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Aktenzeichen / Case Number / N<sup>o</sup> du recours : T 395/87

Anmeldenummer / Filing No / N<sup>o</sup> de la demande : 81 102 665.7

Veröffentlichungs-Nr. / Publication No / N<sup>o</sup> de la publication : 0 038 022

Bezeichnung der Erfindung: Metallised bonded sheet comprising a  
Title of invention: polyolefinic film and a paper or paperboard sheet  
Titre de l'invention :

Klassifikation / Classification / Classement : B32B 27/10

### ENTSCHEIDUNG / DECISION

vom / of / du 25 April 1990

Anmelder / Applicant / Demandeur :

Patentinhaber / Proprietor of the patent /  
Titulaire du brevet :

Moplefan s.p.A.

Einsprechender / Opponent / Opposant :

- (1) PKL Papier und Kunststoffwerke
- (2) Hoechst AG
- (3) Unilever N.V.

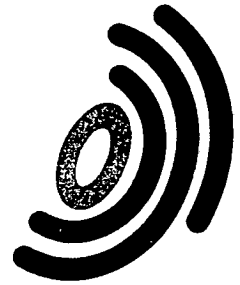
Stichwort / Headword / Référence :

EPO / EPC / CBE Article 56

Schlagwort / Keyword / Mot clé :

"Inventive step (Yes) - non-obvious  
improvement"

Leitsatz / Headnote / Sommaire



Case Number : T 395/87 - 3.3.2

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.2  
of 25 April 1990

**Appellant :**  
(Opponent 03)

Unilever N.V.  
Burgemeester's Jacobplein 1  
NL-3015 CA Rotterdam NL

**Representative :**

Hutzelmann, Gerhard  
Duracher Strasse 22  
D-8960 Kempten

**Respondent :**  
(Proprietor of the patent)

Moplefan S.p.A.  
31, Foro Bonaparte  
Milan  
Italy

**Representative :**

Barz, Peter, Dr.  
Patentanwälte Dr. V. Schmied-Kowarzik  
Dipl.-Ing. G. Dannenberg  
Dr. P. Weinhold Dr. D. Gudel  
Dipl.-Ing. S. Schubert Dr. P. Barz  
Siegfriedstrasse 8  
D-8000 München 40

**Other Parties :**  
(Opponent 01)

PKL Papier- und Kunststoffwerke Linnich GmbH  
Heerdter Sandberg 32  
D-4000 Düsseldorf (DE)

**Representative :**

LOUIS, PÖHLAU, LOHRENTZ & SEGETH  
Ferdinand-Maria-Strasse 6  
D-8130 Starnberg

(Opponent 02)

Hoechst Aktiengesellschaft, Frankfurt (Main)  
c/o Kalle Niederlassung der Hoechst AG  
Postfach 3540  
D-6200 Wiesbaden 1 (DE)

**Representative :** -

**Decision under appeal :** Interlocutory decision of the Opposition Division of the European Patent Office dated 11 September 1987 concerning maintenance of European patent No. 38022 in amended form.

**Composition of the Board :**

**Chairman :** A. Nuss

**Members :** I. Holliday  
R. Schulte

## Summary of Facts and Submissions

- I. The mention of the grant of European patent No. 0 038 022, in respect of European patent application No. 81 102 665.7, filed on 8 April 1981, was published on 8 February 1984.
- II. Notices of opposition were filed by the Appellant (Opponent 03) and two further Opponents (Opponents 01 and 02). Of the thirteen documents cited by the Opponents, only the three most relevant mentioned at the appeal stage need to be considered in this decision:
- (6) DE-U-1 883 770
  - (9) DE-U-7 922 846
  - (11) Lueger, "Lexikon der Technik", Vol. 9, 1968, page 141.
- III. (i) In an interlocutory decision dated 11 September 1987, the Opposition Division decided to maintain the patent in amended form with the text as notified to the parties in the communication pursuant to Rule 58(4) EPC issued on 23 April 1987. Independent Claim 1 reads as follows:
1. A bonded sheet comprising two layers and, optionally, an interposed adhesive layer, one of said layers consisting of a polyolefinic film metallized on at least one face, the metallization having a resistivity of from 1 to 5 Ohms and the other layer consisting of a paper or paperboard sheet, characterized in that said paper or paperboard sheet is coated on at least one face with nitrocellulose or vinyl or vinylidene lacquer.

