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**DECISION**  
of 10 April 2003

**Case Number:** T 1169/00 - 3.2.6

**Application Number:** 92909648.5

**Publication Number:** 0538486

**IPC:** D05B 85/02

**Language of the proceedings:** EN

**Title of invention:**  
Sewing machine needle and method of manufacturing same

**Patentee:**  
ORGAN NEEDLE CO., LTD.

**Opponent:**  
Groz-Beckert KG

**Headword:**  
-

**Relevant legal provisions:**  
EPC Art. 123(2), 84, 56  
EPC R. 55(c)

**Keyword:**  
"Opposition - admissible (yes)"  
"Prior art documents filed during appeal proceedings -  
admissible (yes)"  
"Amendments - added subject-matter (no)"  
"Clarity (yes)"  
"Inventive step (yes, third auxiliary request)"

**Decisions cited:**  
G 0002/95, G 0004/95, T 0328/87, T 0169/83, T 0522/94,  
T 1022/99

**Catchword:**  
-



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Boards of Appeal

Chambres de recours

Case Number: T 1169/00 - 3.2.6

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.6  
of 10 April 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 27 November  
2000 rejecting the opposition filed against  
European patent No. 0538486 pursuant to  
Article 102(2) EPC.

**Composition of the Board:**

**Chairman:** P. Alting van Geusau  
**Members:** G. Pricolo  
M. B. Tardo-Dino

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## Summary of Facts and Submissions

- I. The appeal is from the decision of the Opposition Division posted on 27 November 2000 to reject the opposition against European patent No. 0 538 486 granted in respect of European patent application No. 92 909 648.5.
- II. The Opposition Division held that the subject-matter of claim 1 was novel and involved an inventive step having regard to the disclosures of documents on file, in particular

D5: US-A-4 598 753;

D19: Catalog "Rhein Nadel", 1979 by Rheinnadel, pages 2, 121, 169, 172, 176;

D20: US-A-3 986 468;

and also having regard to an alleged prior use of a sewing machine needle of the kind 339.163A106 made by the opponent and shown in

D12: drawings No. 0.110.5 and 1.110.6,

which alleged prior use was taken into consideration despite the fact that it was "not unambiguously substantiated".

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III. The appellant (opponent) lodged an appeal, received at the EPO on 7 December 2000, against this decision. The appeal fee was paid simultaneously with the filing of the appeal. In the statement setting out the grounds of appeal, which was received at the EPO on 30 March 2001, the appellant filed a new document

D22: Fachwissen Bekleidung, Verlag Europa-Lehrmittel, 1989, pages 2, 3, 142 and 143;  
and a declaration of the company Rimac S.A.S. and an invoice as evidence in support of the alleged prior use.

IV. In an annex to the summons for oral proceedings pursuant to Article 11(2) Rules of Procedure of the Boards of Appeal the Board in response to an objection of the respondent expressed its preliminary opinion that although in the notice of opposition the ground of opposition of lack of novelty was substantiated solely in respect of independent claim 10 whilst the ground of opposition of lack of inventive step was substantiated solely in respect of independent claim 1, each ground for opposition should be discussed in respect of both independent claims, since the Opposition Division could decide upon each of them for both independent claims of the patent in suit.

V. Oral proceedings took place on 10 April 2003.

The appellant requested that the decision under appeal be set aside and that the patent be revoked. In the course of oral proceedings, the appellant filed document

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D19': page 144 of the catalogue "Rhein Nadel", 1979 by  
Rhein Nadel,

of which catalogue the previously filed document D19  
already constituted an extract.

The respondent (patentee) requested that the opposition  
be rejected as inadmissible or that the appeal be  
dismissed and the patent be maintained as granted. The  
respondent auxiliarily requested that the patent be  
maintained in amended form on the basis of the requests  
filed during oral proceedings, the first auxiliary  
request including claims 1 to 15, the second auxiliary  
request claims 1 to 14, and the third auxiliary request  
claims 1 to 9 together with amended description  
columns 1, 2, 3, 4, 7, 8.

VI. Independent claim 10 of the patent as granted (main  
request) reads as follows:

"10. A sewing machine needle including a cylindrical  
shank (12) of a large diameter, a blade (14, 16)  
arranged so as to extend from said shank (12) and a  
sharp needle point (60) formed at a distal end of said  
blade (14, 16), in which a continuous long groove (28)  
of a recessed shape is provided so as to extend from  
said shank (12) to a portion of said blade (14, 16) in  
proximity to said needle point (60), wherein a needle  
eye portion (30) is formed along said long groove (28),  
wherein said blade (14, 16) is formed with a  
clearance-above-eye (40), and wherein said blade (14,  
16) has inner side surfaces (28, 34) defining said long  
groove (28) and outer side surfaces (36), each being  
spread at a predetermined angle ( $\theta_{11}$ ,  $\theta_{12}$ ,  $\theta_{21}$ ,  $\theta_{22}$ ),

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characterized in that said blade (14, 16) is divided into a first blade section (14) and a second blade section (16) through two frust-conical portions (18, 20) formed on said blade (14, 16) in a manner to be spaced from each other, said needle eye portion (30) being arranged at said second blade section (16), a constriction (38) is arranged contiguous to said second blade section (16) and in proximity to said needle eye portion (30) of said second blade section (16) and formed into a sectional area smaller than said second blade section (16); and said clearance-above-eye (40) is provided on said constriction (38) in a manner to be opposite to said long groove (28)."

