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Datasheet for the decision of 10 February 2020

Case Number: T 0310/18 - 3.2.08

Application Number: 11723741.2

Publication Number: 2577075

IPC: F16B37/04

Language of the proceedings: EN

Title of invention:
FASTENING UNIT

Patent Proprietor:
J. van Walraven Holding B.V.

Opponent:
Secura Services AG

Headword:

Relevant legal provisions:
EPC Art. 56
RPBA Art. 13
RPBA 2020 Art. 13(1), 13(3), 25(3)

Keyword:
Inventive step - (yes)
Late-filed argument - admitted (yes)

Decisions cited:

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

Boards of Appeal

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Case Number: T 0310/18 - 3.2.08

D E C I S I O N
of Technical Board of Appeal 3.2.08
of 10 February 2020

Appellant: (Opponent)	Secura Services AG Rudolf-Diesel-Straße 3 8404 Winterthur (CH)
Representative:	Boult Wade Tennant LLP Salisbury Square House 8 Salisbury Square London EC4Y 8AP (GB)
Respondent: (Patent Proprietor)	J. van Walraven Holding B.V. Industrieweg 5 3641 RK Mijdrecht (NL)
Representative:	EP&C P.O. Box 3241 2280 GE Rijswijk (NL)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 30 November 2017 rejecting the opposition filed against European patent No. 2577075 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	C. Herberhold
Members:	A. Björklund
	C. Schmidt

Summary of Facts and Submissions

I. The opponent filed an appeal against the opposition division's decision to reject the opposition against the European Patent No. 2 577 075.

II. The opposition division found that the subject-matter of claim 1 of the patent as granted involved an inventive step.

III. Oral proceedings before the Board took place on 10 February 2020.

IV. The appellant (opponent) requested that the decision under appeal be set aside and that the European Patent No. 2 577 075 be revoked.

V. The respondent (patent proprietor) requested that the appeal be dismissed and that the patent be maintained as granted (main request) or on the basis of one of auxiliary requests 1 to 20, all filed by letter dated 14 August 2018.

VI. Independent claim 1 of the patent as granted (main request) reads as follows:

M1 "A fastening unit (1, 101) for fastening an object to a profile element (80) with a longitudinal slot (85), in particular a profile element of the type comprising sides (81) extending in the longitudinal direction, a bottom (82) which connects the sides, and an upper side (83),

M1.1 wherein the upper side (83) is formed by a flange (84) directed inwardly from each side,

M1.2 which flanges (84) define between them the longitudinal slot (85), which fastening unit (1, 101) includes:

M2 - an oblong metal anchoring element (2) with an upper side (21) and a lower side (22) opposite the upper side,

M2.1 which anchoring element (2) is intended to have a length which is in use greater than the width (b2) of the longitudinal slot (85) of the profile element,

M2.2 and is intended to have such a width that the anchoring element (2) with its longitudinal axis can be aligned in use with the longitudinal slot (85), introduced into the profile element (80) and then turned in order to extend substantially transversely to the longitudinal slot (85) and with its upper side (21) to engage behind the flanges (84) of the profile element,

M2.3 wherein the anchoring element (2) furthermore has a bore (23) passing through it for receiving a male fastening element for fastening the object to the profile element (80) when the anchoring element (2) is in its transverse position,

M3 - a support element (3, 103) on the upper side (21) of the anchoring element (2),

M3.1 which support element (3, 103) has a body (31, 131) connected to the anchoring element (2)

M3.1.1 and having a central opening (32) which is substantially coaxial with the bore (23) in the anchoring element (2),

M4 - a washer element (4) associated with the support element (3, 103),

M4.1 which in a mounted state of the fastening unit (1, 101) on the profile element (80) engages the upper side (83) of the profile element (80),

M5 wherein the connection between the support element (3, 103) and the anchoring element (2) includes two or more connecting legs (36, 136)

M5.1 which are formed integrally with the body (31, 131) of the support element (3, 103)

M5.2 and extend each through an associated recess (24) in the anchoring element (2),

