

Publication in the Official Journal ~~Yes~~ / No

File Number: T 113/89 - 3.3.2
Application No.: 83 300 832.9
Publication No.: 0 089 746
Title of invention: High gloss, low friction plastics sheet, method of
production thereof, and container made from the sheet
Classification: B32B 27/00

D E C I S I O N
of 25 June 1991

Applicant: AMERICAN NATIONAL CAN COMPANY

Headword: Plastics sheet/AMERICAN CAN

EPC Articles 84, 113(1), 116, Rule 67

Keyword: "Clarity of the claim (yes) - Claim not only defined by the result
to be achieved"
"Reimbursement of appeal fee (no) - Substantial procedural
violation (no) - Opportunity to present comments (yes)"

Headnote



Case Number : T 113/89 - 3.3.2

DECISION
of the Technical Board of Appeal 3.3.2
of 25 June 1991

Appellant : AMERICAN NATIONAL CAN COMPANY
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US

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Decision under appeal : Decision of Examining Division 032 of the
European Patent Office dated 15 September 1988
refusing European patent application
No. 83 300 832.9 pursuant to Article 97(1) EPC.

Composition of the Board :

Chairman : P.A.M. Lançon
Members : M.M. Eberhard
F. Benussi

Summary of Facts and Submissions

- I. European patent application 83 300 832.9 (publication No. 89 746) was refused by a decision of the Examining Division. The decision was based on Claim 4 of the set of claims filed on 24 March 1988.
- II. The ground for refusal was that Claim 4 did not meet the requirements of clarity set out in Article 84 because the method was only defined by the result to be achieved. It was held that the provision of a chill roll which allowed the manufacture of plastics sheets with special properties was regarded as the invention, therefore the method of producing plastic sheets according to Claim 4 should also automatically have included the method of obtaining a suitable roll. However, only the final aspect of the roll was defined in Claim 4, i.e. only the result to be attained.
- III. The Appellant lodged an appeal against this decision.
- IV. In a Board's communication, the Appellant's attention was drawn upon the provisional opinion of the Board that Claim 4 did not comply with the requirements of Article 123(2) and that this objection applied analogously to the additional independent Claims 1, 5, 6 and 9.
- V. In reply to the Board's communication, the Appellant filed two amended sets of claims on 4 June 1991 and 23 May 1991 corresponding respectively to the main request and to the first auxiliary request. As a second auxiliary request the Appellant proposed to amend Claim 4 of the main request by mentioning therein the method for obtaining the chill roll. Claim 4, so amended, was filed on 6 June 1991.

Claim 4 of the main request reads as follows:

"A method of producing a plastics sheet having a surface with both high gloss and low coefficient of friction characteristics, wherein a thermoplastic material is extruded to form a heated thermoplastic layer and the said layer is pressed, while still in a softened state, with a chill roll which is maintained at a temperature at which it will cool and harden the surface of the layer contacted thereby, the chill roll having a grit-blasted, polished surface which has minute irregularly shaped depressions distributed thereover, characterised in that for providing prominences in the plastics sheet having irregular shapes with substantially convex rounded peripheries, the depressions are substantially convex and rounded about the peripheries thereof on the surface of the roll, and their average depths are about 5 microns with a standard deviation of the depth of less than 3 microns, there being an average frequency of depressions over the surface of the roll of approximately 3,000 per square centimeter and the average area of each depression being less than 16,000 square microns."

VI. The main arguments submitted by the Appellant as regards clarity of Claim 4 may be summarised as follows:

The combination of shape, depth and distribution of the depressions is ascertainable by microscopic inspection of the surface of the roll. These features are physical features of the surface of the roll. Neither their inclusion in Claim 4 nor the fact that they were imparted to the roll by a particular method of modifying a standard commercial roll makes Claim 4 a claim defined by the result to be achieved.

Claim 4 expressly defines the novel combination of all the essential roll surface features which are to be employed and which represent the key to solving the problem facing the Applicant. The surface characteristics are expressed in terms of numerical parameters which the expert will understand and be able to measure. By adopting a roll as defined in Claim 4, the expert will not be expected to experience any undue difficulty in reducing Claim 4 to practice.

Furthermore, the Appellant contended that the decision was issued to a degree contrary to Article 113(1). He pointed out that the decision was issued without warning although he specifically invited the Examiner to telephone him in the first instance in case of further objections.

Therefore he was deprived of an opportunity of exercising his right under Article 116 to request oral proceedings. The Appellant further argued that he was denied the opportunity to present comments on the Examiner's unjustified and incorrect conclusion that he implicitly admitted the non-allowability of the alternative forms A and C of Claim 1 submitted on 5 August 1987. In the Appellant's view, a substantial procedural violation had therefore occurred.