Independent claim 10 of the first auxiliary request additionally defines:

"said constriction (38) having a width at said outer surfaces smaller than the corresponding width of said second blade section (16)".

Independent claim 10 of the second auxiliary further defines:

"wherein said clearance-above-eye (40) is formed at both ends thereof with slant portions (24, 26) slanting with respect to an axis of the needle through which said clearance-above-eye (40) is connected to said second blade section (16); the slant portion (24) arranged in proximity to said needle eye portion (30) being formed into an inclination angle larger than that of the other slant portion (26)".

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Claim 1 of the third auxiliary request reads as follows:

"1. A method for manufacturing a sewing machine needle, said needle including a shank (12), a blade (14, 16) arranged so as to extend from said shank (12) and a needle point (60) formed at a distal end of said blade (14, 16), in which a continuous long groove (28) of a recessed shape is provided so as to extend from said shank (12) to a portion of said blade (14, 16) in proximity to said needle point (60), a needle eye portion (30) is formed along said long groove and said blade (14, 16) is formed with a clearance-above-eye (40), comprising the steps of: forming a needle blank (10) with said shank of a large diameter and a cylindrical shape and a blade (14, 16) of a diameter smaller than said shank (12) contiguous to a distal end of said shank (12); and subjecting said blade (14, 16) to die pressing to form said long groove (28) of a recessed shape extending from said shank (12) to a portion of said blade (14, 16) in proximity to said needle point (60), said needle eye portion (30) having a thin eye accommodating web (32) arranged along said continuous groove (28), and said clearance-above-eye (40), wherein said long groove (28) of said blade (14, 16) has inner side surfaces and outer side surfaces spread at a predetermined angle, respectively, by deforming said blade (14, 16), characterized in that before subjecting said blade (14, 16) to die pressing a first blade section (14) having a diameter smaller than said shank (12) contiguous to a distal end of said shank (12) and a second blade section (16) of a diameter smaller than said first blade section contiguous to a distal end of said first blade section

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(14) are formed, said first and second blade sections constituting said blade (14, 16); after forming said first blade section (14) as well as said second blade section (16) and before subjecting said blade sections to die pressing said second blade section (16) is formed with an elongated portion (22) of a cylindrical shape corresponding to said clearance-above-eye (40) of the sewing machine needle; and during the subjecting of said blade (14, 16) to die pressing, said elongated portion (22) is deformed to form said clearance-above-eye (40), the elongated portion thus formed providing the finished sewing machine needle with a constriction (38) of a width at said outer side surfaces smaller than the corresponding width of said second blade section (16)".

VII. The appellant argued essentially as follows:

In the notice of opposition it was stated that a sewing machine needle of the kind 339.163A106 was manufactured and sold by the opponent prior to the relevant date of the patent in suit. The prior used sewing machine needle was shown in detail in the drawings of D12. Pages of a sales catalogue of 1989 referring to said needle were filed, and a witness was offered to support the fact that the catalogue was distributed to members of the public. Furthermore, invoices were filed as evidence that the sale of the needle effectively took place. Finally, it was immediately evident what features of the prior used needle corresponded to those according to the wording of the claimed subject-matter. Therefore, the opposition was sufficiently substantiated within the meaning of Rule 55(c) EPC and consequently admissible.



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Document D5, which represented the closest prior art, disclosed a sewing machine needle from which the subject-matter of claim 10 of the patent as granted was distinguished essentially only in that the blade was divided into a first blade section and a second blade section through two frust-conical portions formed on said blade in a manner to be spaced from each other. In fact, contrary to the respondent's opinion, D5 also disclosed that the blade was formed with a constriction, on which was provided the clearance-above-eye: in the context of the patent in suit the term "constriction" simply implied that the blade was restricted along a portion of its length, the restriction however not extending necessarily around the whole circumference of the blade. Thus, a restriction of the blade provided on one side only of the needle, such as in D5, constituted a constriction. D22, which was an extract from a basic text book filed with the notice of appeal to show what constituted general knowledge in the art, disclosed to form the blade with an upper part thicker than the lower part in order to reduce the vibrations of the needle during use. The skilled person would obviously provide this feature in the needle according to D5 in order to solve the problem underlying the patent in suit to provide a needle which exhibited sufficient buckling strength and ensured a stable sewing operation at a high speed, thereby directly arriving at the subject matter of claim 10 of the patent as granted.