M5.2.1 which recess (24) for one connecting leg (36, 136) of the support element (3, 103) is formed as a slot-like recess

M5.2.1.1 which extends from the upper side (21) to the lower side (22) of the anchoring element (2)

M5.2.1.2 and adjoins the through bore (23) in the anchoring element (2),

M5.3 the connecting legs (36, 136) at their distal ends having a retaining lug (37, 137) for preventing that the anchoring element (2) can be released from the distal ends of the connecting legs (36, 136),

characterised in that

M6 the support element comprises one or more spring elements (38, 136, 138) associated with the connecting legs (36, 136)

M6.1 and a stop surface (31a, 131a) for engagement with the upper side (21) of the anchoring element,

M6.2 wherein the one or more spring elements (38, 136, 138) act to push the anchoring element from the underside (22) away from the retaining lugs (37, 137) so as to bias the upper side (21) of the anchoring element against the stop surface (31a, 131a) of the support element (3, 103)."

The feature references been added by the Board.

VII. The auxiliary requests are irrelevant for the present decision.

VIII. The following documents are referred to in the present decision:

D1: WO 2007/008060
D2: EP 0 978 663 A1
D7: AT E 25 136
D15: US 4,146,074 A

IX. The appellant argued essentially the following:

Admissibility of the inventive-step objection starting from D2 in view of D15

The objection regarding a lack of inventive step starting from D2 in view of D15 raised in the letter dated 10 January 2020 should be admitted into the proceedings. It was *prima facie* relevant, and the disclosures of these documents had already been addressed and combined for an inventive-step evaluation starting from D15. The respondent and the Board would

therefore be able to discuss this objection without any detriment to procedural economy.

Inventive step

The subject-matter of claim 1 of the patent as granted did not involve an inventive step.

Starting from D15

D15 (Figure 4) disclosed a fastening unit with an anchoring element 19a, a support element 31a, 33a and a connecting element in the form of the arms 37a and their hook-shaped ends hooked over the ring 31a. The connecting legs 37a extended through recesses in the anchoring element and had spring elements 41a at their tips. The underside of the ring was a stop surface. The ring 31a and flange 33a formed a washer element according to features M4 and M4.1.

Consequently, the subject-matter of claim 1 differed from the fastener disclosed in D15 only in that the recesses adjoined the through-bore of the anchoring element according to feature M5.2.1.2.

The problem solved by this difference was to make the fastener easier and less costly to manufacture.

D2 (paragraph [0006]) taught that recesses adjoining the bore in the anchoring element were a solution to the problem posed.

It was obvious for the skilled person to apply this teaching to the fastening unit in D15 in order to solve the problem posed. Doing so required only a simple and

minor adaption of the legs 37a, as the angle of the springs 41a would make them snap back after assembly.

The skilled person would thus arrive at the subject-matter of claim 1 without needing any inventive skill.

Starting from D1

Figures 1, 3 and 5 of D1 disclosed fastening units with an anchoring element 20, a support element 30/30', a washer element 10/10', connecting legs 35/35', spring elements 55/57 and a stop surface 36/36'.

These fastening units had no recesses for the connecting legs in the anchoring element. Consequently, the subject-matter of claim 1 differed from these fastening units in features M5.2 to M5.2.1.2.

The problem solved by this difference was, again, to make the fastener easier and less costly to manufacture.

D2 taught the skilled person that axial guiding could be achieved by legs extending in slits adjoining the through-bore in the anchoring element, instead of a complex cage as in D1.

It was obvious for the skilled person to apply this teaching to the fastening unit in D1 in order to solve the problem posed. In particular, this would make it possible to dispense with the snap elements 53 provided on the plate 56 in order to hold it in place on the legs 35. The only adjustment required would be a simple rearrangement of the legs 35/35'.

The skilled person would thus arrive at the subject-matter of claim 1 without needing any inventive skill.

Starting from D7

The subject-matter of claim 1 likewise differed from the fastening unit disclosed in Figures 1 to 4 of D7 in feature M5.2.1.2.

