BESCHWERDEKAMMERN DES EUROPÄISCHEN PATENTAMTS

BOARDS OF APPEAL OF THE EUROPEAN PATENT OFFICE

CHAMBRES DE RECOURS DE L'OFFICE EUROPEEN DES BREVETS

Internal distribution code:
(A) [ ] Publication in OJ
(B) [ ] To Chairmen and Members
(C) [X] To Chairmen
(D) [ ] No distribution

D E C I S I O N
of 21 January 2002

Case Number: T 0157/00 - 3.2.1

Application Number: 93500004.2

Publication Number: 0580537

IPC: F16B 12/10, E04G 17/04

Language of the proceedings: EN

Title of invention:
Improved cramp for joining modular form panels

Patentee:
ULMA C y E, S. Coop.

Opponent:
Peri GmbH

Headword:
-

Relevant legal provisions:
EPC Art. 54, 56

Keyword:
"Novelty (yes)"
"Inventive step (yes)"

Decisions cited:
T 0687/94; T 0389/86.

Catchword:
-

Europäisches Patentamt | European Patent Office | Office européen des brevets

Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0157/00 - 3.2.1

D E C I S I O N
of the Technical Board of Appeal 3.2.1
of 21 January 2002

Appellant: (Opponent)
Peri GmbH
Rudolf-Diesel-Strasse
D-89264 Weissenhorn (DE)

Representative:
Holzmüller, Reinhold
Kohler Schmid & Partner
Patentanwälte GbR
Ruppmannstrasse 27
D-70565 Stuttgart (DE)

Respondent: (Proprietor of the patent)
ULMA C y E, S. Coop.
Obispo Otaduy, 3
Apdo. 13
ES-20560 Onate (Guipuzcoa) (ES)

Representative:
Carpintero López, Francisco
HERRERO & ASOCIADOS, S.L.
Alcalá, 35
ES-28014 Madrid (ES)

Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted 14 October 1999 rejecting the opposition filed against European patent No. 0 580 537 pursuant to Article 102(2) EPC.**

Composition of the Board:

Chairman: F. A. Gumbel
Members: J. Osborne
P. H. Muehlens

Summary of Facts and Submissions

I The opponent's appeal is directed against the decision of the Opposition Division to reject the opposition against European patent No. 0 580 537 (application No. 93 500 004.2).

II The opponent had requested revocation of the patent in its entirety on the grounds that the subject-matter of the claims lacked novelty and/or inventive step (Article 100(a) EPC). The following evidence was cited during the opposition proceedings:

D1 DE-A-3 545 273

D2 EP-A-0 311 876.

III The written decision of the Opposition Division was posted on 14 October 1999. Notice of appeal together with due payment of the appeal fee was received on 14 December 1999. The grounds of appeal were received on 14 February 2000.

IV The appellant requested that the decision of the Opposition Division be set aside and that the patent be revoked in its entirety due to lack of inventive step of the subject-matter of the claims and cited the following additional evidence:

D3 sales brochure "Peri-Multi-Modul" dated 2/84;

D4 two photographs of a cramp carrying the designation "meva".

The respondent requested that the appeal be dismissed.

V Claim 1 as granted reads:

"A cramp for joining modular form panels, comprising a combination of three parts, one formed with a mounting section (1) and a first pair of jaws (2) integral with the sides of such section, the other part consisting of a U-section (7') clasping and travelling along the mounting section (1), one of the ends of the travelling section (7') extending into a second pair of jaws (7) similar to said first pair of jaws (2) and facing the same, the third part comprising a cross mounting pin or wedge (8), wherein the travelling part comprising the U-section (7') and said second pair of jaws (7) has a pair of bolts (9) projecting from the inner face of the jaws (7) and reaching into longitudinal steps (1') provided on one of the longitudinal edges of the sides of the mounting section (1), constituting the guide means when the said travelling jaws are displaced; the sides of the mounting section (1) and of the U-section (7') have been provided with windows (5), the mounting section windows (5) having notches (6) on both the longitudinal edges of the windows (5), the said notches (6) being slanting and offset on one side with regard to the other, thereby to allow straight insertion of the respective cross wedge (8), which comprises a T-section part with its first branch (11) having a skew longitudinal edge, and the second branch (12) defining two ribs on either side of the first branch for the positioning thereof in the notches (6) of the actual mounting section windows (5)."

In addition to Claim 1 the patent as granted contains dependent Claims 2, 3 which define preferred embodiments of the subject-matter of Claim 1.

VI The arguments of the appellant can be summarised as follows:

The closest prior art is known from D1 which discloses all features of the subject-matter of Claim 1 except that, according to D1, teeth are provided on only one longitudinal edge of each window on the mounting section and the cross wedge does not comprise a T-section part with one of its branches having a skew longitudinal edge. The provision of teeth on both longitudinal edges of each window is, however, merely a matter of dimensioning which falls within the normal activity of the skilled person. The provision of a T-section for the cross wedge would be an obvious modification, according to circumstances. In particular, a T-section cross wedge is already known from D3 and the subject-matter of Claim 1 in suit is obvious in the light of a combination of the teachings of D1 and D3.

VII The respondent essentially countered the arguments of the appellant.

VIII With a communication pursuant to Article 12 RPBA the Board indicated its provisional opinion that the subject-matter of Claim 1 as granted was not rendered obvious by the cited evidence. No reply was received from the appellant.

Reasons for the Decision

1. The appeal is admissible.

2. The Board agrees with both parties that the closest prior art is that known from D1. As is evident from the

Board's assessment of inventive step below, the subject-matter of Claim 1 is novel with respect to the disclosure of D1. Since novelty has not been put into question during the appeal procedure it is not necessary to consider it in greater detail.