Dependent Claims 2-4 relate to preferred embodiments of the above bonded sheet, including the optional provision of a welding or heat sealing layer.

(ii) In its decision, the Opposition Division took the view that, having regard to the closest state of the art, DE-U-7 922 846 (9), none of the other cited documents would have led the skilled man to coat the paper surface of the known metallised polyolefin/paper laminate with either nitrocellulose or with a vinyl or vinylidene lacquer in order to solve the problem of improved folding characteristics.

IV. The Appellant filed a notice of appeal against this decision on 10 November 1987, paying the appeal fee at the same time. A Statement of Grounds of Appeal was filed on 8 January 1988.

The essence of the Appellant's argumentation was that the closest prior art (9) differed from the subject-matter of Claim 1 of the patent in suit only in that the paper surface of the bonded sheet lacked the coating with nitrocellulose or a vinyl or vinylidene lacquer. Having regard to (11), it would have been obvious to the man skilled in the art to apply a plastics coating to the bonded sheet known from (9) to improve its properties for packaging purposes.

The Appellant also considered that the amended Claim 1 lacked an essential feature in that the use of oiled paper was mandatory.

V. The Respondent (Proprietor of the Patent) accepted that (9) represented the closest prior art. However, it was considered that (11) was a very general disclosure which

did not point to the actual coatings, referred to in Claim 1 of the patent in suit. The Respondent also pointed to the improvement demonstrated by evidence submitted during the opposition proceedings which accompanied the letter dated 28 August 1985.

VI. In accordance with the provisions of Rule 71(2) EPC, oral proceedings took place on 25 April 1990 in the absence of the Appellant and Opponent (01), party as of right according to Article 107 EPC. Opponent (02), also a party as of right, who like Opponent (01) has up to this time played no active part in the appeal, was, contrary to the latter, represented at the hearing.

The parties present at the oral proceeding, argued as follows:

- (i) Starting from (6), briefly mentioned in the contested decision, Opponent (02) submitted that this document discloses a bonded sheet of the type: vinylidene lacquer/aluminium foil/vinylidene lacquer/adhesive/paper/vinylidene lacquer. At the time of publication of (6) (i.e. 1963), metallised plastics films were scarcely known. However, at the priority date of the patent in suit (11 April 1980), such metallised films were well known and it would, accordingly, have been obvious to replace the vinylidene coated aluminium foil of the bonded sheet of (6) with metallised polyolefin known from (9) and so arrive at the bonded sheet of the contested patent.
- (ii) The Respondent refuted the Opponent's argument, pointing to the different problem underlying (6). A bonded sheet involving aluminium foil could never be capable of surviving the folding test referred to in the comparative experiments mentioned above.

VII. The Appellant requested, in the letter of appeal, the cancellation of the decision of the Opposition Division and the revocation of the patent.

The Opponent (02) requested, at the oral proceedings, that the decision under appeal be set aside and that the patent be revoked.

The Respondent requested, at the oral proceedings, that the appeal be dismissed and that the patent be maintained.

#### Reasons for the Decision

1. The appeal complies with Articles 106 to 108 and Rule 64 EPC and is admissible.
2. Claim 1 as amended during the opposition procedure (see point III above) is supported by Claim 1 as originally filed, together with page 2, lines 36 and 37 of the patent specification (page 3, lines 29-31 of the originally filed documents). The amendment does not extend the scope of the protection conferred by the patent. Accordingly, the requirements of Article 123(2) and (3) are met.
3. The patent in suit relates to a metallised bonded sheet comprising a polyolefinic film and a paper or paperboard sheet. According to the introductory part of the description, the object is to provide a bonded sheet for packaging having a high capability of retaining a fold, high resistance to gas or vapour diffusion, high antistatic properties, good weldability and excellent mechanical properties. On page 3, lines 6-7, it is stated that the bonded sheets are useful in the packaging of foodstuffs, especially in the manufacture of boxes for biscuits. For

the latter purpose, having regard to repeated opening, it is important that the sheets have a high resistance to breakage along the fold line.

