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D E C I S I O N
of 28 October 2003

Case Number: T 0090/01 - 3.2.5

Application Number: 93918251.5

Publication Number: 0660760

IPC: B41N 10/04

Language of the proceedings: EN

Title of invention:
Printing blanket having improved dynamic thickness stability

Patentee:
Day International, Inc.

Opponent:
Continental AG

Headword:
-

Relevant legal provisions:
EPC Art. 54, 56, 83

Keyword:
"Sufficiency of disclosure (auxiliary request, yes)"
"Novelty (main request, no; auxiliary request, yes)"
"Inventive step (auxiliary request, yes)"

Decisions cited:
T 0494/95

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0090/01 - 3.2.5

D E C I S I O N
of the Technical Board of Appeal 3.2.5
of 28 October 2003

Appellant: (Opponent)
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Representative:
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Respondent: (Proprietor of the patent)
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Decision under appeal:
Decision of the Opposition Division of the European Patent Office posted 16 November 2000 rejecting the opposition filed against European patent No. 0660760 pursuant to Article 102(2) EPC.

Composition of the Board:

Chairman: W. Moser
Members: P. E. Michel
W. Widmeier

Summary of Facts and Submissions

I. The appellant (opponent) lodged an appeal against the decision of the Opposition Division rejecting the opposition filed against European Patent No. 0 660 760.

The Opposition Division held that the subject-matter of claims 1 and 7 as granted were novel and involved an inventive step. In addition, it was held that the invention was disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

II. Oral proceedings were held before the Board of Appeal on 28 October 2003.

III. The appellant requested that the decision under appeal be set aside and that the European Patent No. 0 660 760 be revoked in its entirety.

The respondent (patentee) requested as a main request that the appeal be dismissed and as an auxiliary request that the decision under appeal be set aside and that the patent be maintained on the basis of claims 1 to 11 presented during oral proceedings.

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

D1: DE-C-28 16 703

D2: "Kautschuktechnologie: Gummierte Stoffe", R.-D. Schenke, Stand 1986

D3: Distribution list for document D2

D4: DE-B-1 284 929

D5: "Mischungen für die Elastverarbeitung", W. Kleemann, Leipzig, 1982

D7: Manufacturing procedure for a layered fabric, 1985

D8: "Der Vakuum-Färbe- und Imprägnier- Foulard Vacupad und seine Effektivität in den verschiedenen Bereichen der Textilveredlung", Kleinewefers Industrie-Companie GmbH

D9: Report of a visit to Kleinewefers on 24 January 1979

D10: Delivery note of 25 September 1980

D11: "CONTI^{7} Offset Printing Blankets", Continental Gummi-Werke Aktiengesellschaft.

V. Claim 1 according to the main request of the respondent reads as follows:

"1. A printing blanket having an improved gauge stability, said blanket including a printing surface layer and a reinforcing woven fabric ply, said fabric ply being impregnated with an elastomeric compound prior to assembly into said printing blanket, said elastomeric compound at least partially penetrating into air spaces of individual fiber bundles in said woven fabric plies and fixing said fibers against relative movement, said blanket resisting permanent

deformation when subjected to printing nip pressures so that said blanket retains at least 95 % of its original gauge throughout the useful life of said printing blanket."

Claim 1 according to the auxiliary request of the respondent reads as follows:

"1. The process of making a printing blanket including a reinforcing woven fabric base ply and a printing surface layer disposed thereon, said printing blanket having improved gauge stability, the process comprising the steps of:
impregnating an elastomeric compound into said woven fabric ply such that said elastomer at least partially penetrates into the air spaces of individual fiber bundles in said woven fabric ply and fixes said fibers against relative movement; and
assembling said woven fabric ply and said printing surface layer to fabricate said printing blanket which is resistant to permanent deformation when subject to printing nip pressures such that said blanket retains at least 95 % of its original gauge throughout the useful life of said printing blanket."