The amendments of independent claims 1 and 10 according to the first auxiliary request constituted an unallowable extension of the subject-matter of the

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patent, contrary to Article 123(2) EPC. Indeed, the application as filed only disclosed that the constriction was smaller in width than the needle point, not that the constriction was smaller than the width of the second blade section. Furthermore the latter feature introduced a lack of clarity, because it was not clear what width of the second blade section was to be taken into consideration for comparing it with the width of the constriction. Anyway, this feature was already known from document D5. But even if this were not the case, it did not justify the presence of an inventive step regarding the subject-matter of claim 10. The provision of a constriction having a width at its outer surfaces smaller than the width of the blade corresponded to the provision of a reduction of the diameter of the blade shortly above the eye, which as shown in D19' was made by grinding with the purpose of reducing the friction between the needle and the sewing material.

The additional feature of claim 10 according to the second auxiliary request was in contradiction with the disclosure of the patent in suit relating to Figure 8: the relationship between the slant portions of the clearance-above-eye shown in Figure 8 was the opposite of that defined in claim 10. In any case, the latter did not involve any particular technical effect in respect of the finished sewing machine needle and the selection of slant angles fulfilling such relationship was to be regarded as an obvious design measure.

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Claim 1 of the third auxiliary request was identical to claim 1 of the first auxiliary request. For essentially the same reasons given in respect of claim 10 of the first auxiliary request, its subject-matter did not involve an inventive step. Although D19' disclosed the provision of a constriction having a width at its outer side surfaces smaller than the width of the blade by grinding in a finishing step, it was clear for the skilled person that such constriction could be obtained, in the method of D5, by die pressing since D5 disclosed that the die pressing operation produced a finished configuration of the needle such that the cross-sectional area at each point along its length was substantially equal to the cross-sectional area of the finished needle at the corresponding point.

VIII. In support of its requests the respondent relied essentially on the following submissions:

The objection that the discussion in the appeal proceedings should be restricted to the inventiveness of claim 1 and the novelty of claim 10 since in the notice of opposition the ground of opposition based on lack of novelty was substantiated solely in respect of independent claim 10 whilst the ground of opposition based on lack of inventive step was substantiated solely in respect of independent claim 1, was no longer pursued during the oral proceedings. However, the respondent raised the further objection that the opposition was inadmissible because the notice of opposition was not sufficiently substantiated. As a matter of fact, the grounds for opposition of lack of novelty and lack of inventive step were based on an alleged prior use of a sewing machine needle

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manufactured by the opponent, which was not sufficiently substantiated within the 9 month period for filing an opposition. In particular, the invoices filed with the notice of opposition did not sufficiently substantiate the fact that the prior used needle was made available to the public. Nor did the opponent provide a detailed comparison between the claimed subject-matter and the prior used needle, so that the Opposition Division and the patentee could not examine the grounds for opposition without recourse to independent enquiries.

By filing further documents at various stages of the appeal proceedings, in particular documents D22 filed with the grounds of appeal and D19' filed during oral proceedings, the appellant was applying so-called "salami tactics" consisting in deliberately withholding information, which was inadmissible. For this reason, the additional documents should be disregarded.

Document D5 related to a sewing machine needle which was neither divided into first and second blade sections through two frust-conical portions, nor provided with a constriction arranged contiguous to the second blade portion. It was clear that what was meant with the constriction referred to in claim 10 of the patent as granted was not only a restriction of the cross-section of the blade in correspondence of the clearance-above-eye, as in D5, but also a restriction in correspondence of the outer side surfaces of the blade. The subject-matter of claim 10 involved an inventive step because there was no suggestion in the prior art to provide a blade divided into first and second sections in needles formed by die pressing and

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having a cross section in the form of a "V" in correspondence of the groove. In fact, D22 disclosed a reinforcement, consisting in an upper part of the shaft being thicker than the lower part, only for needles having circular cross-section. D20 disclosed that the form obtained by die pressing already constituted a reinforcement of the needle shaft as compared to shafts having circular cross-section. Therefore, there was no motivation for the skilled person to include in the needle of D5 a feature of D22 disclosed for reinforcing a needle shaft having circular cross-section, since the needle of D5 already possessed sufficient strength due to the "V" cross-section obtained by die pressing.

Similarly, also the subject-matter of claim 10 of the first auxiliary request involved an inventive step. The text of this claim clarified the nature of the constriction by specifying that the constriction had a width at the outer surfaces smaller than the corresponding width of the second blade section. This feature, which was directly derivable from the drawings, provided the technical effect of reducing the friction between the needle and the sewing material.