For the same reasons as when starting from the fastening units in D1, it was obvious to apply the teaching of D2 to this fastening unit in order to solve the problem of making the fastening unit easier and less costly to manufacture. Providing a support for the coil spring would be a minor and simple adaptation.

The skilled person would thus arrive at the subject-matter of claim 1 without needing any inventive skill in view of D2 alone.

D15 was evidence of the skilled person's common general knowledge of how to arrange springs in fastening units. In view of the teaching of the internal recesses and legs from D2 and further taking the common general knowledge from D15 into account, the skilled person would also arrive at the subject-matter of claim 1 without needing any inventive skill.

Starting from D2

Figures 1 and 2 of D2 disclosed a fastening unit having an anchoring element 10, a support element 20, a washer element 30 and connecting legs 27, 28 extending through recesses 15, 16 adjoining the bore 13. The spring 26 was "associated with" the connecting legs, and the

underside of the part 21 of the support element was a stop surface.

The subject-matter of claim 1 differed from this fastening unit only in feature M6.2.

The problem solved by this difference could be regarded as avoiding having the spring outside the rail.

D1 and D15 both disclosed solutions to this problem, namely springs positioned so as to push the anchoring element from the underside. In view of D1, it was obvious to the skilled person to apply the teaching of the internal spring from Figure 1 to the fastening unit in D2. Holding the spring on the hooks 29a, 29b would have been straightforward. In view of D15, it was obvious to implement the legs 27, 28 with spring-like ends. Applying the teaching of either D1 or D15 to the fastening unit in D2 thus resulted in the subject-matter of claim 1.

The skilled person would thus arrive at the subject-matter of claim 1 without needing any inventive skill.

X. The respondent argued essentially the following:

Admissibility of the inventive-step objection starting from D2 in view of D15

This objection was raised for the first time in the letter dated 10 January 2020. It was late-filed and should therefore not be admitted into the proceedings.

Inventive step

The subject-matter of claim 1 involved an inventive step.

Starting from D15

The subject-matter of claim 1 differed from the fastening unit in D15 in features M4, M4.1 and M5.2.1.2.

Although these features were known from D2, the skilled person would not modify the fastening unit in D15 so that the recesses for the connecting legs adjoined the bore in the anchoring element according to feature M5.2.1.2.

The alleged advantages obtained when manufacturing the anchoring element would be cancelled out by the considerable modifications which would have been necessary for the ring 31a, 33a and the legs 37a. Additionally, a modification of this kind would make assembly and the explicitly disclosed use of the fastener difficult if not impossible.

Starting from D1

The fastening units disclosed in Figures 1, 2 and 5 of D1 had anchoring elements without slits. Furthermore, their connecting legs did not have any retaining lugs. The subject-matter of claim 1 thus differed from these fastening units in features M5.2 to M5.3.

Even when armed with the knowledge from D2, the skilled person had no reason to provide the anchoring element of the fastening units in D1 with recesses for the

connecting legs. This would have entailed an extra manufacturing step, in addition to further necessary modifications to the other parts of the fastener, in particular to the plate 56.

Starting from D7

The subject-matter of claim 1 differed from the fastening unit disclosed in D7 in features M5.2.1.2 and M5.3.

Even though a fastening unit with these features was known from D2, the skilled person would not move the recesses for the connecting legs to adjoin the bore since this would require considerable modifications to the fastening unit in D7. Furthermore, mounting a coil spring, as in D7, on legs having retaining lugs, as taught in D2, would be very laborious since every coil winding would get caught on the retaining lugs.

D15 was a patent document and was thus not evidence of common general knowledge. The appellant's objection based on the combination of the teachings of D7, D2 and D15 thus combined the teaching of three patent documents, which in itself showed that the subject-matter of claim 1 was not obvious to the skilled person. Furthermore, the provision of spring-like ends according to D15 was inconsistent with the teaching of D7, according to which the arms 23 formed a relatively solid stirrup-shaped piece.

