension of the spring is such, that, when a radiator is engaged on the lower engagement member and pivoted towards the upper engagement member, the upper edge of the anchorage stirrup slides along the inclined front surface of the hook and, thereby, pushes the hook up, until the hook enters on a downward movement into engagement with the anchorage stirrup and retains the radiator.

10. This document, therefore, teaches not only to use the radiator for its mounting but also to use it in cooperation with a movable upper engagement member. However, the teaching of this document fails to lead the skilled person to the solution according to the contested Claim 1, since the radiator in this prior art acts directly on the movable part of the engagement member and not by means of a trigger device. Although means for maintaining the hook is not mentioned in this prior art, it could be said that nevertheless such a means is provided, because the hook has to be maintained at a level such that the anchorage stirrup does not abut against it, but can slide on its ramp surface. The function of this implicitly existing maintaining means is however different from the one of the locking member of the present invention, which locks the upper engagement member in a particular position, namely the upper position of this member, and has for its object to maintain clearance between both engagement members for the introduction of the radiator, - an object which is not satisfied in document D8. Therefore, no locking member is shown in document D8 and, thus, the person skilled in the art also receives from this document no suggestion to use the radiator as means for releasing a locking member. In document D8, the radiator only moves the hook aside.

11. Another element to consider is the kind of locking means disclosed in document D5. Even if the skilled person had received from a prior art document a suggestion to use the radiator as means for actuating trigger means, the application of this idea in combination with the manually releasable locking means known from document D5 cannot be considered as obvious. It would at least be necessary to modify the whole arrangement of the locking means of this closest prior art and, then, to combine trigger means with it. Such a combination is not

suggested by the disclosed prior art. It follows that the combination of the mere suggestion of using the radiator, instead of hands, according to either document D2 or document D8 with the bracket according to Document D5 can only be made by hindsight analysis, since in other respects the structural features between them are incompatible.

12. In conclusion, for the various reasons given above, the subject-matter of Claim 1 involves an inventive step. The dependent Claims 2 to 10, which represent preferred embodiments of this subject-matter, are also therefore patentable.

Order

For these reasons, it is decided that:

The appeal is dismissed.

The Registrar:



N. Maslin

The Chairman:



C.T. Wilson

W. Noser
1095.D