Claim 10 of the second auxiliary request was additionally amended by way of inclusion of the features of granted claim 15, which were disclosed as such in the application as filed. These features were advantageous in that they provided an improved flow of material during the die pressing step, and therefore supported the presence of an inventive step.

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The third auxiliary request comprised only method claims, with claim 1 corresponding to claim 1 of the first auxiliary request. D19' disclosed reducing the diameter of the blade shortly above the eye by grinding the edges, whilst claim 1 required the finished sewing machine needle to have the constriction formed during the die pressing step.

**Reasons for the Decision**

1. The appeal is admissible.
  
2. *Admissibility of the opposition*
  - 2.1 Although the objection that the opposition was inadmissible was raised by the respondent for the first time during the oral proceedings before the Board, thus at a very late stage of the proceedings, the admissibility of the opposition is an indispensable procedural requirement for any substantive examination of the opposition submissions at every stage of the proceedings, ie. also in appeal proceedings, and it must therefore be examined by the Board of its own motion (see T 522/94, OJ 1998, 42).
  
  - 2.2 The respondent submitted that the grounds for opposition of lack of novelty and lack of inventive step were based on an alleged prior use of a sewing machine needle manufactured by the opponent, which prior use was not sufficiently substantiated within the 9 month period for filing an opposition. Furthermore, the opponent didn't provide a detailed comparison

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between the claimed subject-matter and the prior used needle.

When an opposition is based on grounds of prior use, the requirements of Rule 55(c) EPC are only fulfilled if the notice of opposition indicates, within the opposition period, all the facts which make it possible to determine the date of prior use, what has been used, and the circumstances relating to the alleged use. The notice of opposition must also indicate the evidence and arguments presented in support of the grounds of opposition (see T 328/87, OJ 1992, 701).

With the notice of opposition (see page 4, second full paragraph) the opponent specified that needles of the type 339.162A106 were sold and delivered without any secrecy agreement to Groz-Beckert Italia s.r.l.. This constitutes a sufficient indication of the circumstances relating to the use since already a single sale without secrecy agreement may render a product available to the public. Furthermore, the opponent filed invoices dated 20 March and 26 April 1992 as evidence relating to the sale, from which a sufficient indication of the date of prior use can be deduced. The technical drawings (D12), also filed with the notice of opposition, make readily apparent the construction of the allegedly used needle. On pages 2 and 3 of the notice of appeal, the features of such needle are listed using the wording of claim 10 of the patent in suit, so that any substantive identity or similarity of the alleged piece of the art with the subject-matter of the patent in suit can be readily determined. Finally, the notice of opposition included arguments in support of the grounds of opposition of

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lack of novelty and inventive step. Therefore, the respondent's objection fails because the date of prior use, what has been used, the circumstances relating to the alleged use, the indication of evidence and the arguments presented in support of the grounds of opposition are sufficiently indicated in the notice of opposition.

- 2.3 The respondent submitted that the invoices filed with the notice of opposition did not sufficiently substantiate the fact that the allegedly prior used needle was made available to the public.

However, the evaluation of the evidence (invoices) in order to decide whether the alleged prior use was effectively made available to the public, is irrelevant for the purpose of deciding whether the opposition is admissible (see T 1022/99, point 2.2). For this, it must be assessed whether the requirements of Rule 55(c) are met by the notice of opposition (see point 2.2 above).

- 2.4 It follows that the Board can only confirm the findings of the Opposition Division in the decision under appeal (point 1 of the reasons) that the opposition is admissible.

3. *The documents filed during appeal proceedings*

- 3.1 Documents D22 and D19' were filed by the appellant respectively with the grounds of appeal and during the oral proceedings before the Board.



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The Board does not consider these documents to be late-filed. Indeed, document D22 was filed to support the statement of the appellant that the provision of supplementary shoulders in needles is a generally known measure, and document D19' was filed in reaction to the respondent's first auxiliary request filed during the oral proceedings, to show that the feature added to claim 10 was known.

- 3.2 Nor can the Board recognize in the behaviour of the appellant a deliberate withholding of information relevant to the validity of the patent (so-called "salami tactics") as submitted by the respondent. Rather, the Board is of the opinion that the filing of the additional documents in the appeal proceedings is justified by the course taken by the proceedings. Indeed, the Opposition Division motivated its decision to reject the opposition on the basis, *inter alia*, that the prior art did not suggest providing a supplementary shoulder in the needle of D5 (ie a needle divided into first and second blade sections), although this feature was in the appellant's opinion generally known. Furthermore, during the oral proceedings the respondent introduced a feature taken from the drawings of the patent in suit in the claims of the first auxiliary request. This, having regard to the right of the parties to a fair procedure, justifies the filing, at the oral proceedings, of a prior art document (D19') specifically directed to such feature.