VI. The appellant has argued substantially as follows in the written and oral procedure:

The term "useful life" as used in the claims is not defined in the patent in suit, so that it is not possible for the person skilled in the art to carry out the invention. There is no definition of the extent to which the elastomeric compound penetrates the woven fabric ply. The invention is thus not disclosed in a

manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

The subject-matter of claim 1 of the main request lacks novelty in view of the disclosure of document D4 and, in particular, the passage at column 5, lines 26 to 34. A printing blanket in which impregnation was carried out after assembly cannot be distinguished from a printing blanket in which impregnation was carried out before assembly.

The subject-matter of claim 1 of the auxiliary request also lacks novelty in view of the disclosure of document D4. Claim 1 of the auxiliary request does not make it clear in which order the steps of impregnation and assembly are carried out. As stated at column 3, lines 46 and 47 of the patent in suit, the term "impregnation" merely means that the elastomer is forced into individual threads of the fabric, so that the impregnation step could be carried out after assembly of the blanket.

The subject-matter of claim 1 of the auxiliary request does not involve an inventive step. The sample of the printing blanket included in document D11 constitutes the closest prior art. Not being informed as to how the blanket is made, the person skilled in the art would see two possibilities: either the layers of the blanket could be assembled, followed by pressing to force the elastomeric material into the fibres of the fabric layer; or the fabric ply could be impregnated, followed by assembly to form the blanket. Documents D5 and D8 indicate that the term "impregnation" would be understood by the person skilled in the art as

requiring dipping of the fabric into a dipping solution. This would not be possible after assembly of the blanket, so that the obvious choice would be to carry out the impregnation step before assembly of the blanket.

VII. The respondent has argued substantially as follows in the written and oral procedure:

The patent in suit refers to the term "useful life" at column 3, lines 33 and 34 as involving over one million impressions and in Examples 1 and 2 as "after two months and almost five million impressions". The person skilled in the art will know what the useful life of a blanket will be under varying conditions of use.

Document D4 relates to a blanket for screen printing as opposed to offset printing, for which stability under pressure is not necessary. Since the entire blanket is compressed in the vulcanisation step, the finished blanket is not compressible. The subject-matter of claim 1 of the main request is thus novel.

The vulcanisation step disclosed in document D4 cannot be equated with the impregnation step of claim 1. It is only possible to carry out the steps in the order specified in the claim, since impregnation of the woven fabric ply would not be possible after assembly of the blanket. The subject-matter of claim 1 of the auxiliary request is thus novel.

The subject-matter of claim 1 of the auxiliary request involves an inventive step. The only clear teaching of a process for making a printing blanket is available

from document D4. There is no reason to depart from this teaching. The method according to the invention enables improved control of the properties of the individual layers.

Reasons for the Decision

1. *Main request*

1.1 *Novelty of claim 1*

Document D4 discloses a printing blanket in which, after vulcanisation of the assembled blanket, all the fibrous elements are embedded in a solid rubber mass, which penetrates deeply into the spaces between the fibres of the plies (see column 5, lines 26 to 34). Although claim 1 specifies that the fabric ply is "impregnated with an elastomeric compound prior to assembly into said printing blanket", the claim is directed to a printing blanket per se, and a blanket in which the impregnation of the reinforcing woven fabric ply occurs prior to assembly cannot be distinguished from a blanket in which the impregnation is only carried out after the blanket is assembled.

Whilst there is no explicit disclosure of the feature of claim 1 according to which the blanket resists "permanent deformation when subjected to printing nip pressures so that said blanket retains at least 95 % of its original gauge during the useful life of said printing blanket", it was not contested by the respondent that the blanket of document D4 would satisfy this criterion.

Claim 1 does not specify that the blanket is suitable for offset printing. The fact that document D4 is concerned with a blanket for silk screen printing is thus not relevant to the issue of novelty of this claim.

The subject-matter of claim 1 thus lacks novelty in view of the disclosure of document D4 and the main request of the respondent is thus not allowable.

2. *Auxiliary request*

2.1 Sufficiency of disclosure

The appellant argues that the absence of a definition of the term "useful life" renders the disclosure of the invention insufficient. This term is regarded as being an indication in the independent claims that the object of the invention is to provide a printing blanket in which gauge loss remains within acceptable limits in use. The person skilled in the art is capable of assessing the useful life of a printing blanket based on the conditions of use. The Examples of the patent in suit give an indication that the useful life may be measured in terms of millions of impressions.