3. D1 discloses in the embodiment of Figures 1 to 4 and 9 a cramp for joining modular form panels, comprising a combination of three parts. One part 10 is formed with a mounting section 21 and a first pair of jaws 12 integral with the sides of the mounting section. The second part 11 consists of a U-section (see Column 12, Line 51) engaging the mounting section for movement along it and being provided with windows 30 in its sides, one of the ends of the second part extending into a second pair of jaws 13 similar to and facing the first pair of jaws. The third part comprises a cross mounting pin 32 which passes through the windows and serves to lock together the first and second parts. The mounting section is provided with longitudinal flanges 23 which are straddled by projections 60 to 62 on the inner faces of the U-section of the second part (Figure 9). The projections loosely engage the flanges (Column 13, Lines 52 to 59; Figure 9) and constitute guide means during displacement of the second part relative to the first part. The cross mounting pin is provided with a series of obliquely arranged grooves 35 which engage with slanted teeth 24 positioned externally of the mounting section (Column 13, Lines 18 to 21). The pin is inserted orthogonally to the mounting section.

3.1 It follows that the subject-matter of Claim 1 in suit differs from that of D1 in that:

(a) the projecting guide means for the displacement of the travelling jaws are a pair of bolts projecting from the inner face of the jaws and reaching into longitudinal steps provided on one of the longitudinal edges of the sides of the mounting section;

(b) a window is provided also in each side of the mounting section;

(c) the cross mounting pin is in the form of a wedge (hereafter "cross wedge");

(d) notches are provided on both of the longitudinal edges of each window in the mounting section;

(e) the notches are slanting and offset on one side with regard to the other, thereby to allow straight insertion of the cross wedge;

(f) the cross wedge comprises a T-section part with its first branch having a skew longitudinal edge, and the second branch defining two ribs on either side of the first branch for the positioning thereof in the notches of the mounting section windows.

3.1.1 The plate 22 of D1 provides both teeth 24 for engagement with the cross mounting pin and flanges 23 to guide the second part. The provision of windows in the first part according to differentiating feature (b) permits the mounting pin to engage the first part by passing through it, thereby rendering the teeth 24 of D1 superfluous. The arrangement of the projecting guide means in conjunction with longitudinal steps according

to differentiating feature (a) set out under point 3.1 provides an alternative guidance to that provided by the plate 22 of D1. Differentiating features (a) and (b) therefore have a common effect in together permitting deletion of the plate 22 of D1 to solve the problem of simplifying the assembly.

3.1.2 The slanting and offset arrangement of the notches according to differentiating feature (e) co-operates with the wedge shape of the pin according to differentiating feature (c) to provide clamping by straight insertion of the mounting pin. Features (c) and (e) therefore have a common effect similar to that of the corresponding obliquely arranged grooves 35 and slanted teeth 24 of D1 and are an alternative solution to the problem of providing a clamping load by use of a cross mounting pin.

3.1.3 The two ribs provided on the second branch of the T-section engage in the notches provided along each longitudinal edge of the windows in the mounting section and so the differentiating features (d) and (f) have a common effect in providing for a balanced transfer of forces between the cross wedge and the mounting section whilst allowing for varying longitudinal relative positions of engagement of the first and second parts. By comparison, the cross mounting pin according to D1 is subjected to a force moment about its longitudinal axis, tending to rotate the pin and spread apart the first and second parts. The differentiating features (d) and (f) together solve the problem of improving the engagement of the pin when it is in position.

3.2 It follows from the above that the subject-matter of

Claim 1 contains various groups of differentiating features which are not functionally interdependent but solve partial problems. In such a case it is not necessary for establishing inventive step of the subject-matter of the claim to consider all differentiating features in combination (T 687/94, not published). On the other hand, it is established case law that features which do exhibit functional interdependence, as in each of the three groups of features (a) and (b), (c) and (e), (d) and (f), are to be treated in combination. However, it suffices in establishing inventive step of the subject-matter of an entire claim that any one group of features exhibiting functional interdependence taken singly is not obvious in the light of the prior art (T 389/86 OJ 1988, 87).

3.3 D2 discloses a cramp in which rectangular holes are provided in both the first and second parts to accommodate a wedge of rectangular cross-section which engages the end edges of the holes (Column 9, Lines 35 to 50). The differentiating features (d) and (f) are not disclosed.

3.4 D3 discloses various devices. Only the "Keilklemme" is a clamp of the type which forms the subject-matter of Claim 1 in suit and appears to employ a wedge passing through and engaging the end edges of windows in both first and second parts. However, the wedge is not of T-section but of I-section and there is no indication of the presence of notches on the longitudinal faces of the windows. The combination of the differentiating features (d) and (f) therefore is not present. The "Kreuzschloß", which is an element for connecting a square tube to a double-flanged element, is not a device of the type which forms the subject-matter of

Claim 1 in suit. The "Fallkopf" is not a cramp. Neither the "Kreuzschloß" nor the "Fallkopf" comprises the differentiating features (d) and (f) in combination.

3.5 D4 has not been established as being prior art within the meaning of Article 54(2) EPC. However, even if it were valid prior art it would fail to prejudice inventive step of the subject-matter of Claim 1 because it does not disclose the differentiating features (d) and (f) in combination.

4. The Board therefore comes to the conclusion that the subject-matter of Claim 1 is not rendered obvious by the cited prior art. Since dependent Claims 2 and 3 contain all features of Claim 1 the same conclusion applies to those claims. Accordingly, the subject-matter of the claims is found to involve an inventive step (Article 56 EPC).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

S. Fabiani F. Gumbel