4. The closest prior art is document (9), which relates to a bonded sheet consisting of paper adhesively bonded to the metallised sheet of a metallised plastics film, e.g. polypropylene or polyethylene (cf. the drawing); a heat sealing layer (unidentified) is applied to the plastics film.
5. The technical problem to be solved in respect of the said closest prior art accordingly consisted in further improving the bonded sheet known from (9) in order to increase the resistance to breaking along the fold line.

In order to solve this problem, the patent in suit proposes to apply to at least one face of the paper layer of the bonded sheet known from (9), a nitrocellulose or a vinyl or vinylidene lacquer.

The experimental data provided by the Respondent in an annex to the response to the statements of opposition (received in the EPO on 28 September 1985) show that the said problem was indeed solved by this proposal. The Appellant has not challenged the said data. The file does not contain evidence of any other advantageous properties.

6. In the absence of any document disclosing all the features of Claim 1, the subject-matter thereof is deemed to be novel. The question of lack of novelty was not raised by the Appellant.
7. It remains, therefore, to examine whether or not the claimed solution to the above indicated technical problem meets the requirements for inventive step.

7.1 The experimental data referred to by the respondent (see Point 5.) show that bonded sheets in accordance with (9), i.e. in which the paper surface is not lacquered in accordance with Claim 1 of the patent in suit, do not solve the underlying problem insofar as the resistance to breakage along the fold line is unsatisfactory. It remains to be considered whether or not the application of the said lacquer to the paper layer would nonetheless have been obvious to the man skilled in the art at the priority date of the patent in suit.

The Appellant relied on (11), an entry in a standard German reference book concerning the finishing of paper. The pertinent part is the final sentence which states that the "packaging properties" (Verpackungseigenschaften) of paper are improved by coating with plastics. The reference is of a very general nature. It gives no indication of what is meant by the term packaging properties nor does it identify examples of the intended plastics material. Accordingly, in the Board's opinion, (11) cannot be regarded as giving the skilled man any incentive to apply a nitrocellulose, vinyl or vinylidene lacquer to the composite sheet known from (9) in order to solve the problem of breakage along the fold line.

7.2 Opponent (02), at oral proceedings, based an inventive step argument on document (6). The Opponent argued that it would have been obvious, in the light of developing technology, to replace the vinylidene coated aluminium foil of the composite sheet known from (6) with a layer of metallised polyolefin known from (9). However, (6) relates to package suitable for sterilising constructed from the said composite sheet. The emphasis is on sealing the packet against the ingress of moisture. There is no indication of repeated opening and closing of the package. It is also

clear that a composite sheet containing aluminium foil, i.e. a rather rigid material, would be quite incapable of passing the folding test referred to above. Thus, it is apparent that (6) is concerned with a different problem and the skilled man seeking to solve the problem indicated in point 5. above would have no incentive to start from the composite sheet known therefrom and to replace part of the composite with the metallised polyolefin layer known from document (9).

- 7.3 It follows from the preceding paragraphs that the subject-matter of Claim 1 involves an inventive step.

The same applies to dependent Claims 2 to 4 which concern particular embodiments of the bonded sheet according to Claim 1.

Hence, all four claims are allowable.

8. There is no substance in the Appellant's argument in the statement of appeal concerning a missing essential feature. It is quite clear from page 2, lines 33-35 of the published patent (page 3, lines 24-28 of the original disclosure) that the use of oiled paper is an optional feature; oiled paper is used in Examples 1-7 but parchment type paper is used in Example 8.
9. Consequently, there are no grounds which prejudice the maintenance of the patent in the form proposed by the Opposition Division in the communication pursuant to Rule 58(4) EPC dated 23 April 1987.

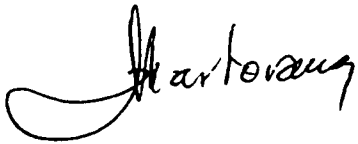
Order

For these reasons, it is decided that:

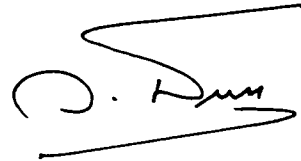
The Appeal is dismissed.

The Registrar:

The Chairman:



P. Martorana



A.J. Nuss

*du* 37.90  
*John M* 28.6.90