3.3 Therefore, documents D22 and D19' have to be taken into consideration pursuant to Article 114(1) EPC. 146

4. *Main request*

4.1 During the written proceedings (letter dated 30 August 2001), the respondent submitted that, since in the notice of opposition the ground of opposition based on lack of novelty was substantiated solely in respect of independent claim 10 whilst the ground of opposition based on lack of inventive step was substantiated solely in respect of independent claim 1, the discussion in the appeal proceedings should be restricted to the inventiveness of claims 1 to 9 and the novelty of claims 10 to 15 of the patent as granted.

In the annex to the summons for oral proceedings pursuant to Article 11(2) Rules of Procedure of the Boards of Appeal the Board expressed its preliminary opinion that inventive step should be discussed also in respect of claims 10 to 15, and the respondent did not submit any further arguments concerning his submission. As stated in this annex, the Opposition Division decided upon each of the grounds for opposition of lack of novelty and inventive step for both independent claims 1 and 10 of the patent as granted. Since the purpose of the appeal procedure is to give the losing party the possibility to challenge the decision of the first instance in all the points examined by this instance and considering that arguments on the basis of previously submitted facts and evidence are allowed at any stage of opposition or opposition appeal proceedings (see G 4/95, OJ 1996, 412, point 4b of the

reasons), inventive step is also to be discussed in respect of claim 10 and dependent claims 11 to 15.

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#### 4.2 Novelty

The available prior art does not disclose a sewing machine needle with a blade of the kind having inner side surfaces defining a long groove and outer side surfaces each being spread at a predetermined angle, which is divided into a first and second blade sections in accordance with the wording of claim 10. Therefore, the subject-matter of claim 10 is found to be novel.

Novelty was in fact not in dispute.

#### 4.3 Inventive step

4.3.1 The technical problem underlying the patent in suit is to provide a sewing machine needle which is capable of exhibiting high quality while providing sufficient buckling strength and substantially preventing breakage of the needle (see column 2, lines 2 to 6).

4.3.2 In the decision under appeal document D5 is considered to represent the closest prior art. This view was not contested by the parties. Since D5 (see page 3, first paragraph) relates to a sewing machine needle obtained by die pressing and therefore of the same kind as that in the patent in suit, the Board shares the view expressed by the Opposition Division.

Using the wording of claim 10 of the patent in suit, document D5 discloses (see Figures 7 to 11) a sewing machine needle including a cylindrical shank (11 in

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Figure 1; see column 2, lines 21 to 24) of a large diameter, a blade (14) arranged so as to extend from said shank and a sharp needle point formed at a distal end of said blade (see column 6, lines 14, 15), in which a continuous long groove (22) of a recessed shape is provided so as to extend from said shank to a portion of said blade in proximity to said needle point (D5 explicitly discloses that the point is provided on a portion of the needle blade adjacent to the eye, see column 6, lines 14, 15), wherein a needle eye portion (24) is formed along said long groove, wherein said blade is formed with a clearance-above-eye (23), and wherein said blade has inner side surfaces defining said long groove and outer side surfaces, each being spread at a predetermined angle (Figures 9, 10).

Furthermore, D5 discloses that in correspondence of the clearance-above-eye (23) the blade (see Figure 8) is formed into a sectional area smaller than the blade section above the clearance-above-eye (see column 3, lines 60 to 64). Thus, there is provided a constriction which is in proximity to said needle eye portion and formed into a sectional area smaller than the main blade section, on which the clearance-above-eye (23) is provided in a manner so as to be opposite to the long groove (22, see Figure 8).

The Board cannot follow the respondent's opinion that the term "constriction" in claim 1 implied more than only a restriction of the cross-section of the blade in correspondence of the clearance-above-eye, as in D5. In particular, according to the respondent, the term constriction should imply that the space between the outer side surfaces of the needle was narrower at the

constriction. However, claim 1 of the patent in suit requires the constriction to be formed with a sectional area smaller than the second blade section (ie the blade section above the clearance-above-eye), but there is no specific requirement in claim 1 implying that the outer side surfaces of the blade are narrowed in correspondence of the constriction. (149)

Therefore, the subject-matter of claim 1 is distinguished from the sewing machine needle of D5 in that the blade is divided into a first blade section and a second blade section through two frust-conical portions formed on said blade in a manner to be spaced from each other, whereby said needle eye portion is arranged at said second blade section.

4.3.3 In order to solve the above-mentioned technical problem, the skilled person would consider the provision of a supplementary shoulder in the sewing machine needle of D5, this being a generally known measure for reinforcing the needle and reducing the vibrations in use as shown by document D22 (see page 142, paragraph starting with "Der Nenndurchmesser"), which is an extract of a textbook relating generally to textiles and clothing (see page 3). Clearly, the supplementary shoulder improves the buckling strength since the blade is reinforced, and substantially prevents breakage of the needle since the vibrations in use are reduced.