The appellant further argues that the absence of a definition of the extent to which the elastomeric compound penetrates the woven fabric ply also renders the disclosure of the invention insufficient. However, as stated in the decision under appeal, this term refers to a degree of penetration which results from the elastomer being forced or squeezed into the ply as opposed to the limited penetration which would occur as a result of coating of the fabric ply. It is further

necessary, as is made clear in claim 1, that the degree of penetration is sufficient to fix the fibres against relative movement.

The patent in suit thus satisfies the requirement of Article 83 EPC.

2.2 Novelty of claim 1

It was suggested on behalf of the appellant that claim 1 need not be construed so that the step of impregnating an elastomeric compound into the woven fabric ply precedes the step of assembling the woven fabric ply and the printing surface layer to fabricate the printing blanket. This cannot be accepted. The reference in the claim to "assembling said woven fabric ply" refers back to the preceding uses of this term in the claim, according to which the woven fabric ply is impregnated with an elastomeric compound which "at least partially penetrates into the air spaces of individual fiber bundles in said woven fabric ply and fixes said fibers against relative movement".

This interpretation of the claim is supported by the description of the patent in suit, which only discloses such a procedure. Two alternative methods are disclosed, in the first of which the woven fabric is dipped in a liquid rubber or latex solution, and in the second of which the elastomeric compound is forced under pressure into the woven fabric. In each case, the impregnation step is followed by assembly of the woven fabric ply and the printing surface layer to fabricate the printing blanket.

The subject-matter of claim 1 is thus novel, since the prior art does not disclose a method in which impregnation of the woven fabric ply is carried out before assembly of the woven fabric ply and the printing surface layer.

2.3 Inventive step

The closest prior art may be regarded, as proposed by the appellant, as being the sample of a printing blanket referred to as "Conti Airform" which was made available to the public at a printing trade fair in 1986 as part of the sample folder D11. Whilst this constitutes a disclosure of a printing blanket satisfying the criteria specified in claim 1, there is no suggestion as to how the blanket is made.

The problem facing the person skilled in the art is thus to provide a method of manufacturing a printing blanket having the properties known from the sample folder D11.

The only disclosure of a method of making a printing blanket available in the cited prior art is that of document D4. This document teaches a method in which a woven fabric ply is assembled with a printing surface layer, whereafter the assembled blanket is subjected to a vulcanisation process during which rubber is forced into the spaces between the fibres of the woven fabric (see column 5, lines 26 to 35). This procedure thus forms the obvious approach for the person skilled in the art seeking a method of manufacturing a printing blanket having the properties known from the sample folder D11.

Document D1 discloses a printing blanket comprising woven layers 2 which are referred to as "gummierte Lagen" (column 4, line 2), i.e. rubberised layers. This refers to the application of rubber to a surface of the layers. There is no disclosure of an elastomeric compound "at least partially penetrating into air spaces of the individual fiber bundles in said woven fabric plies and fixing said fibers against relative movement".

Documents D2 and D7 were not made available to the public before the priority date of the patent in suit. Whilst evidence (document D3) has been supplied to the effect that document D2 had been supplied to "Praktikanten", such recipients would not have been free of an explicit or implicit obligation to maintain secrecy. Document D7 is also an internal document, issued in 1985, but not intended to be made available to the public.

Document D5 relates to the adhesion of reinforcing fibres to rubber articles such as conveyor belts, fan belts, hoses and car tyres. Whilst the document suggests subjecting the fibres to a dip process, there is nothing to suggest that this treatment would be of use in a printing blanket comprising a woven fabric layer.

Documents D8, D9 and D10 relate to an apparatus for the impregnation of textiles. There is, however, nothing to suggest the use of this apparatus in the manufacture of a printing blanket.

The subject-matter of claim 1 thus involves an inventive step. Claims 2 to 11 relate to preferred embodiments of the process of claim 1 and thus similarly involve an inventive step.

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 the following documents:

   (a) claims 1 to 11 presented as auxiliary request during oral proceedings; and

   (b) description, pages 2 and 3 presented during oral proceedings and pages 4 to 6 as granted; and

   (c) drawings, Figure 1 as granted.

The Registrar: The Chairman:

R. Schumacher W. Moser