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Aktenzeichen / Case Number / N° du recours : T 216/83

Anmeldenummer / Filing No / N° de la demande : 79 301 932.4

Veröffentlichungs-Nr. / Publication No / N° de la publication : 0 009 392

Bezeichnung der Erfindung: Couplings

Title of invention:

Titre de l'invention :

Klassifikation / Classification / Classement : F 16 L 21/02

ENTSCHEIDUNG / DECISION

vom / of / du 9 December 1986

Anmelder / Applicant / Demandeur :

POLYPIPE LIMITED

Patentinhaber / Proprietor of the patent /

Titulaire du brevet :

Einsprechender / Opponent / Opposant :

Stichwort / Headword / Référence :

EPO / EPC / CBE

Kennwort / Keyword / Mot clé : Article 56

"Inventive step"

Leitsatz / Headnote / Sommaire



Case Number : T 216/83

DECISION
of the Technical Board of Appeal 3.2.1
of 9 December 1986

Appellant : POLYPIPE LIMITED
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Representative : Johnson, Terence Leslie
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Decision under appeal : Decision of Examining Division 118 of the European Patent Office dated 8 July 1983 refusing European patent application No. 79 301 932.4 pursuant to Article 97(1) EPC

Composition of the Board :

Chairman : P. Delbecque

Member : C. Maus

Member : P. Ford

Summary of Facts and Submissions

- I. European patent application No. 79 301 932.4, filed on 18 September 1979, published under publication number 0 009 392 and claiming the priority of a previous application of 22 September 1978, was refused by the decision of of the Examining Division 118 dated 8 July 1983.

The decision was based on Claims 1 to 13 received on 21 August 1982.

- II. In its decision, the Examining Division held that the subject-matter of Claim 1 did not involve an inventive step having regard to German "Offenlegungsschrift" No. 2 548 581.
- III. On 5 September 1983, the Appellants lodged an appeal against the decision by telex, requesting that the decision under appeal should be cancelled in its entirety. A letter reproducing the contents of the telex was received on 12 September 1983. The fee for appeal was paid on 6 September 1983 and the Statement of Grounds was submitted on 11 November 1983.
- IV. In a communication dated 5 June 1984 the Rapporteur drew the Appellants' attention additionally to US patent specification No. 4 083 586 and to British patent specification No. 1 175 503 and No. 1 183 881 and raised an objection as to the patentability of the subject-matter of Claims 1 to 5 received on 21 August 1982.
- V. In the oral proceedings which were held on 9 December 1986 the Appellants requested that the decision under appeal should be set aside and that a patent should be granted on the basis either of the following Claim 1:

"1. A pipe coupling comprising a socket (13) which in use receives a tubular member, the socket having an internal circumferential groove which in use receives a sealing ring (14) to form a seal between the inner wall of the socket and the outer wall of the tubular member, the groove being defined between a shoulder (15) on the inner wall of the socket and an end (16) of a separately formed retaining ring (17) inserted into the socket, the socket having an aperture (19) extending radially from outside the socket through the wall of the socket, and the retaining ring having a radially extending projection (18), characterised in that the dimensions of the socket (13) and the retaining ring (17) are so related that, when the retaining ring (17) is inserted into the socket (13), the projection (18) extends into the aperture (19) for substantially the entire radial extend of the aperture."

and Claims 2 to 13 received on 21 August 1982, or
(Auxiliary Request)

Claims 1 to 3, description and drawings as submitted in the oral proceedings.

Claim 1 according to the auxiliary request reads as follows:

"1. A pipe coupling comprising a socket (13) which in use receives a tubular member, the socket having an internal circumferential groove which in use receives a sealing ring (14) to form a seal between the inner wall of the socket and the outer shoulder (15) on the inner wall of the socket and an end (16) of a separately formed retaining ring (17) inserted into the socket and retained therein by a snap fit characterised in that the retaining ring (17) has at least one radially extending projection (18) and there are at

least two apertures (19a, 19b) in the wall of the socket, spaced apart longitudinally of the socket, so that the retaining ring (17) can be retained within the socket in at least two different positions, engagement of the projection (18) of the retaining ring in the first aperture (19a) enabling the groove to accommodate one size of sealing ring (14), while engagement of the projection in the second aperture (19b) enables the groove to accommodate another size of sealing ring (14)."

The Appellants were of the opinion that the subject-matter of Claim 1 according to the main request involved an inventive step. They emphasized that the retaining ring of the pipe coupling according to this claim could not be dismantled when inserted into the socket. They were prepared to introduce in the claim the feature that the socket was composed of plastics material, and functional statements concerning the impossibility of dismantling the coupling.

- VI. For the original claims and description reference is made to publication No. 0 009 392.

Reasons for the Decision

1. The appeal complies with Articles 106 to 108 and Rule 64 EPC and is, therefore, admissible.
2. Having examined the cited documents inclusive European publication No. 0 008 935, the Board has come to the conclusion that the subject-matter of Claim 1 according to the main request is novel having regard to this prior art.
3. On the question of whether or not the pipe coupling characterised in the aforesaid claim was obvious, the following should be observed:

- 3.1 Claim 1 concerns a pipe coupling of the kind which is disclosed in German "Offenlegungsschrift" No. 2 548 541. This coupling comprises a separately formed retaining ring. It is inserted into the socket of the coupling and is retained by a snap fit. The snap fit consists of tongues extending radially from the retaining ring and of apertures extending radially through the (whole) wall of the socket.
- 3.2 The Appellants regarded a pipe coupling like this as insecure, and thus leaking, when it was subjected to rough handling, vibrations and the like, since the snap fit could open under these conditions.
- 3.3 Being confronted with this problem the person skilled in the art would recognise immediately the reason for the insecurity of the coupling. It is in consequence of the fact that the projections of the snap fit consist of tongues. Such projections cannot snap in deeply enough into the corresponding apertures of the socket and might, therefore, disengage when the snap fit is subjected to the aforementioned conditions. As the security against opening of the snap fit depends on how far on the projections extend into the apertures it is obvious to the skilled person to overcome this shortcoming of the coupling described in German "Offenlegungsschrift" No. 2 548 541 by dimensioning the relation between the broadness of the projections and the extent of the apertures as it is stated in the characterising portion of Claim 1. This dimensioning is particularly obvious as the skilled person already learns from the document itself to attend to the appropriate adaption of the dimensions of the projections and of the apertures (cf. page 9, lines 10 to 12).

