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D E C I S I O N
of 19 July 1996

Case Number: T 0702/95 - 3.2.1

Application Number: 89909883.4

Publication Number: 0433335

IPC: F16L 21/02

Language of the proceedings: EN

Title of invention:

Method of providing a joint between two components

Patentee:

AB KINDS PRODUKTER

Opponent:

Idealplast AB Division Plast

Headword:

-

Relevant legal provisions:

EPC Art. 56, 84, 123(2) & (3)

Keyword:

"Amendments - opposition proceedings - added subject-matter
(no) - broadening of the scope of claim (no)"

"Novelty (yes)"

"Inventive step (yes)"

Decisions cited:

-

Catchword:

-



Case Number: T 0702/95 - 3.2.1

D E C I S I O N
of the Technical Board of Appeal 3.2.1
of 19 July 1996

Appellant: Idealplast AB Division Plast
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Respondent: AB KINDS PRODUKTER
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 20 June 1995
rejecting the opposition filed against European
patent No. 0 433 335 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: F. A. Gumbel
Members: P. Alting van Geusau
G. Davies

Summary of Facts and Submissions

- I. European patent No. 0 433 335 was granted with effect from 16 March 1994 on the basis of the international application No. PCT/SE89/00469.
- II. Notice of opposition was filed on 12 December 1994 on the grounds of lack of novelty and inventive step (Article 100(a) EPC) as well as on the ground that the subject-matter of the patent extended beyond the content of the application as filed (Article 100(c) EPC).

Of the state of the art relied upon in the opposition proceedings only that reflected by the following pre-published documents played any significant role in the appeal proceedings:

D1: NL-A-8 203 087
D2: FR-A-2 126 485
D3: US-A-2 145 279
D4: DE-A-2 709 426

- II. By its decision given at the oral proceedings on 1 June 1995 and posted in writing on 20 June 1995 the Opposition Division held that the claimed subject-matter involved an inventive step and did not extend beyond that of the application as it was originally filed. Consequently the opposition was rejected.
- III. An appeal was filed against this decision on 15 August 1995 with payment of the appeal fee on the same day. The appellant (opponent) requested that the decision under appeal be set aside and the patent revoked.

The statement of grounds of appeal was filed on 27 October 1995.

IV. Oral proceedings before the Board were held on 19 July 1996. During the oral proceedings the respondent (proprietor) filed a new set of claims (claims 1 to 3) and an amended description. The respondent requested maintenance of the patent in amended form on the basis of these new documents and the drawings as granted.

Claim 1 of this request reads:

"1. A method of providing a tensile-stress resistant and fluid tight joint (5) between two mutually insertable components (2, 4), said components being tubes, bends, jointing sleeves or connecting boxes of plastics used in electrical installations in buildings, wherein an adherent elastic sealing material (6) is applied on at least one of said components (2 or 4) on the end (1 or 3) thereof facing the opposite one of said components for engagement therewith, by integrally applying the elastic material (6) on a smooth, axially extending surface on said end (1 or 3) so as to form a unit with said opposite component (2 or 4) after said insertion, in such a way that use is made of the friction between the facing surfaces of the joint and of the sealing properties of the material, said application of the elastic material (6) being effected during or in connection with the manufacture of the components (2 or 4)."

V. The appellant's submissions in support of its request for revocation of the patent, as far as they are still relevant with respect to the presently claimed subject-matter, can be summarised as follows:

Amendments

The amendments carried out in the granted claim did not meet the requirements of the EPC. In particular, by replacing the word "adhesive" by "adherent" the scope of claim 1 was extended, contrary to the requirements of Article 123(3) EPC, because "adherent" had a wider meaning than "adhesive". Furthermore, the present claim 1 did not meet the requirement of Article 84 in respect of clarity, since nothing else than a frictional engagement of the parts to be assembled was disclosed and therefore the claim should be restricted in that use was made "solely" of the friction between the facing surfaces of the joint.

The word "integrally" in claim 1 had no basis in the application as originally filed and therefore contravened the requirements of Article 123(2) EPC.

Novelty and inventive step

The closest prior art as represented in D4 provided a method of connecting two mutually insertable components which fully reads on to the presently claimed method. Therefore claim 1 lacked novelty within the meaning of Article 54 EPC.

In particular the terms "adherent" and "integrally" did not distinguish it from a separate elastic sealing part, such as shown in D4, fixed in a manner that it was part of one of the components or a sealing part that was fixed to the component in any other manner.