Starting from D2

The subject-matter of claim 1 differed from the fastening unit in D2 in features M6 to M6.2.

D1 disclosed a fastening unit with an internal spring adapted for different thicknesses of the anchoring element. The fastening unit in D2 had no problems with varying thicknesses of the anchoring element since the spring was on the outside of the profile. The skilled person would therefore have no reason to transfer the isolated feature of the internal spring from D1 to the fastening unit in D2. Doing so would also entail further necessary modifications to the legs, e.g. in order to provide support for the leaf spring elements from D1.

In view of D15, the skilled person would have no incentive to transfer any part of the complicated mechanism of that fastening unit, the operation of which required tools, to the fastening unit in D2. Moreover, the modification required was beyond the skilled person's capabilities.

Reasons for the Decision

1. Admissibility of the inventive-step objection starting from D2 in view of D15

The appellant raised an objection regarding a lack of inventive step starting from D2 in view of D15 for the first time with the letter dated 10 January 2020, about a month before the oral proceedings. This objection is therefore late-filed and its admissibility is at the Board's discretion (Article 13 RPBA 2007, Article 13(1) and (3) RPBA 2020, Article 25(3) RPBA 2020).

An objection regarding a lack of inventive step starting from D15 in view of D2 was, however, discussed in the decision under appeal, and raised again in the

statement setting out the grounds of appeal. As such, the relevant technical content of documents D2 and D15 was discussed extensively during the earlier stages of the appeal proceedings.

The objection starting from D2 instead of D15 does not introduce any complex matter but merely relies on a combination of the previously discussed features. Both the respondent and the Board were therefore able to deal with the objection during the oral proceedings without any detriment to procedural economy.

Under these circumstances, the Board decided to admit the objection into the proceedings (Article 13 RPBA 2007, Article 13(1) and (3) RPBA 2020, Article 25(3) RPBA 2020).

2. Inventive step

The subject-matter of claim 1 involves an inventive step (Article 56 EPC) for the following reasons.

2.1 Starting from D15, D1 or D7 in view of D2

It is common ground that the subject-matter of claim 1 differs from the fastening units disclosed in documents D15 (Figure 4), D1 (Figures 1, 3 and 5) and D7 (Figures 1 to 4) at least in feature M5.2.1.2.

According to the appellant, in view of D2, paragraph [0006], it was obvious to the skilled person to provide the anchoring element with recesses for the connecting legs that adjoin the through-bore in the anchoring element to any of the fastening units disclosed in D15, D1 or D7 in order to solve the problem of making the manufacture easier and less costly.

2.1.1 D15 as the closest prior art

The connecting legs 37a of the fastening unit in Figure 4 of D15 are positioned on the outside of the anchoring element and extend straight down from the ring 31a, 33a. If the corresponding recesses were moved to adjoin the through-bore, significant changes to the ring 31a, 33a and the legs 37a would be necessary to allow the legs to extend through these recesses. The allegedly easier manufacture of the anchoring element would therefore be cancelled out by a considerably more complicated manufacture of the other elements of the fastening unit in D15.

Furthermore, moving the connecting legs further inwards towards the through-bore would bring them in conflict with the tool 47a (or with the operator's thumb) when the fastening unit is mounted (column 4, lines 34-59), thus making it impossible to use the fastener in the manner disclosed.

For these reasons, the skilled person would be dissuaded from moving the recesses in the anchoring element of the fastening unit in D15 such that they adjoin the through-bore.

2.1.2 D1 as the closest prior art

The anchoring element 20 of the fastening units in D1 is guided in a sort of cage 30/30' formed by the rather wide connecting legs 35/35'. The anchoring element does not have any recesses at all for these legs. Providing recesses in the anchoring element thus forms an additional work step, which cannot lead to an easier manufacturing process. The argument that recesses

adjoining the through-bore would make it possible to dispense with the elements 53 ("snap elements") on the plate 56, thus simplifying the manufacture of said plate, is based on hindsight. Indeed, the allegedly obvious modification requires a complete re-design of the plate 56, which exceeds what can be expected from the skilled person as part of their routine work and experimentation. The skilled person would thus not provide the anchoring element 20 of the fastening units in Figures 1, 3 and 5 of D1 with recesses adjoining the through-bore in order to solve the problem posed.