The provision of a supplementary shoulder according to D22 in the sewing machine needle of D5 directly results in the blade being divided into a first blade section and a second blade section through two frust-conical

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portions formed on said blade in a manner to be spaced from each other (see Figure 2 on page 142 of D22), and in the needle eye portion being arranged at said second blade section, and directly results, therefore, in the provision of a sewing machine needle according to claim 10 of the patent in suit. It follows that the subject-matter of this claim does not involve an inventive step

Hence the main request of the respondent is not allowable.

- 4.3.4 The respondent argued that there was no suggestion in the prior art to provide a needle shaft reinforcement in needles such as that of D5 formed by die pressing and having a cross section in the form of a "V" in correspondence of the groove.

In fact, D22 discloses the provision of a needle shaft reinforcement in needles having a circular or semi-circular cross-section (see D22, Figure 2 on page 142). The needle according to D20 (see Figures 1 to 3) does not have a cross-section in the form of a "V" either. However, it is clear for the skilled person that the provision of a thicker blade portion in proximity of the shank provides the desired advantages in terms of improved buckling strength and reduction of vibrations in use independently from the geometrical form of the cross section of the blade. Accordingly, it is clear for the skilled person that the advantages described in D22 for a circular cross-section are obtained also in case of a needle having a cross-section in the form of a "V".

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5. *First auxiliary request*

5.1 Amendments

5.1.1 Claim 10 defines the additional feature, over claim 10 of the patent as granted, that the constriction has a width at said outer surfaces smaller than the corresponding width of said second blade section.

Since this further limiting feature can be clearly, unmistakably and fully derived from the drawings (see Figures 7 to 10 of the application as filed) by a person skilled in the art and so relatable by him to the content of the description as a whole as to be manifestly part of the invention, the amendment is allowable under Article 123(2) and (3) EPC (see T 169/83, OJ 1985, 193).

5.1.2 The appellant submitted that the application as filed only disclosed that the constriction was smaller in width than the needle point.

However, the fact that the added feature cannot be found textually in the description does not mean that the feature was not disclosed in the application as filed, since the drawings are also part of the content of the application as filed (G 2/95, OJ 1996, 555).

5.1.3 Furthermore, the added feature does not introduce any lack of clarity (Article 84 EPC). As a matter of fact, according to the definition of claim 10 the outer side surfaces of the blade are spread at a predetermined angle and therefore the blade has a cross-section in the form of a "V". Since the width of a "V" can be

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unequivocally determined, there is no ambiguity in the definition of claim 10. Accordingly, the objection of the appellant, that it was not clear what width of the blade was to be taken into consideration, is unfounded.

5.2 Inventive step

5.2.1 The above-mentioned added feature is not disclosed by the closest prior art D5 and constitutes therefore a further distinguishing feature.

The appellant argued that this feature was also disclosed by document D5, in particular having regard to the disclosure of Figures 9 to 11. However, there is no clear and unambiguous disclosure in D5 that the cross-section of the blade as shown in Figure 9 is wider than the cross-section of the constriction as shown in Figure 10. As normally is the case for a patent specification, the drawings are schematic. In the case of D5 they are also erroneous. Indeed, according to Figure 8, the longitudinal top line of the needle is a straight horizontal line. This means that in the drawings of Figures 9 and 10 the top points of the cross sections of the needle should be on the same level, which is clearly not the case in these drawings. Therefore, no precise information, in particular about the width of the cross sections, can be inferred from the drawings of D5.

5.2.2 As submitted by the respondent, the effect of the distinguishing feature is to reduce the friction between the needle and the sewing material.



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Since this distinguishing feature is not functionally interrelated with the other distinguishing features (see above paragraph 4.3.2), the technical problem that it solves can be considered separately from the technical problem solved by the other distinguishing features.

Therefore, the objective technical problems solved by the features distinguishing the subject-matter of claim 10 from the sewing machine needle of D5 can be regarded as:

- (i) to provide a sewing machine needle which is capable of exhibiting high quality while providing sufficient buckling strength and substantially preventing breakage of the needle;
- (ii) to reduce the friction between the needle and the sewing material.

5.2.3 As explained above (section 4.3), the solution to problem (i) in accordance with claim 10 is obvious. In order to solve problem (ii), the skilled person would turn to document D19', which suggests to reduce the friction between the needle and the sewing material by means of a relief grinding consisting in a reduction of the diameter of the blade shortly above the eye by grinding the edges. The thus obvious provision of a relief grinding in the sewing machine needle of D5 modified so as to have a first and second blade section (the solution to problem (i)) directly results in the constriction having a width at its outer surfaces smaller than the corresponding width of the second blade section, and therefore directly results in the

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subject-matter of claim 10 which consequently lacks an inventive step.