VII. The Appellant requests that the decision under appeal be set aside and that a patent be granted on the basis of the set of claims filed on 4 June 1991 as main request, or on the basis of the set of claims filed on 23 May 1991 as first auxiliary request, or on the basis of Claim 4 filed on 6 June 1991 and Claims 1-3 and 5-11 submitted on 4 June 1991 as second auxiliary request. He further requests reimbursement of the appeal fee.

Reasons for the Decision

1. The appeal is admissible.

2. There are no objections under Article 123(2) to the amended Claim 4 of the main request. Claim 4 is based upon Claim 1 of the application as originally filed. The additional features, namely the "grit-blasted", polished surface of the chill roll and the "irregular shapes" of the depressions, are supported by the original description, page 6, lines 9-13 and by figure 6 which clearly shows the irregular shapes of the depressions. The fact that the depressions are substantially convex about their periphery "on the surface of the chill roll" is directly and unambiguously derivable from the passage at page 13, lines 19-22 of the description and from figure 6 to which this passage refers. Furthermore this amendment was necessary for the sake of clarity since depressions are normally concave as pointed out by the Examining Division. The additional statement in Claim 4 that the depressions have the recited characteristics "for providing prominences in the plastics sheet having irregular shapes with substantially convex rounded peripheries" is also directly derivable from the application as originally filed, in particular from page 10, lines 6-8, where it is disclosed that the surface characteristics of the chill roller are permanently impressed upon the surface of the plastics sheet.
 - 2.1 After examination of the amended independent Claims 1, 5, 6 and 9 of the main request which now include the additional features relating to the average area of the depressions and to the convex shape of their peripheries on the surface of the roll, the Board has come to the conclusion that they also meet the requirements of Article 123(2). Regarding Claims 1 and 5, it is implicit

from the data given in the description as regards the depth of the depressions before and after polishing that the very small depressions have been polished away, i.e. the number of depressions before polishing was greater than 3 000.

3. The only issue arising in this appeal is that of clarity in respect of Claim 4.

3.1 The average surface of each depression has been re-introduced in Claim 4 in order to overcome the Board's objection of non-compliance with the requirements of Article 123(2). In its communication dated 18 June 1986, the Examining Division considered that the average area of less than 16 000 square micrometres was not clear because it covers a very broad range of average areas and very different distributions of depressions. The Examining Division doubted whether any of these distributions represents a solution to the problem stated in the application.

This objection is, in essence, an objection against the broadness of the claim. However, the Examining Division did not indicate the reasons as to why it considered that there exists critical limits within the broad range of less than 16 000 μm^2 . Furthermore, in his letter of 14 October 1986 the Appellant pointed out that the recitation of this average area in the claim certainly covers an operable range. He further argued that the requirement concerning the average depth of the depressions also places a lower limit on their areas taking into consideration that the surface of the roller has been grit-blasted and polished. In the absence of any evidence showing the contrary, it appears to the Board that the average area of each depression is defined in Claim 4 by a range which is limited upwardly by a precise

upper value and downwardly by the combination of the other features recited in this claim and that the claimed process leads to a plastics sheet having the desired gloss and coefficient of friction characteristics. Therefore the Board does not see any objective reasons for questioning the clarity of this range.

- 3.2 In the Examining Division's opinion the process of Claim 4 is defined in terms of the result to be achieved.

Claim 4 indeed relates to a method for producing a plastics sheet which exhibits high gloss and low coefficient of friction characteristics, wherein a thermoplastic layer in a softened state is impressed with a chill roll having a grit-blasted, polished surface with irregularly shaped depressions distributed thereover. However, the characterising part of Claim 4 recites, besides the shape of the depressions, physical properties defining the topology of the surface of the roll which is to be employed for the impression of the layer. Thus, the average depth of the depressions, their average frequency, the average area of each of them and the standard deviation of the depth are clearly defined by specific values or range of values. In view of the statement at page 11 of the description, the skilled person is able to measure these parameters. In the Board's opinion the recitation of the characteristics regarding the surface configuration of the roll and the additional feature that the roll has a grit-blasted, polished surface constitute a clear definition of the roll which is to be used in the claimed process. Under these circumstances there is no need to mention in Claim 4 the method of making this roll as specifically described in the application.

According to the application, the main aim of the invention "is the provision of a plastics sheet having a

surface which exhibits a high gloss and possesses a surface configuration responsible for minimising the coefficient of friction of the surface" (cf. page 3, lines 12-16). This purpose is achieved by the method of producing a plastics sheet as defined in the preamble of Claim 4, wherein a roll having the surface configuration stated in Claim 4 is used for impressing the surface of the extruded thermoplastic layer (cf. page 3, line 16 to page 5, line 11). Hence the result to be achieved is the provision of a plastics sheet having the desired gloss and coefficient of friction characteristics, not the provision of a chill roll having the surface configuration indicated in Claim 4. This particular surface configuration of the roll represents, in the Board's view, the features essential to solving the problem stated at page 3 of the application. Therefore, the Board cannot follow the Examining Division's opinion that the method according to Claim 4 is defined by the result to be obtained.

