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D E C I S I O N
of 9 May 1995

Case Number: T 0977/92 - 3.2.4

Application Number: 88107435.5

Publication Number: 0292768

IPC: A47B 57/42

Language of the proceedings: EN

Title of invention:

Racking structure and support member therefor

Applicant:

LINK 51 LIMITED

Opponent:

-

Headword:

-

Relevant legal provisions:

EPC Art. 56

Keyword:

"Inventive step (yes) "

Decisions cited:

-

Catchword:

-



Case Number: T 0977/92 - 3.2.4

D E C I S I O N
of the Technical Board of Appeal 3.2.4
of 9 May 1995

Appellant: LINK 51 LIMITED
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Decision under appeal: Decision of the Examining Division of the European Patent Office dispatched on 1 June 1992 refusing European patent application No. 88 107 435.5 pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: C. A. J. Andries
Members: M. G. Hatherly
J. C. M. de Preter

Summary of Facts and Submissions

I. On 23 July 1992 the Appellant (Applicant) lodged an appeal against the decision of the Examining Division dispatched on 1 June 1992 to refuse European patent application No. 88 107 435.5. The appeal fee was paid on 23 July 1992 and the statement of grounds of appeal received on 5 October 1992.

II. The Examining Division found that the subject-matter of all claims then on file was obvious and that one of these claims contravened Article 123 EPC.

The search report lists the following prior art documents:

D1 FR-A-2 030 248

D2 US-A-4 421 239

D3 FR-A-2 247 883

III. With a letter dated 4 December 1992 the Appellant filed a Statutory Declaration by Professor Robert Davies dated 26 November 1992.

After a communication and a telephone call from the Board the Appellant submitted amended application documents.

IV. The wording of the present Claim 1 is as follows:

"A support member (10) for use with a racking structure comprising a plurality of upright members (6) and at least one shelf (8), the support member comprising a central portion (28) and two legs (30, 32) extending from one end of the central portion, the first leg (30) being adapted to be inserted through an aperture (14) of

one of the upright members to engage the inner side (12a) of the member (6) above the aperture (14), and the second leg 32 being adapted to engage the upright member on the outer side (12b) thereof immediately beneath the aperture (14), and an engagement portion (36) extending generally upwardly with respect to the central portion (28) at a position spaced from the first leg (30) to cooperate with a location aperture (25) of the shelf, the engagement portion (36) comprising an inclined face (38) operative to draw the shelf towards the upright member (6) as the shelf is lowered relative to the support member (10); characterised in that the support member comprises a supplementary leg (34) extending from the other end of the central portion (28) to engage said outer side (12b) of the upright member (6) at a position spaced from that at which the second leg (32) engages the upright member (6), there being a region of non-engagement with said outer side (12b) between said second and supplementary legs (32 and 34)."

V. The Appellant requests that the decision under appeal be set aside and a patent be granted on the basis of the following set of application documents:

- Claims 1 to 4 filed with the letter of 2 May 1995;
- Description pages 1 to 4 filed with the letter of 2 May 1995; and
- Drawings sheet 1/1 (Figures 1 to 3) as originally filed.

Reasons for the Decision

1. The appeal is admissible.

2. *Amendments*

2.1 The present Claim 1 includes all the features of the originally filed independent Claim 10. Wording taken from the originally filed Claims 1 and 4 has been added. The feature of an engagement portion to cooperate with a location aperture of the shelf is derived from the originally filed Claim 7. That this engagement portion comprises an inclined face 38 operative to draw the shelf towards the upright member follows from the originally filed description page 4, lines 5 to 8.

2.2 The non-inclined portion of the inclined surface 38 specified in the present Claim 2 can be seen in Figures 1 and 2 of the originally filed drawings.

The statement in Claim 2 filed with the letter of 21 August 1991 that this non-inclined portion is "to locate the shelf positively in relation to the support member" was objected to by the Examining Division under Article 123 EPC but is no longer in the present Claim 2, thus overcoming the objection.

2.3 The present Claim 3 includes all the features of the present Claim 1 by its reference thereto and adds features taken from the originally filed Claim 7. The present Claim 4 corresponds to the originally filed Claim 9.

2.4 The present description is merely an adaptation of the originally filed description to take account of changes to the claims and to acknowledge the prior art.

2.5 The drawings are as originally filed.

2.6 Thus there are no objections under Article 123 EPC to the application in its present form.

3. *Novelty*

After examination of the cited documents, the Board is satisfied that none of them discloses a support member having all the features set out in Claim 1. Moreover novelty was not disputed by the Examining Division. The subject matter of Claim 1 is thus to be considered as novel within the meaning of Article 54 EPC.

4. *Closest prior art*

The Board, like the Examining Division, considers the support member closest to the present invention to be that disclosed by document D1. The features of the pre-characterising portion of Claim 1 are known from this document.

As shown in Figure 3 of document D1, a support member 3 comprises two legs 34, 33 extending from one end of a central portion. The first leg 34 is inserted through an aperture 11 of an upright member 1 (see Figures 1a and 7) to engage the inner side of the upright member 1 above the aperture 11. The second leg 33 engages the outer side of the upright member 1 immediately beneath the aperture 11. An upwardly extending engagement portion 35 cooperates with a location aperture (see Figure 6) and has an inclined face for drawing the shelf 2 towards the upright member 1.