5.2.4 The Board observes that although in accordance with the method of claim 1 the constriction having a width at its outer surfaces smaller than the corresponding width of the second blade section is obtained as a result of the die pressing step, claim 10 does not include any limitations in respect of how the feature relating to the width of the constriction at its outer surfaces is obtained, and therefore claim 10 does not exclude that this feature is obtained by grinding.

5.2.5 It follows that also the first auxiliary request of the respondent is not allowable.

6. *Second auxiliary request*

6.1 Amendments

Claim 10 includes, in addition to the combination of features present in claim 10 of the first auxiliary request, the features of claim 15 of the patent as granted. The definition of the latter claim corresponds **textually** to the definition of claim 17 of the application as filed. Therefore, no objections arise under Article 123(2) and (3) EPC in respect of claim 10, notwithstanding the fact that, as correctly pointed out by the appellant, claim 10 is in clear contradiction with the disclosure of the patent in suit relating to Figure 8.

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6.2 Inventive step

6.2.1 In respect of the additional features of claim 10, the feature that the clearance-above-eye is formed at both ends thereof with slant portions slanting with respect to an axis of the needle through which said clearance-above-eye is connected to the blade section is already known from document D5 (see Figures 7 and 8). Therefore, the further feature distinguishing the subject-matter of claim 10 from the sewing machine needle of D5 is that the slant portion arranged in proximity to said needle eye portion is formed into an inclination angle larger than that of the other slant portion.

The respondent argued that this distinguishing feature provided an improved flow of material during the die pressing step.

The respondent thus relied on a technical effect which is related to and is obtained exclusively during the process of manufacturing the sewing machine needle by die pressing. However, there is no reference to a manufacturing process in claim 10, so that the needle of claim 10 might be obtained by other processes for which the above-mentioned technical effect is not achieved and is not, therefore, a direct consequence of the distinguishing feature. Furthermore, claim 10 does not relate to a process of manufacturing a needle, but to a needle as such (product). As regards the needle itself, the patent clearly conveys the information that it is irrelevant whether the slant portion of the clearance-above-eye arranged in proximity to said needle eye portion is formed into an inclination angle

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larger than that of the other slant portion, since it discloses that said inclination angle is modified after the die pressing step by a machining operation (see column 7, lines 52 to 55) whereby it becomes smaller as shown in Figure 8.

It follows that the further distinguishing feature does not necessarily result in any specific technical effect. It is also not functionally interrelated with the other distinguishing features, which inclusion in the sewing machine needle of D5 is obvious (see above paragraphs 5.2.1 to 5.2.3). Therefore, the additional technical problem (iii) solved by the further distinguishing feature can only be seen in a selection of inclination angles for the slant portions of the clearance-above-eye.

The choice of an inclination angle of the slant portion arranged in proximity to the needle eye portion which is larger than that of the other slant portion of the clearance-above-eye amounts to an obvious, arbitrary selection from the options which the skilled person has at its disposal when putting in practice the teaching of D5. Consequently, the subject-matter of claim 10 of the second auxiliary request does not involve an inventive step either.

7. *Third auxiliary request*

7.1 *Amendments*

7.1.1 Claim 1 of the third auxiliary request is identical to claim 1 of the first auxiliary request.

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Claim 1 includes all the features of claim 1 as granted and additionally the following limiting features:

- the elongated portion corresponding to the clearance above eye is of a cylindrical shape, and
- the elongated portion thus formed provides the finished sewing machine needle with a constriction of a width at said outer side surfaces smaller than the corresponding width of said second blade section.

The first feature is disclosed on page 5, third paragraph, of the application as filed. The second feature is directly derivable from the drawings (see Figures 7 to 10 of the application as filed, see above paragraph 5.1.1).

- 7.1.2 Dependent claims 2 to 9 correspond to claims 2 to 9 of the patent as granted.
- 7.1.3 The description of the patent in suit is amended to bring it into conformity with the new claims and to acknowledge document D5 as background art.
- 7.1.4 Therefore, the amendments do not give rise to objections under Article 123(2) and (3) EPC.
- 7.1.5 Neither does the reference in claim 1 to the width of the second blade section result in a lack of clarity, for the reasons already given above in respect of claim 10 of the first auxiliary request (see above paragraph 5.1.3).

7.2 Novelty

Since the method of claim 1 directly results in a sewing machine needle having all the features of claim 10 of the first auxiliary request, its subject-matter is accordingly found to be novel.

Novelty was in fact not in dispute also in respect of claim 1.

7.3 Inventive step

7.3.1 The technical problem underlying the method of claim 1 is to provide a method for manufacturing a sewing machine needle which is capable of exhibiting high quality while providing sufficient buckling strength and substantially preventing breakage of the needle (see column 2, lines 12 to 17 of the patent in suit).