Anyhow, the joint resulting from D4 was also a tensile resistant joint and it would not, in view of the prior art disclosed in D1 or D2 and the application of the elastic material by spraying application, known in

itself from D3, need any inventive ingenuity to replace the separate sealing ring disclosed in D4 by a ring of similar material directly sprayed on to one of the components. In this respect D1 already disclosed on page 3, lines 28 and 29 an alternative in which the adhesive might be an acrylic adhesive in capsules enclosed in a neutral coat of paint. Given the tacky consistency of the elastic sealing material in the examples of the components presented by the respondent during the oral proceedings, it was not seen where there was a difference, let alone a difference that could be considered to involve an inventive step.

- VI. The respondent contested the appellants views and relied essentially on the following submissions:

Amendments

The amendments to claim 1 concerned mere limitations to subject-matter disclosed in the application as it was originally filed.

According to well-known dictionaries, the term "adhesive" is defined as "adhering" and these two terms had thus essentially the same meaning. Since adhering was used in the originally-filed application documents, the replacement of the term "adhesive" by "adherent" did not interfere with either the requirements of Article 123(2) or (3) EPC.

The introduction of the term "integrally" (applying the elastic material), was essentially a generalisation of the application of the elastic material in the preferred embodiments as defined in dependent claims 2 and 3.

In an attempt to further specify the meaning of the term "to form a unit" and the manner in which a fluid tight joint was achieved by the method of claim 1, the wording used in the originally filed claim 5 had been introduced. None of these amendments interfered with the requirements of either Article 123(2) or (3) EPC.

Novelty and inventive step

The subject-matter of claim 1 was novel over D4 since, in the usual meaning of the wording of claim 1, separately fixed or inserted sealing rings were excluded. The advantage of the method defined in claim 1 of the patent in suit was the simple manner in which the elastic sealing material was applied so that an individual ring would not have to be manufactured for each different size of tube or other component.

D1 and D2 related to bonded joints and as such did not lead the skilled person to the subject-matter of claim 1 of the patent in suit either.

Reasons for the Decision

1. The appeal is admissible.
2. *Amendments*
 - 2.1 Present claim 1 is distinguished from granted claim 1 in that:
 - (a) in the phrase "adhesive elastic sealing material" in lines 6 and 7, the term "adhesive" was replaced by "adherent",

- (b) the word "integrally" was inserted between "by" and "applying" in line 10
- (c) in line 14 after the word "insertion," the words "in such a way that use is made of the friction between the facing surfaces of the joint and of the sealing properties of the material" were added.

2.2 It is to be noted that the term "adhesive" is not mentioned in the application as it was originally filed.

When considering whether the replacement of the term "adhesive" by "adherent" is acceptable in particular the requirements of Article 123(2) and (3) EPC should be complied with.

In accordance with the disclosure of the application in its originally-filed form, the elastic material applied to one or both of the components to be connected to each other "adheres" to the component (see claim 1 and page 4, line 18 of the published PCT document WO 90/02902). This disclosure is a sound basis for feature (a) in respect of Article 123(2) EPC.

However, the question arises whether the replacement of "adhesive" by "adherent" is also acceptable in view of the requirement of Article 123(3) EPC that the amendment should not change the scope of the granted claim 1 to extend the protection conferred by the granted patent.

In accordance with dictionaries of the English language such as the Oxford English Dictionary and Webster's Dictionary the adjective "adhesive" is defined as "having the property of adhering; sticky" or "tending to adhere or cause adherence" and thus has essentially the same meaning as the adjective "adherent" which is defined as "sticking to" or "able or tending to adhere".

No objectively verifiable basis for the allegation that the adjective "adherent" is of broader scope than "adhesive", was presented by the appellant.

When considering the content of the application in its originally-filed form in the patent specification, it is immediately clear that the tensile stress resistance and fluid sealing properties of the joint are the result essentially of the friction between the facing surfaces of the joint and the sealing properties of the elastic material (see also the originally filed claims 1 and 5) rather than that the elastic material has the properties of a glue or cement in order to provide a fixed bond between the two mutually-insertable components.

Considering that, in addition to the replacement of "adhesive" by "adherent", the extent of the joining and sealing of the two mutually-insertable components is clarified by the introduction of features (c), the Board is satisfied that the above feature (a) does not infringe the requirements of Article 123(3) EPC and that the scope of the claim is sufficiently clarified (Article 84 EPC) to exclude a bonded joint.

The introduction of the term "integrally" (feature (b)) is implicit from the direct application of the elastic material to the component and is therefore to be seen as supported by the disclosure of the application in its originally filed form. This amendment clarifies the nature of the application of the adherent elastic material so that it forms part of the component to which it is applied and excludes interpreting claim 1 as a preassembly method of a component and a distinct sealing part (such as in the prior art disclosed in D4).

The present claim 1 thus also meets the requirements of Article 84 EPC in respect of clarity and support, which conditions, as a consequence of Article 102(3) EPC, apply when maintenance of a patent in amended form is requested.