3.4 For the preceding reasons, it is considered that Claim 4 meets the requirements of Article 84.

4. The Board is further of the opinion that the requirements of Article 83 are fulfilled even if Claim 4 does not mention the method of making the roll (see point 14.5 of the decision under appeal).

When examining sufficiency of disclosure, not only the claims but also the whole application should be taken into consideration. The application contains a description of how the chill roll is made starting from a roll which is commercially available from a supplier who is identified at page 11. The application further includes a photomicrograph of this starting roll and precise data about the depth of its depressions. Moreover it is referred to document US-A-3 300 286 (document (1)) as

regards the production of this starting roll. Therefore it is considered that the requirements of sufficiency of disclosure are also met.

5. In the communication dated 18 June 1986, the Examining Division expressed a provisional opinion as regards inventiveness of the process claimed in the original Claim 1, from which the present Claim 4 is derived. However, the question whether or not the process as claimed in the present Claim 4 would be considered as involving an inventive step in view of the subsequent Appellant's arguments has not been definitely decided.

Furthermore according to the Appellant's letter dated 18 October 1986, the present invention results in a plastics sheet with a markedly increased gloss without any concomitant increase in the coefficient of friction in comparison with the plastics sheet produced by the process of document (1). However, the Appellant has admitted in reply to the Board's communication that the coefficient of friction of the plastics sheet obtained by the method of Claim 4 is not as good as that obtained using the roll of document (1). Therefore it appears that the technical problem to be solved by the patent should be reformulated correspondingly and more precisely in the light of document (1) which the Board considers as closest prior art.

Under these circumstances, the Board finds it appropriate to remit the case to the Examining Division for further prosecution upon the basis of the claims of the main request.

6. To support his view that a substantial procedural violation within the meaning of Rule 67 has been made, the Appellant argued that the Examiner disregarded his

invitation to telephone him in the first instance in case of further objections (cf. Appellant's letter of 22 March 1988) and that he was deprived of an opportunity of exercising his right under Art. 116 to request oral proceedings.

In the present case the Examining Division sent three communications pursuant to Article 96(2) to the Appellant and invited him each time to file observations. In the third communication dated 23 September 1987, it was stated that the claims of the alternatives A, B and C were considered not to meet the requirements of clarity (Article 84) since they attempted to define the invention by the result to be achieved. It was also referred to the reasons indicated in the second communication (22 April 1987). In his reply dated 22 March 1988 the Appellant presented his comments in particular upon the clarity of the claim of alternative B which is identical to Claim 4 of the decision under appeal. As the decision is based on grounds which were stated in the third communication and upon which the Appellant had already commented, it was not necessary, in the Board's view, either to telephone the Appellant or to issue a further communication. Therefore the action of disregarding the Appellant's invitation to telephone him cannot be regarded in the present case as contrary to the provisions of Art. 113(1) (cf. T 42/84, OJ EPO 1988, 251).

- 6.2 According to Art. 116, oral proceedings shall take place if they have been requested by any party to the proceedings. However the Appellant's invitation to telephone him cannot be considered to be a request for oral proceedings (cf. T 42/84 mentioned above and T 299/86 of 23 September 1987 not published in OJ EPO). The Board further observes in this respect that the Appellant has had the opportunity to request oral proceedings at least

three times in reply to the Examiner's communications. Nevertheless he never requested them.

6.3 The Appellant further argued that he was denied the opportunity to present comments on the Examiner's incorrect conclusion regarding the claims of the alternatives A and C (cf. point VI above). The Board cannot see there any failure to meet the requirements of Article 113(1) since the grounds for refusal given in the decision under appeal are not based upon the Examining Division's conclusion that the Appellant implicitly admitted the non-allowability of these claims. Thus, in point 14.1 of the decision it is indeed observed that a somewhat curious situation is created insofar as the claims of alternatives A and C would be open to an objection under Article 84 while alternative B would not although it gives less information, however no findings are inferred therefrom as regards the compliance of Claim 4 (or alternative B) with the clarity requirements. Therefore it was not necessary to invite the Appellant to comment upon the contested conclusion regarding the alternatives A or C. Under these circumstances the decision would not be regarded as contrary to the requirements of Art. 113(1) even if the Examining Division's conclusion were unjustified.

6.4 It results from the preceding that neither Article 113(1) nor Article 116 was contravened. Therefore the Board comes to the conclusion that in the present case no substantial procedural violation has occurred and there is no basis for a reimbursement of the appeal fee under Rule 67 EPC.

Order

For these reasons, it is decided that:

1. The decision under Appeal is set aside.
2. The case is remitted to the Examining Division for further prosecution on the basis of Claims 1 to 11 filed on 4 June 1991 as main request.

The Registrar:

The Chairman:

P. Martorana

P.A.M. Lançon