2.1.3 D7 as the closest prior art

The fastening unit in D7 has a coil spring 13 held in position by a collar 24 on the bottom plate 21 which interconnects the legs 23 and the collar 26 of the anchoring element 8. The connecting legs 23 extend through recesses 27 at the outer periphery of the anchoring element 8.

Replacing this construction with more inwardly positioned legs with an arrowhead geometry and recesses adjoining the through-bore in the anchoring element as shown in D2 requires considerable modifications exceeding the capabilities of the person skilled in the art. Indeed, a suitable seat for the spring would need to be provided on the legs. Alternatively, if the coil spring were dimensioned to sit directly on the rear of the arrowheads, mounting the spring would be difficult since every winding would tend to get caught on the arrowheads. The alleged advantage of an easier manufacture of the anchoring element 8 would therefore be more than cancelled out by drawbacks in the manufacture of the other parts or upon assembly of the fastening unit in D7.

For these reasons, in view of D2 alone, the skilled person would not move the recesses in the anchoring element of the fastening unit in D7 such that they adjoin the through-bore.

Furthermore, according to established case law, a single patent document - in this case D15 with respect to fastening units - cannot provide evidence of the skilled person's common general knowledge.

Even if said document were considered in addition to D2, this would not render the subject-matter of claim 1 obvious. While D15 shows a spring biasing an anchoring element from the underside, said spring is made by bending connecting legs made of spring wire - teaching which is inconsistent with the rigid stirrup-forming connecting legs of the fastening unit shown in D7.

2.2 Starting from D2 in view of D1 or D15

The fastening unit in Figures 1 and 2 of D2 has an external spring 26 which pulls the entire supporting element 20, and thus the anchoring element 10, outwards to hold the fastening unit in position relative to the profile during mounting.

It is common ground that the subject-matter of claim 1 differs from the fastening unit in D2 at least in feature M6.2.

According to the appellant, in view of the teaching of either D1 or D15, it was obvious to the skilled person to replace the external spring 26 of the fastening unit in D2 with an internal spring pushing the anchoring element from the underside and away from the retaining

lugs 29a, 29b in order to solve the problem of avoiding having a spring outside the profile.

2.2.1 However, neither D1 nor D15 discloses any advantage of springs which are positioned so as to push the anchoring element from the underside to bias it away from the retaining lugs. Therefore, these documents do not give the skilled person any incentive to replace the external spring 26 of the fastening unit in D2 with an internal spring.

2.2.2 Furthermore, the springs shown in D1 or D15 cannot be applied directly to the fastening unit in D2:

- Figures 1, 3 and 5 of D1 show leaf spring elements 55, 57 which are positioned so as to act on the underside of the anchoring element. However, the connecting legs 27 and 28 of the fastening unit in D2 do not provide any suitable support for such a leaf spring. The required modification exceeds the routine work and experimentation performed by the person skilled in the art and would have discouraged them from replacing the external spring of the fastening unit in D2 with a leaf spring as shown in D1.

- Figures 1 to 4 of D15 show spring elements formed by bending the tips of spring wires forming the connecting legs 37, 37a. This teaching cannot be applied directly to the plastic legs formed integrally with the supporting element of the fastening unit in D2 since this would again require a re-design of the legs 27 and 28 in D2, which goes beyond routine work and experimentation.

2.2.3 To conclude, the skilled person would thus not replace the external spring 26 of the fastening unit in D2 with

one or more spring elements acting so as to push the anchoring element from the underside away from the retaining lugs without exercising inventive skill.

2.3 The subject-matter of claim 1 thus involves an inventive step in view of the objections raised.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

C. Moser C. Herberhold

Decision electronically authenticated