- 3.4 Concerning the contour of the projections the claim comprises no details. Consequently, the Appellants consider the choosing of an appropriate contour as a matter of normal considerations of the person skilled in the art.
- 3.5 As to the opinion of the Appellants that the retaining ring of the coupling according to the application could not be dismantled when retained within the socket the following should be remarked:

The features mentioned in Claim 1 are not sufficient to prevent dismantling of the retaining ring. For this a satisfactory rigidity of the socket is essential. However, the application as filed comprises no statement in this respect. Neither is the problem of preventing the ring to be dismantled disclosed, nor is an indication given from which the skilled person could derive this. It is true that the person skilled in the art may learn from the statement on page 6, lines 13 to 20 of the description that the socket could be moulded even in rigid plastics material. However, as all intention is directed to the moulding of the socket including the withdrawing of the core of the mould, it does not follow from this statement that the term "rigid plastics material" means material which prevents dismantling of the retaining ring. The Board, can, therefore, leave the question undecided as to whether or not, for solving this problem, a distinct elasticity of the retaining ring would also be necessary since the specification, as filed, is silent about this.

- 3.6 It follows from the reasons given above that the subject-matter of Claim 1, to the extent it is supported by the application as filed, does not involve an inventive step within the meaning of Article 56 EPC and that the suggested supplement to the wording of the claim is not allowable.

4. Claim 1 according to the main request is, therefore, unallowable.
5. The rest of the set of claims according to the main request comprises only dependent claims. As the independent Claim 1 is not allowable the basis lacks for the allowability of the dependent Claims 2 to 13.

Under these circumstances, the issue of Claim 13, comprising apparently no further feature having regard to the foregoing claims, can be left undecided.

6. The examination of Claim 1 according to the auxiliary request produces the following result:
 - 6.1 The features mentioned in the claim are disclosed in the original Claims 1, 5 and 6. The subject-matter of the claim does not, therefore, extend beyond the content of the application as filed (Article 123(2) EPC).
 - 6.2 The Appellants derived the preamble of the claim from the pipe coupling disclosed in German "Offenlegungsschrift" No. 2 548 581 which is already discussed above in paragraph 3.1. After examining the other cited documents, the Board has come to the conclusion that they do not represent prior art which is closer to the subject-matter of the claim than the aforesaid coupling.

As the Appellants have mentioned in the preamble of Claim 1 all those features which, in combination, are part of the disclosure in the "Offenlegungsschrift", the claim is not open to objection in respect of Rule 29(1) EPC.

- 6.3 It follows from the foregoing that the subject-matter of Claim 1 is not disclosed in European publication No. 0 008 935 and in any one of the other cited documents

which are published before the date of priority. It is, therefore, novel having regard to the state of the art to be taken in consideration.

6.4 Concerning the question of whether or not the pipe coupling according to Claim 1 was obvious the following considerations seem to be relevant:

6.4.1 Among the documents cited in addition to German "Offenlegungsschrift" No. 2 548 581 and published before the date of priority only British patent specifications No. 1 175 503 and No. 1 183 881 and US patent specifications No. 3 827 734 and No. 4 083 586 concern pipe couplings comprising a socket having an internal circumferential groove which is defined between a shoulder on its inner wall and an end of a separately formed retaining ring inserted into the socket, and which receives in use a sealing ring.

6.4.2 In the pipe couplings disclosed in British patent specifications No. 1 175 503 and 1 183 881 and in US patent specification No. 3 827 734, the distance between the shoulder and the inner end of the retaining determines the height of the sealing ring which is retained in the socket by a snap fit. A possibility of modifying the distance, in order to use sealing rings of different size, does not exist if the contour of the ring is fixed.

6.4.3 According to US patent specification No. 4 083 586 a circumferentially continuous ring is located between the sealing ring and the retaining ring. Even if it is supposed that this construction would allow sealing rings of different size to be accommodated, this would not alter the fact that the document could not, neither *per se* nor in combination with the other aforesaid documents, suggest the

subject-matter of Claim 1 as a solution of the problem to accommodate sealing rings of different sizes on a pipe coupling as shown in German "Offenlegungsschrift" No. 2 548 581.

6.4.4 The other patent specifications cited in the search report give no hint of this, as they concern pipe couplings without a sealing ring in a groove in the inner wall of the socket.

6.4.5 Consequently, the subject-matter of Claim 1 according to the auxiliary request involves an inventive step within the meaning of Article 56 EPC.

6.5 This claim is, therefore, allowable (Article 52 EPC).

6.6 Dependent Claims 2 and 3 concern particular embodiments of the coupling according to Claim 1 and thus are likewise allowable.

6.7 The description is adapted to the restricted Claim 1 and refers to the relevant German "Offenlegungsschrift" No. 2 548 581. Hence, it is not open to objection.

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 grant a European patent on the basis of the following documents:

Claims 1 to 3, submitted during the oral proceedings,
description, submitted during the oral proceedings,
drawings, submitted during the oral proceedings.

The Registrar:

Rückerl

The Chairman:

Delbecque