5. *Differentiating features, problem and solution*

The support member defined in Claim 1 has, in addition to the first and second legs 30, 32 at one end of the central portion 28, a third or supplementary leg 34 which extends from the other end of the central portion 28. The second and supplementary legs 32, 34 engage the outer side of the upright member 6 at respective positions spaced from each other, there being a region of non-engagement between the second and supplementary legs 32, 34.

The Board sees the objective problem as being to provide a support member which when used with a racking structure gives improved results.

The Board is satisfied that the features in Claim 1, and in particular the third or supplementary leg and the region of non-engagement with the upright member between the second and supplementary legs of the characterising portion, provide an improved support member.

The present support member is lighter than it would be if there were no gap between the second and supplementary legs. Expressed the other way round, without increasing the weight compared to a support member with no gap, the load is applied by the present support member to the upright member at a greater vertical distance from the aperture in the upright member. The area of the upright member most prone to deformation is adjacent the aperture, if there is deformation here then dismantling and re-erection of the racking structure would be impeded and the rigidity of the erected structure diminished. With the present support member, by applying the deforming force away from the aperture, deformation cannot obtain a toe hold, the then primarily stressed area is away from the aperture and is thus more effective at absorbing load.

6. *Inventive step*

6.1 Document D2

Figure 3 of document D2 shows an attachment 13 with an upper leg 16 hung on an upright member 3 by means of a slot 18 in the attachment 13 and a slot 6 in the upright member. The attachment 13 has a lower leg 17 which engages the outer side of the upright member 3 at a position spaced from the upper leg 16 and there is a region of non-engagement between the legs 16, 17.

6.2 Combination of documents D1 and D2

6.2.1 The Board cannot agree with the Examining Division's finding in its decision that the person skilled in the art would use the teaching of this document D2 to solve the problem in the structure according to document D1 of deformation of the upright member at the location around the aperture carrying the support member.

6.2.2 The Board is of the opinion that the skilled person would not realize that document D2 would solve a deformation problem because the document does not state why the shape with the two legs 16 and 17 and the gap therebetween is provided. He would conclude that the gap between the upper leg 16 and the lower leg 17 was there for two reasons, firstly to provide room for attachment of the bar 7 to the plate 9 using the wings 11, 12 and the pin 15, and secondly as a consequence of folding the wing 11 during manufacture. He would assume the extra leg 17 was there to make sure the bar 7 is vertical (see page 4, lines 20 to 27). Thus the features of document D2 are employed neither for the same purpose nor with the same result as in the present invention.

6.2.3 Moreover the skilled person would need to know the present invention before he recognised the similarities in document D2. Indeed, while the present invention has three types of separate components (the upright member, the support member and the shelf), the structure of document D2 has only two types of separate components (the upright member and the unit consisting of firstly the bar 7 or element 8, secondly the plate 9 comprising the connection parts 11, 12 and legs 16, 17, and thirdly the connection element 15). This unit is not dismantled each time the rack is dismantled whereas the present invention's rack is dismantled each time into its three types of components. Even though document D2 mentions shelves (page 1, line 5 - "étagères") these would seem to be one unit with the plates 9.

6.2.4 Moreover, while the structures according to document D1, document D2 and the present invention are all intended for easy assembly and dismantling of the support member from the upright member, it is only in the structures according to document D1 and the present invention that easy assembly and dismantling of the shelf from the support member is achieved. The structure of document D2 does not permit ready dismantling of the transverse part (bar 7 or basket 8 or shelf) from its support member 9.

6.2.5 So the skilled person faced with a problem in the structure of document D1 would only find the Figures of document D2 of interest if he knew of the present invention.

6.2.6 Thus the Board finds that the combination of documents D1 and D2 would not be obvious to the skilled person.

6.3 Document D3

- 6.3.1 The key 20 shown on Figures 2 and 3 of document D3 passes from the inside of the upright member 10 outwards, contacts the post 10 between the key's hook portions 24, and these hook portions 24 carry the shelf unit 14, 17, 18. Thus there is little in common between this key 20 and the support member of the present invention.
- 6.3.2 The supporting bracket 32, 33 shown in Figures 5 to 7 of document D3 is more relevant to the present invention but still no more relevant than the bracket according to document D1.
- 6.3.3 To combine the teaching of document D3 with the teaching of either document D1 or document D2 would neither be obvious nor would it lead to a support member as defined by the present Claim 1.
- 6.4 The Board thus finds that the prior art documents of the search report, taken singly or in combination, are not prejudicial to the support member of Claim 1.

The support member according to Claim 1 thus involves an inventive step within the meaning of Article 56 EPC.

Accordingly there is no need to consider the Statutory Declaration of Professor Robert Davies.

7. The subject-matter of Claim 1 is thus patentable as required by Article 52 EPC. A patent may therefore be granted based on the allowable independent Claim 1, dependent Claim 2 which concerns a preferred embodiment of the support member according to Claim 1, Claims 3 and 4 which concern racking structures including the support member of Claim 1 or 2, the amended description and the drawings.

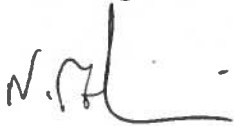
Order

For these reasons it is decided that:

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 grant a patent in the version set out in section V above.

The Registrar:



N. Maslin

The Chairman:



C. Andries