- 2.2 The dependent claims 2 and 3 are repetitions of the granted claims 2 and 3, respectively the originally-filed claims 7 and 8.

The description and drawings were adapted to conform with the actual wording and scope of the claims. The description further comprises a reference to the most relevant prior art as required by Rule 27(1)(b) EPC.

These claims and documents do not give rise to objections under the EPC either.

3. *Novelty*

- 3.1 The parties and the Board are in agreement that D4 represents the closest prior art.

This document discloses a method of providing a tensile stress resistant and fluid tight joint between two mutually-insertable plastic tubes (PVC tubes).

An elastic ring is concentrically mounted in one of the tube ends and the other tube is inserted into this end of the tube. Due to compression of the elastic ring and frictional properties of the ring and tube material, the joint between the components is tensile-stress resistant and fluid tight.

3.2 The method of claim 1 differs from this known method in that the elastic material is an adherent elastic material which is integrally applied on at least one of the components whereby the application of the elastic material is effected during or in connection with the manufacture of the components.

3.3 The appellant considered that these features did not clearly distinguish the method of claim 1 from the method known from D4 and that therefore claim 1 lacked novelty.

This opinion cannot be followed because, following the usual interpretation of the wording used in claim 1, it is immediately clear to the skilled person that the application of adherent material integrally and directly to the component during or in connection with the manufacture of the components excludes the use of a separate sealing ring.

3.4 Since none of the cited documents comes closer to the subject-matter of claim 1 than D4, the subject-matter of claim can be considered novel.

4. *Inventive step*

4.1 Considering the method known from D4, it will be clear that for each tube diameter a different size of ring has to be manufactured. Each such ring should be manufactured in accordance with relatively high accuracy such that distinct frictional and sealing properties are achieved which guarantee a tensile-stress-resistant and fluid-tight joint after insertion of the counterpart for each of the tube size ranges.

Starting from the closest prior art as represented by D4, the object of the patent in suit is to eliminate such problems and disadvantages encountered with this prior art method.

- 4.2 No lead to the direct and integral application of adherent elastic material instead of the use of a separate sealing ring can be derived from the cited documents.

D1 and D2, considered to be pertinent by the appellant, both clearly concern the manufacture of bonded joints by means of an adhesive.

In the Board's opinion, the problems encountered when making a connection in which use is made of the friction between the facing surfaces of the joint, implying of course a well-defined relation between the elastic properties and thickness of the adherent material applied to the component, or when making a bonded connection in which it is important only that enough adhesive is available at the joint, are substantially different. Therefore the skilled person would not consider either D1 or D2 when seeking a solution to the problem underlying the patent.

The appellant's argument that D1 discloses an acrylic adhesive provided in capsules enclosed in a neutral coat of paint and therefore has adherent, sealing and elastic properties, cannot be accepted for the reasons already put forward by the Opposition Division in the decision under appeal. In contrast to the method of claim 1, in the method according to D1 the material becomes adhesive when the capsules are crushed during insertion of the tube end and a bond between the components is provided. This document does not provide any hint in the direction of the elastic property of the material being an

important parameter which determines the friction between the facing surfaces of the joint and together with the amount of material applied can be selected such that a tensile-stress resistant joint is achieved after insertion of the tubes just by friction.

Hence, contrary to the appellant's opinion even by combining the teaching of D4 on the one hand and D1 or D2 on the other hand, the skilled person would not arrive at the solution as specified in claim 1.

D3 deals with the internal coating of tubes and bears no relation whatsoever with the insertion of tube ends or use of properties of the coating material for the connection of the tube ends.

4.3 Therefore the Board comes to the conclusion that the subject-matter of claim 1 according to the respondent's request cannot be derived in an obvious manner from the cited prior art and accordingly involves an inventive step (Article 56 EPC). This claim, together with dependent claims 2 and 3 and the amended description and drawings as granted form a suitable basis for maintenance of the patent in amended form.

Order

For these reasons it is decided that:

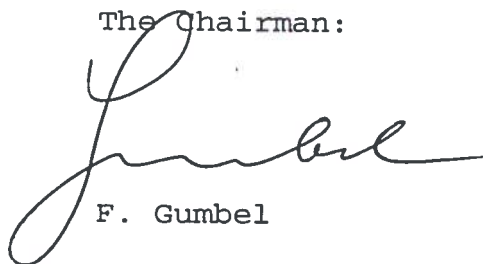
1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to maintain the patent on the basis of claims 1 to 3 according to the request filed during the oral proceedings, together with the amended description filed also during the oral proceedings and the drawings as granted.

The Registrar:



S. Fabiani

The Chairman:



F. Gumbel