7.3.2 Also in respect of the subject-matter of claim 1 document D5 represents the closest prior art. Indeed, it discloses a sewing machine needle manufacturing method of the kind comprising a die pressing step and which has the most technical features in common with the claimed invention. D5 undisputedly discloses a method having all the features recited in the preamble of claim 1.

7.3.3 The above-mentioned technical problem is solved, in accordance with the definition of claim 1, by the following features: before subjecting said blade to die pressing a first blade section having a diameter smaller than said shank contiguous to a distal end of said shank and a second blade section of a diameter

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smaller than said first blade section contiguous to a distal end of said first blade section are formed, said first and second blade sections constituting said blade; after forming said first blade section as well as said second blade section and before subjecting said blade sections to die pressing said second blade section is formed with an elongated portion of a cylindrical shape corresponding to said clearance-above-eye of the sewing machine needle; and during the subjecting of said blade to die pressing, said elongated portion is deformed to form said clearance-above-eye, the elongated portion thus formed providing the finished sewing machine needle with a constriction of a width at said outer side surfaces smaller than the corresponding width of said second blade section.

- 7.3.4 Although the provision of first and second blade sections *per se* (see above paragraph 4.3.3) and the provision of a constriction having a width at its outer side surfaces smaller than the corresponding width of said second blade section (see above paragraph 5.2.3) are regarded as being obvious, the recognition that such a constriction, which also accommodates the clearance-above-eye, could be formed with the same die pressing operation during which the long groove is formed in the first and second blade sections, goes beyond the teaching of the available prior art. In particular, document D19' discloses provision of such a constriction **exclusively** by means of an additional finishing grinding step. Accordingly, the subject-matter of claim 1, and of dependent claims 2 to 9, is found to involve an inventive step.

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7.3.5 The alleged prior use by the opponent.

In its decision, the Opposition Division did not decide whether the alleged prior use of a sewing machine needle of the kind 339.163A106 in accordance with the drawing D12 formed part of the state of the art, but came to the conclusion that it was not relevant in respect of the subject-matter of claim 1 because it only disclosed a needle and not the steps of the method for its manufacture (see the decision, page 7, penultimate paragraph). Having regard to this conclusion, the Board considers it appropriate to first investigate the relevance of that alleged prior use.

The drawing D12 shows a needle with a blade having a circular cross-section and a groove with parallel inner side surfaces. Having regard to these features, it is clear that the finished shape of the needle is not obtained by die pressing. Therefore, even if it were assumed that the needle shown in D12 relates to a public prior use, the latter could not suggest to provide the constriction which accommodates the clearance-above-eye and has a width at its outer side surfaces smaller than the corresponding width of the second blade section, in the same die pressing operation during which the long groove is formed. Consequently, it would not affect either the novelty or inventiveness of the subject-matter of claim 1. Therefore, for the purposes of determining novelty and inventive step, it is not necessary to decide on the matter of the alleged prior public use.



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8. Therefore, the claims 1 to 9 according to the third auxiliary request together with the description as amended during the oral proceedings of 10 April 2003, and the figures as granted, form a suitable basis for maintenance of the patent in amended form.

**Order**

**For these reasons it is decided that:**

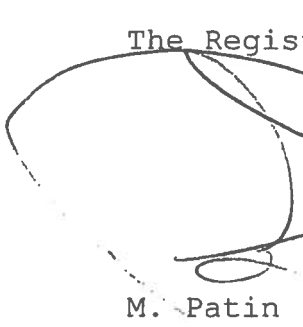
- 1. The decision under appeal is set aside.
- 2. The case is remitted to the first instance with the order to maintain the patent on the basis of the following documents according to the third auxiliary request:

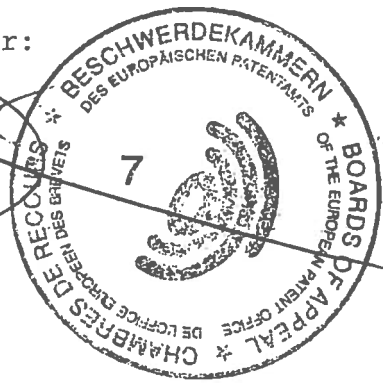
**claims:** 1 to 9, filed during oral proceedings;

**description:** columns 1 to 4, 7, 8, filed during oral proceedings;  
columns 5, 6, as granted;

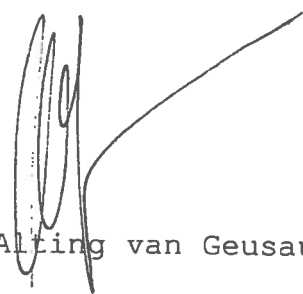
**drawings:** Figures 1 to 10, as granted.

The Registrar:

  
M. Patin



The Chairman:

  
P. Alting van Geusau

